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**2013 Annual Groundwater
Monitoring Report**
Empire Abo Gas Plant
Eddy County, New Mexico
AP-112

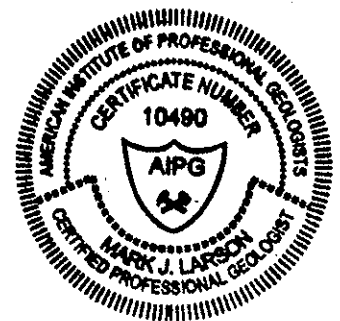
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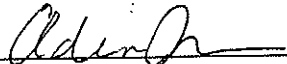
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Table of Contents

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	2
2.1	Background	2
2.2	Topography and Surface Water	2
2.3	Geology	3
2.4	Groundwater Occurrence	3
2.5	Light Non-Aqueous Phase Liquid	4
3.0	GROUNDWATER SAMPLES AND LABORATORY ANALYSIS	5
3.1	BTEX Analysis	6
3.2	Dissolved Metals Analysis	7
3.3	General Chemistry Analysis	7
4.0	CONCLUSIONS	9
5.0	RECOMMENDATIONS	10

List of Tables

Table 1	Monitor Well Completion and Gauging Summary
Table 2	BTEX Analytical Data Summary
Table 2a	BTEX Analytical Quality Control Data Summary
Table 3	Dissolved Metal Analytical Data Summary
Table 3a	Dissolved Metal Analytical Quality Control Data Summary
Table 4	General Chemistry Analytical Data Summary
Table 4a	General Chemistry Analytical Quality Control Data Summary

List of Figures

Figure 1	Topographic Map
Figure 2	Aerial Photograph
Figure 3	Facility Drawing
Figure 4a	Groundwater Potentiometric Map, May 20, 2013
Figure 4b	Groundwater Potentiometric Map, October 14-15, 2013
Figure 5a	Apparent LNAPL Thickness Map, May 20, 2013
Figure 5b	Apparent LNAPL Thickness Map, October 14-15, 2013
Figure 5c	Apparent LNAPL Thickness (MW 02-09, MW 02-13, MW 3-02, and EB-03)
Figure 5d	Apparent LNAPL Thickness (MW-06, MW-10, and MW-19)
Figure 6a	Benzene Concentration in Groundwater, May 20-23, 2013
Figure 6b	Benzene Concentration in Groundwater, October 15-17, 2013
Figure 7	Dissolved Chromium Concentration in Groundwater, October 15-17, 2013
Figure 8a	Chloride Concentration in Groundwater, May 20-23, 2013
Figure 8b	Chloride Concentration in Groundwater, October, 15-17, 2013
Figure 9a	TDS Concentration in Groundwater, May 20-23, 2013
Figure 9b	TDS Concentration in Groundwater, October, 15-17, 2013

List of Appendices

Appendix A	Laboratory Analytical Reports and Chain of Custody Documentation
Appendix B	NMOSE Approval for Groundwater Extraction

1.0 EXECUTIVE SUMMARY

This report presents 2013 groundwater monitoring results for the Empire Abo Gas Plant (Facility) operated by Frontier Field Services, LLC (Frontier) which is a wholly owned subsidiary of AKA Energy Group (AKA). The Facility processes natural gas using cryogenic methods to remove simple alkanes (i.e. ethane, propane, pentane and hexane). The Facility is located approximately 9 miles east - southeast of Artesia, in Unit I (NE/4, SE/4), Section 3, Township 18 South, Range 27 East, Eddy County, New Mexico. The geodetic position is north 32° 46' 37.4" and west 104° 15' 32.7".

The following activities occurred during 2013:

- First semi-annual groundwater gauging and sampling event – May 20, 2013;
- Second semi-annual groundwater gauging and sampling event – October 15, 2013

The following is documented in the report:

- Groundwater mounding is present beneath the Facility and causes groundwater to flow in a radial pattern;
- The regional groundwater flow direction is to the east – southeast therefore well MW-06 is considered the background monitoring well;
- Wells EB-01 and P-04 were dry during the first (1st) and second (2nd) monitoring events;
- Hydrocarbon product (LNAPL) was observed in 19 monitoring wells during the reporting period with apparent LNAPL thicknesses ranging from about 0.02 feet (MW-14) to 5.12 feet (MW-06);
- Dissolved benzene exceeded the New Mexico Water Quality Control Commission (WQCC) human health standard of 0.10 milligrams per liter (mg/L) in 12 monitoring wells during the reporting period;
- Dissolved chromium was the only WQCC metal reported above the NMWQCC human health standard of 0.05 mg/L and was reported in three (3) wells (MW-02-03, EB-04 and MW-07) during the reporting period;
- The extent of the dissolved benzene in groundwater was delineated;
- Chloride, sulfate and TDS are highest near the northwest corner of the Facility and likely due to dissolution of minerals, predominantly gypsum, from the Tansill formation from a water leak in the cooling tower basin;
- Sulfate is naturally occurring and elevated due to dissolution of gypsum with concentrations exceeding the WQCC domestic water quality standard (600 mg/L) in all wells.

An evaluation of the abatement option, including permitting and installing an SWD or AGI well, is under consideration by AKA. Frontier will continue groundwater monitoring during 2014 and submit the results in an annual report. Frontier will notify the OCD at least 48 hours prior to the annual monitoring events, and as soon as possible upon any significant change in analyte concentrations.

2.0 INTRODUCTION

This report presents 2013 groundwater monitoring results for the Empire Abo Gas Plant (Facility) operated by Frontier Field Services, LLC (Frontier), a wholly owned subsidiary of AKA Energy Group (AKA). The Facility is located approximately 9 miles east-southeast of Artesia, in Eddy County, New Mexico. The legal description is Unit I (NE/4, SE/4), Section 3, Township 18 South, Range 27 East. The geodetic position is north 32° 46' 33.7" and west 104° 15' 37.22". Figure 1 presents the location on a topographic map. Figure 2 presents an aerial photograph. Figure 3 presents a Facility drawing.

2.1 Background

The Facility is a natural gas processing plant that utilizes cryogenic processes to remove simple alkanes (i.e. ethane, propane, pentane and hexane) from natural gas. The Facility previously operated under a New Mexico Water Quality Control Commission (WQCC) discharge permit (GW-022) administered by OCD. The discharge permit was not renewed by OCD following completion of a questionnaire ("Oil & Gas Facilities Questionnaire for Determination of a WQCC Discharge Permit") by Frontier stating that the Facility did not have intentional discharges other than potable water onto the ground or directly into surface or groundwater. The OCD issued case number AP-112 for remediation of groundwater contamination and requested Frontier to submit an abatement plan for groundwater contamination. An abatement plan was submitted to the OCD on January 15, 2013. Implementation of the groundwater abatement plan was contingent on approval from the Office of the State Engineer (OSE) to extract groundwater and permitting, installation and start-up of a disposal (SWD or AGI) well. On March 8, 2013, the OSE approved Frontier's request to extract the groundwater. Consideration for an SWD or AGI well is currently review and consideration by Frontier management.

Previous investigations at the Facility have identified light non-aqueous phase liquid (LNAPL) on groundwater and dissolved benzene in groundwater resulting from release of natural gas condensate from subsurface piping. The LNAPL and dissolved benzene are present in 4 areas including the northeast, west-central, east-central and southwest areas of the Facility. The groundwater contains naturally elevated concentrations of sulfate and total dissolved solids (TDS) that exceed the WQCC domestic water quality standards of 600 and 1,000 milligrams per liter (mg/L), respectively.

2.2 Topography and Surface Water

The surface elevation is approximately 3,550 feet above mean sea level (MSL) and slopes to the southeast. The Facility is located approximately 3.4 miles east-northeast of the Pecos River. The nearest drainage is an unnamed wash located west of the Facility. The unnamed wash flows south to Scoggins Draw (aka Coggins Draw on some early maps) about 1,300 feet south of the Facility. Scoggins Draw flows southwest to ephemeral Chalk Bluff Draw located about 3 miles downstream. Chalk Bluff Draw flows to the Pecos River located about 1.8 miles further downstream.

When comparing the elevation of Scoggins Draw and the depth to groundwater from the nearest monitoring wells (P-04, EB-07, and EB-01), depth to groundwater is estimated to be about 25 or more feet below the drainage. This watercourse is a losing stream without groundwater affecting surface water or discharging to the surface. There are no documented springs, seeps or marshes within 1-mile of the outside perimeter of the Facility. Figure 1 presents a topographic map.

2.3 Geology

The dominant regional feature is the Pecos Slope, a broad geologic structure with a low eastward dip of about 50 to 100 feet per mile. The western extents of the Pecos Slope are the Mescalero Arch, and Sacramento and Guadalupe uplift structural divides (Kelley, 1971). The eastern extents of the Pecos

Slope are the Delaware and Midland Basins. This Pecos Slope is a monocline that is imprinted with other structural features, including the southern flank of the Artesia-Vacuum Arch, which reflects the underlying Abo reef trend.

The Artesia-Vacuum Arch extends from beneath the Pecos Valley fill to the west, extending through Townships 17 through 19 south, eastward to Range 35 East in Lea County (Kelley, 1971). The arch is covered by post-Permian strata, except in a four to five mile stretch near Chalk Bluff Draw. In the vicinity of the Facility, the plunging south limb of Yates and Tansill Formations dip about 4° South 47° east. Brittle deformation of the Artesia Group members caused fractures that are subject to dissolution by groundwater interaction.

The lowest encountered formation at the Facility is the Permian-age Yates formation of the Artesia Group. The Yates formation is named for the Yates oilfield in Pecos County, Texas, and has wide aerial extent in both surface exposures and subsurface wells samples. The Yates formation is approximately 250 to 350 feet thick and is documented as siltstone north of Roswell, New Mexico, carbonate and evaporites west and northwest of Carlsbad, and as gypsum north of Lake McMillan to near Roswell (the vicinity of the Facility). At the Facility it appears as red mudstone/shale/clay reported at the base of monitor well borings is the top of the Yates formation.

Above the Yates formation is the Tansill formation of the Artesia Group. The type section of the Tansill formation is found along US Highway 285 about 2 miles north of Carlsbad and is reported to be predominantly dolomite. The reef shelf margin is about 300 – 325 feet thick (Kelley, 1971), however, this facies gives way to evaporite facies about 10 miles north of the type section. In the vicinity of the Facility the Tansill Formation is part of a irregularly shaped north-trending belt that is generally less than a mile wide and comprised of anhydrite and salt about 100 feet thick. At the Facility the anhydrite, gypsum and salts of the Tansill formation appear to be the bulk of the strata encountered in monitor wells and borings, and is the aquifer of concern.

2.4 Groundwater Occurrence

Groundwater occurs in the Tansill formation. The base of the water-bearing strata is interpreted as the red shale between approximately 3,460 and 3,480 feet above mean sea level (MSL).

The historic groundwater flow direction is towards the south-southwest consistent with the surface drainage (Hendrickson and Jones, 1952). During investigations, LAI observed groundwater mounding under the north-central and east-central areas of the Facility which has affected the groundwater flow direction. Current groundwater potentiometric maps depict groundwater movement south of the mound moving towards the east and southeast, while groundwater to the north of the mounds appears to be moving towards the north and northeast. The mounding may be due in part to a combination of process water and pipeline leaks and perched water in shallow discontinuous clay and silty-clay units.

Depth to groundwater was measured in fifty-four (54) monitoring wells on May 20, 2013 and October 14 and 15, 2013. The measurements were collected at the top of the PVC well casing with an electronic oil and water interface probe that was decontaminated between wells with a solution of Alconox® detergent and water and rinsed with distilled water.

Groundwater elevations in the more peripheral monitor wells remained relatively stable with seasonal fluctuation of a few feet between May and October 2013. On May 20, 2013, groundwater was encountered between approximately 7.56 (MW-07) and 109.44 (MW-16) feet bgs. Shallow groundwater was observed within the facility operation area where water lines leaks were discovered and repaired, while the deepest groundwater was encountered in well MW-16 located north of the Facility. Similar results were observed on May 20, 2013. Table 1 presents a summary of monitoring well gauging data. Figure 4a and Figure 4b present groundwater potentiometric maps for May 20, 2013 and October 14 and 15, 2013, respectfully.

The following monitoring wells were dry during 2013:

Well	May 20, 2013	October 14-15, 2013
P-04	√	√
EB-01	√	√

2.5 Light Non-Aqueous Phase Liquid

Light non-aqueous phase liquid (LNAPL) in the form of natural gas condensate was measured in 17 monitoring wells during the May and October 2013 monitoring events. The LNAPL was observed in wells located near the west central (MW-02-09, MW-02-13, MW-02-14, MW-03-01, MW-09, MW-10 and MW-06), southwest (MW-03-02 and MW-19), east central (MW-02-06, MW-02-10, MW-02-11, MW-04, MW-20 and MW-21) and northwest (MW-03-04) areas of the Facility. LNAPL was also observed east (EB-08) and southeast (EB-03 and MW-14) of the Facility.

On May 20, 2013, the apparent LNAPL thickness ranged from approximately 0.02 (MW-14) to greater than 10 feet (MW-02-10). On October 14 and 15, 2013, the apparent LNAPL thickness ranged from approximately 0.05 (MW-11) to greater the 10 feet (MW-02-10).

The following monitoring wells reported LNAPL during 2013:

Well	May 20, 2013	October 14-15, 2013
MW-02-06	√	√
MW-02-09	√	√
MW-02-10	√	√
MW-02-11	√	√
MW-02-13	√	√
MW-02-14	√	√
MW-03-01		√
MW-03-02	√	√
MW-03-04	√	√
MW-04	√	√
MW-06	√	√
MW-09		√
MW-10	√	√

MW-14	✓	
MW-19	✓	✓
MW-20	✓	✓
MW-21	✓	✓
EB-03	✓	
EB-08	✓	✓

Table 1 presents a summary of apparent LNAPL thickness measurements. Figure 5a and 5b present apparent LNAPL thickness maps for May 20, 2013 and October 14 and 15, 2013, respectively.

Referring to Figures 5a and 5b, the area of greatest LNAPL thickness occurs near the west central area of the Facility, in the vicinity of wells MW-02-09, MW-02-13, MW-02-14, MW-03-01, MW-09, MW-10 and MW-06, where the gas inlet is located. Discussions with former employees indicated that leaks were observed in piping that was replaced.

Figure 5c and 5d present control charts for apparent LNAPL thickness over time and suggests that LNAPL thickness near the west central area of the Facility is decreasing (MW-02-09, MW-02-13, MW-10 and MW-19). The data also suggest that LNAPL thickness is increasing in vicinity of MW-06 and MW-03-02 located near the west central and southwest areas of the Facility, respectively.

3.0 GROUNDWATER SAMPLES AND LABORATORY ANALYSIS

Groundwater samples were collected from 33 monitoring wells during the first semi-annual events on May 20-23, 2013, and from 29 wells during the second semi-annual event on October 15-17, 2013. Seventeen (17) wells were not sampled in May and October 2013, due to the presence of LNAPL. Wells EB-01 and P-04 were dry during the sampling events in May and October, 2013.

The groundwater samples were collected after removing approximately three (3) well volumes of groundwater or purging dry with dedicated disposable polyethylene bailers or pumping with an electric submersible pump and dedicated tubing. The samples were carefully transferred to laboratory containers that were labeled, sealed with custody labels, packed in an ice filled chest and delivered under chain of custody control to DHL Analytical, Inc. (DHL), a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory, located in Round Rock, Texas. All samples for metals analysis were filtered by the laboratory to exclude particles larger than 0.45μ and acidified with nitric acid within 24-hours of collection. DHL analyzed the samples for benzene, toluene, ethylbenzene, xylene (BTEX) by method SW-8021B, dissolved metals (arsenic, barium, cadmium, calcium, chromium, lead, magnesium, potassium, selenium, silver, sodium) by methods SW-6020 and 7470A (October 2013), anions, alkalinity and total dissolved solids (TDS) by methods E-300, M2320B and M2540, respectively. Duplicate samples were collected from wells EB-5 (May 20, 2013), P-03 (May 21, 2013), MW-09 (May 22, 2013) and MW-02-12 (May 23, 2013) for quality assurance and quality control (QA/QC) purposes. Purge water was contained in a portable tank and discharged to the Facility's process water system for disposal in an offsite OCD permitted Class II injection well. Table 2 presents the BTEX analytical data summary. Table 2a presents the BTEX analytical quality control data summary. Table 3 presents the dissolved metals analytical data summary. Table 3a presents the dissolved metals analytical quality control data summary. Table 4 presents the general chemistry, including anion, cation and TDS, analytical data summary. Table 4a presents the general chemistry analytical quality control data summary. The laboratory analytical reports are presented on a CD ROM in Appendix A.

3.1 BTEX Analysis

All benzene values represent dissolved-phase concentrations that are well below the solubility limit of 1,770 mg/L. During May 2013, dissolved benzene exceeded the WQCC human health standard of 0.01 mg/L in samples fourteen (14) wells (MW- 2-07, MW 2-15, MW 2-16, MW 2-18, MW-03, MW 3-01, MW 3-03, MW-07, MW-09, MW-12, MW-13, MW-17, MW-22, and EB-03). During October 2013, dissolved benzene exceeded the WQCC human health standard in ten (10) wells (MW 2-15, MW 2-16, MW 2-18, MW-03, MW 3-03, MW-07, MW-12, MW-22, and P-02). During May and October 2013, benzene was less than the method detection limit (<0.0008 mg/L) in down gradient wells EB-07 and EB-04 confirming the benzene plume was delineated down gradient.

Toluene in well MW-07 exceeded the WQCC human health standard (0.75 mg/L) during the May and October 2013 sampling events. Toluene, ethylbenzene and xylenes were below the WQCC human health standards in the remaining wells that were sampled.

May 2013 Benzene Results

The following samples exhibited benzene concentrations above the WQCC human health standard of 0.01 mg/L:

- | | |
|------------------------|----------------------|
| • MW- 2-07 (3.19 mg/L) | MW-2-15 (0.973 mg/L) |
| • MW 2-16 (0.138 mg/L) | MW-2-18 (19.2 mg/L) |
| • MW-03 (1.3 mg/L) | MW-3-01 (32 mg/L) |
| • MW 3-03 (2.36 mg/L) | MW-07 (14.4 mg/L) |
| • MW-09 (4.4 mg/L) | MW-12 (0.0495 mg/L) |
| • MW-13 (2.71 mg/L) | MW-17 (0.0427 mg/L) |
| • MW-22 (10.2 mg/L) | |

A comparison of the primary (, <0.000800 mg/L) and duplicate (<0.000800 mg/L) samples from EB-05 indicates no deviation. The case narrative indicates some samples were diluted prior to analysis due to the nature of the samples (concentration of target compounds). Figure 6a presents a map of dissolved benzene concentrations from the May 2013 sampling event.

October 2013 Benzene Results

The following samples exhibited benzene concentrations above the WQCC human health standard of 0.01 mg/L:

- | | |
|------------------------|----------------------|
| • MW-02-07 (5.09 mg/L) | MW 2-15 (0.376 mg/L) |
| • MW-2-16 (0.384 mg/L) | MW 2-18 (15.5 mg/L) |
| • MW-03 (2.42 mg/L) | MW 3-03 (1.52 mg/L) |
| • MW-07 (14.6 mg/L) | MW-12 (1.48 mg/L) |
| • MW-14 (0.0941 mg/L) | MW-22 (5.48 mg/L) |
| • P-02 (0.122 mg/L) | EB-03 (0.0982 mg/L) |

No data quality exceptions were noted in the DHL case narratives. Figure 6b presents a concentration map of dissolved benzene concentrations reported in groundwater samples from the October 2013 sampling event.

3.2 Dissolved Metals Analysis

Samples for dissolved metals were collected during the October 2013 event and reported dissolved chromium above the WQCC human health standard of 0.05 mg/L in wells MW-07 (0.577 mg/L), MW-02-03 (0.0545 mg/L) and EB-04 (0.13 mg/L). These results are consistent with previous sampling events. The remaining dissolved metal compounds (arsenic, barium, cadmium, lead, mercury,, selenium and silver were not reported at concentrations exceeding the WQCC human health standards.

Chromium concentrations indicate no clear increasing or decreasing trends. The spatial distribution of chromium above the WQCC human health standard of 0.5 mg/L does not indicate a possible source. The highest chromium was reported in well EB-04 which is located hydraulically cross-gradient from the Facility. Figure 7 presents a map showing dissolved chromium in groundwater exceeding the WQCC human health standard.

(Metals are sampled once annually and were sampled in October 2013)

3.3 General Chemistry Analysis

Sulfate and TDS are naturally elevated above the WQCC domestic water quality standards of 600 and 1,000 mg/L due to interaction groundwater in the Tansill formation and dissolution of gypsum. Chloride is variable in concentration but exceeded the WQCC domestic water quality standard of 250 mg/L in wells MW 02-02, MW 2-05, MW 2-15, MW-08, MW-09, MW-15, MW-16, MW-18, MW-23, EB-04, and P-04. Chloride, sulfate, and TDS concentrations over time have very similar trends and appear linear with neither increasing nor decreasing trends exhibited. A leak in the cooling tower basin and dissolution of mineral in the Tansill formation is suspected as the source for elevated chloride, sulfate and TDS near the northwest corner of the Facility. Dispersion of the chloride and TDS to the north and northeast is due principally to groundwater mounding near the center of the Facility which causes groundwater to flow north.

May 2013 Results

Chloride – The following samples exhibited chloride concentrations above the WQCC domestic water quality standard of 250 mg/L:

- | | |
|--------------------------|----------------------|
| • MW- 2-02 (10,800 mg/L) | MW-2-05 (5,840 mg/L) |
| • MW 2-15 (835 mg/L) | MW-08 (278 mg/L) |
| • MW-09 (318 mg/L) | MW-15 (6,360 mg/L) |
| • MW-16 (353 mg/L) | MW-18 (734 mg/L) |
| • MW-23 (326 mg/L) | EB-04 (481 mg/L) |

Data quality exceptions were noted in the DHL case narratives for chloride. Figure 8a presents a chloride concentration map of reported chloride concentrations in groundwater during the May 2013 sampling event.

Sulfate – all sulfate concentrations exceeded the WQCC domestic water quality standard of 600 mg/L and ranged from 1,270 mg/L (MW-09) to 355,000 mg/L (MW-2-05). The sulfate is the result of dissolution of minerals, principally gypsum, in the Tansill formation. The sulfate concentration at MW-2-02 (344,000 mg/L) and MW-2-05 (355,000 mg/L) is likely the result of a leak from the cooling tower basin and dissolution of minerals in the Tansill formation.

TDS – all TDS concentrations exceeded the WQCC domestic water quality standard of 1,000 mg/L and ranged from 2,640 mg/L (MW-3-03) to 533,000 mg/L (MW-2-05). The TDS is the result of dissolution of minerals, principally gypsum, in the Tansill formation. The TDS concentration at MW-2-02 (507,000 mg/L) and MW-2-05 (533,000 mg/L) is likely the result of a leak from the cooling tower basin and dissolution of minerals in the Tansill formation.

No data quality exceptions were noted in the DHL case narratives. Figure 9a presents a concentration map of TDS in groundwater during the May 2013 sampling event.

October 2013 Results

Chloride – The following samples exhibited chloride concentrations above the WQCC domestic water quality standard of 250 mg/L during the October 2013 event:

- | | |
|--------------------------|-----------------------|
| • MW- 2-02 (16,400 mg/L) | MW-2-05 (10,400 mg/L) |
| • MW 2-15 (738 mg/L) | MW-15 (1,320 mg/L) |
| • MW-16 (381 mg/L) | MW-18 (606 mg/L) |
| • MW-23 (333 mg/L) | EB-04 (387 mg/L) |

Data quality exceptions were noted in the DHL case narratives. The matrix spike and matrix spike recoveries were out of control limits. This is flagged accordingly in the QC summary report. . Figure 8b presents a concentration map for observed chloride concentrations during the October 2013 sampling event.

Sulfates – all sulfate concentrations exceeded the WQCC domestic water quality standard of 600 mg/L and ranged from 1,020 mg/L (MW-3-13) to 237,000 mg/L (MW-2-05). The sulfate is the result of dissolution of minerals, principally gypsum, in the Tansill formation. The sulfate concentration at MW-2-02 (233,000 mg/L) and MW-2-05 (237,000 mg/L) is likely the result of a leak from the cooling tower basin and dissolution of minerals in the Tansill formation.

TDS – all TDS concentrations exceeded the WQCC domestic water quality standard of 1,000 mg/L and ranged from 2,460 mg/L (MW-8) to 458,000 mg/L (MW-2-05). The TDS is the result of dissolution of minerals, principally gypsum, in the Tansill formation. The TDS concentration at MW-2-02 (440,000 mg/L) and MW-2-05 (458,000 mg/L) is likely the result of a leak from the cooling tower basin and dissolution of minerals in the Tansill formation.

Data quality exceptions were noted in the DHL case narratives. The RPD of the sample duplicate was slightly above the method control limit. This is flagged accordingly in the QC Summary report. The associated LCS was within method control limits. No further corrective action was taken. Figure 9b presents a map showing TDS concentrations for the October 2013 sampling event.

4.0 CONCLUSIONS

The following conclusions are based on field observations and laboratory analysis of groundwater samples during the reporting period.

1. Groundwater is mounded beneath the Facility which causes a radial flow pattern. Mounding is occurs near the center of the Facility, in the vicinity of well MW-07, and causes a radial groundwater flow pattern. The regional groundwater flow direction is to the east and southeast, therefore, monitoring well EB-6, is considered up gradient to the Facility;
2. LNAPL was observed in 19 wells during the reporting period with apparent thicknesses ranging from about 0.02 feet (MW-14) to 5.12 feet (MW-06). LNAPL is most prevalent near the west central area of the Facility where employees have stated that under previous ownership leaks were observed in the inlet gas pipelines which were replaced. No overall increasing or decreasing trends in LNAPL thickness were observed during the reporting period except in wells MW-03-02, MW-06 and EB-08. Wells MW-03-02 and MW-06 are located near the southwest quadrant of the Facility and the LNAPL thickness increase may be attributed to groundwater migration since the wells are located southeast (hydraulically down gradient) of the area where LNAPL is most prevalent. Well EB-08 is located east of the Facility. LNAPL was not observed in this well until March 15, 2011 when it was measured at 0.02 feet. Presently the LNAPL thickness is about 2.30 feet. The LNAPL appears to be migrating with groundwater since prior to March 15, 2011, groundwater samples reported dissolved benzene concentrations between 2.58 to 5.77 mg/L. The dissolved benzene concentrations are well below the solubility limit of 1,770 mg/L. The LNAPL thickness in the remaining wells appears to fluctuate with seasonal groundwater fluctuation;
3. Dissolved benzene was observed in groundwater samples at concentrations above the WQCC human health standard (0.01 mg/L) from about 12 monitoring wells during the reporting period. The benzene concentrations ranged from 0.0234 mg/L (MW-23) to 19.2 mg/L (MW-02-18). The dissolved benzene concentrations do not show overall increasing or decreasing trends;
4. Chromium was the only WQCC human health metal reported at in groundwater samples at concentrations above the standard (0.05 mg/L). Chromium was reported at the following concentrations: 0.0545 mg/L (MW-02-03), 0.0577 mg/L (EB-04) and 0.13 mg/L (MW-07). The highest chromium concentration was observed in well MW-07 where groundwater mounding is most prevalent. Well EB-4 is located southwest and hydraulically cross gradient from the Facility. Chromium is not present above the method detection limit (MDL) or WQCC human health standard down gradient of the Facility. There is no apparent increasing or decreasing trend in dissolved chromium concentration;
5. Chloride, sulfate and TDS were elevated in groundwater in the vicinity of the cooling tower near the north side of the Facility. The elevated chloride, sulfate and TDS are attributed to concentration of these constituents resulting from a leak in the concrete basin of the cooling tower. The elevated chloride, sulfate and TDS migrate to the north due to groundwater mounding and are decreasing in concentration as observed in well MW-15. Sulfate is naturally occurring and elevated due to dissolution of gypsum with concentrations exceeding the WQCC domestic water quality standard (600 mg/L) in all wells.

5.0 RECOMMENDATIONS

On January 15, 2013, a report titled, *“Groundwater Abatement Plan, Empire Abo Gas Plant, Eddy County, New Mexico”* was submitted to the OCD. The plan proposed using nine (9) recovery wells for LNAPL recovery and plume control. The plan was contingent on the Office of the New Mexico State Engineer (NMOSE) granting approval for recovering the groundwater and permit for constructing and operating a salt water disposal (SWD) or acid gas injection (AGI) well for managing effluent from the groundwater remediation. On March 8, 2013, the OSE approved the request for recovering groundwater without the need for an appropriation. An evaluation of the abatement option, including permitting and installing an SWD or AGI well, is under consideration by AKA. Appendix B presents the NMOSE letter approving groundwater extraction.

TABLES

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
MW-2	12/29/1991	37.88	4	3,545.3	19 - 34	2.89	3,548.19	2/13/2007	--	32.75	--	3,515.44
								3/26/2007	--	32.85	--	3,515.34
								6/18/2007	--	33.90	--	3,514.29
								9/17/2007	--	33.83	--	3,514.36
								12/10/2007	--	34.02	--	3,514.17
								3/11/2008	--	34.03	--	3,514.16
								9/15/2008	--	33.96	--	3,514.23
								3/9/2009	--	34.00	--	3,514.19
								7/13/2009	--	33.91	--	3,514.28
								9/14/2009	--	33.95	--	3,514.24
								3/29/2010	--	34.02	--	3,514.17
								9/13/2010	--	33.98	--	3,514.21
								3/14/2011	--	34.05	--	3,514.14
								3/16/2011	--	34.05	--	3,514.14
								10/11/2011	--	34.35	--	3,513.84
								5/30/2012	--	34.10	--	3,514.09
								9/24/2012	--	34.07	--	3,514.12
								5/20/2013	--	34.00	--	3,514.19
								10/15/2013	--	34.05	--	3,514.14
MW-02-02	10/6/1992	48.65	4	3,549.3	35 - 45	2.96	3,552.26	10/6/1992	--	39.00	--	3,513.26
								3/26/2007	--	26.50	--	3,525.76
								6/18/2007	--	26.86	--	3,525.40
								9/17/2007	--	27.00	--	3,525.26
								12/10/2007	--	27.03	--	3,525.23
								3/11/2008	--	27.13	--	3,525.13
								9/15/2008	--	27.25	--	3,525.01
								3/9/2009	--	26.96	--	3,525.30
								7/13/2009	--	27.06	--	3,525.20
								9/14/2009	--	27.09	--	3,525.17
								3/29/2010	--	27.00	--	3,525.26
								9/13/2010	--	27.12	--	3,525.14
								3/14/2011	--	27.13	--	3,525.13
								3/16/2011	--	27.13	--	3,525.13
								10/11/2011	--	26.97	--	3,525.29
								5/30/2012	--	26.77	--	3,525.49
								9/24/2012	--	26.94	--	3,525.32
								5/20/2013	--	26.91	--	3,525.35
								10/15/2013	--	27.00	--	3,525.26
MW-02-03	9/28/1992	108.50	4	3,553.0	95 - 105	3.03	3,556.03	9/28/1992	--	97.00	--	3,459.03
								2/12/2007	63.15	63.20	0.05	3,492.83
								3/27/2007	--	62.96	--	3,493.07
								6/18/2007	--	62.26	--	3,493.77
								9/17/2007	--	62.08	--	3,493.95
								12/10/2007	--	62.56	--	3,493.47
								3/11/2008	--	62.01	--	3,494.02
								9/15/2008	--	79.15	--	3,476.88
								3/9/2009	--	64.20	--	3,491.83
								7/13/2009	--	63.95	--	3,492.08
								9/14/2009	--	63.43	--	3,492.60
								3/29/2010	--	67.17	--	3,488.86
								9/13/2010	--	71.41	--	3,484.62
								3/15/2011	--	73.57	--	3,482.46
								10/11/2011	--	72.75	--	3,483.28
								5/30/2012	--	77.23	--	3,478.80
								9/24/2012	--	78.16	--	3,477.87
								5/20/2013	--	77.55	--	3,478.48
								10/15/2013	--	79.00	--	3,477.03
MW-02-04	9/30/1992	61.60	4	3,550.9	45 - 55	2.89	3,553.79	9/30/1992	--	50.00	--	3,503.79
								3/26/2007	--	53.35	--	3,500.44
								6/18/2007	--	50.67	--	3,503.12
								9/17/2007	--	51.69	--	3,502.10
								12/10/2007	--	52.32	--	3,501.47
								3/11/2008	--	52.74	--	3,501.05
								9/15/2008	--	51.52	--	3,502.27
								3/9/2009	--	53.06	--	3,500.73
								7/13/2009	sheen	53.20	sheen	3,500.59

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
MW-02-04	9/30/1992	61.60	4	3,550.9	45 - 55	2.89	3,553.79	9/14/2009	--	48.14	--	3,505.65
								3/29/2010	--	52.30	--	3,501.49
								9/13/2010	--	52.52	--	3,501.27
								3/15/2011	--	54.07	--	3,499.72
								10/11/2011	--	54.20	--	3,499.59
								5/30/2012	--	51.82	--	3,501.97
								9/24/2012	--	53.18	--	3,500.61
								5/20/2013	--	51.45	--	3,502.34
								10/15/2013	--	51.00	--	3,502.79
MW-02-05	10/6/1992	52.31	4	3,549.9	40 - 50	2.79	3,552.69	10/6/1992	--	43.00	--	3,509.69
								3/26/2007	--	27.21	--	3,525.48
								6/18/2007	--	27.40	--	3,525.29
								9/17/2007	--	27.56	--	3,525.13
								12/10/2007	--	27.58	--	3,525.11
								3/11/2008	--	27.76	--	3,524.93
								9/15/2008	--	27.50	--	3,525.19
								3/9/2009	--	27.53	--	3,525.16
								7/13/2009	--	27.62	--	3,525.07
								9/14/2009	--	27.65	--	3,525.04
								3/29/2010	--	27.53	--	3,525.16
								9/13/2010	--	27.67	--	3,525.02
								3/14/2011	--	27.62	--	3,525.07
								3/16/2011	--	27.62	--	3,525.07
								10/11/2011	--	27.51	--	3,525.18
								5/30/2012	--	27.29	--	3,525.40
								9/24/2012	--	27.50	--	3,525.19
								5/20/2013	--	27.45	--	3,525.24
								10/15/2013	--	27.60	--	3,525.09
MW-02-06	9/29/1992	23.90	4	3,548.3	11 - 21	2.52	3,550.82	9/29/1992	--	18.00	--	3,532.82
								3/26/2007	--	18.18	--	3,532.64
								6/18/2007	--	16.48	--	3,534.34
								9/17/2007	--	15.60	--	3,535.22
								12/10/2007	--	16.83	--	3,533.99
								3/11/2008	--	17.96	--	3,532.86
								9/15/2008	--	14.98	--	3,535.84
								3/9/2009	--	17.34	--	3,533.48
								7/13/2009	--	19.19	--	3,531.63
								9/14/2009	--	19.11	--	3,531.71
								3/29/2010	19.10	19.33	0.23	3,531.65*
								9/13/2010	9.10	10.90	1.80	3,541.18*
								3/14/2011	9.10	9.61	0.51	3,541.57*
								10/11/2011	6.62	7.04	0.42	3,544.07*
								5/30/2012	10.68	10.93	0.25	3,540.06*
								9/24/2012	6.66	6.79	0.13	3,544.41*
								5/20/2013	19.25	19.30	0.05	3,531.55*
								10/15/2013	10.55	11.00	0.45	3,540.13*
MW-02-07	10/5/1992	63.80	4	3,544.2	53 - 63	2.80	3,547.00	10/5/1992	--	57.00	--	3,490.00
								3/26/2007	--	46.75	--	3,500.25
								6/18/2007	--	45.89	--	3,501.11
								9/17/2007	--	44.31	--	3,502.69
								12/10/2007	--	46.51	--	3,500.49
								3/11/2008	--	46.73	--	3,500.27
								9/15/2008	--	45.78	--	3,501.22
								3/9/2009	--	48.64	--	3,498.36
								7/13/2009	--	46.95	--	3,500.05
								9/14/2009	--	46.57	--	3,500.43
								3/29/2010	--	54.52	--	3,492.48
								9/13/2010	--	56.64	--	3,490.36
								3/14/2011	--	57.32	--	3,489.68
								3/17/2011	--	57.32	--	3,489.68
								10/11/2011	--	56.78	--	3,490.22
								5/30/2012	--	59.67	--	3,487.33
								9/25/2012	--	61.10	--	3,485.90
								5/20/2013	--	58.00	--	3,489.00
								10/15/2013	--	60.40	--	3,486.60

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
MW-02-09	10/7/1992	43.97	4	3,543.5	30 - 40	3.02	3,546.52	10/7/1992	--	31.00	--	3,515.52
								3/27/2007	34.84	38.41	3.57	3,510.60*
								6/18/2007	35.45	35.62	0.17	3,511.10*
MW-02-09	10/7/1992	43.97	4	3,543.5	30 - 40	3.02	3,546.52	9/17/2007	35.66	38.72	3.06	3,509.94*
								12/10/2007	35.78	39.18	3.40	3,509.72*
								3/11/2008	38.19	39.01	0.82	3,508.08*
								9/15/2008	25.89	34.72	8.83	3,517.98*
								3/9/2009	35.18	39.07	3.89	3,510.17*
								7/14/2009	--	33.11	--	3,513.41
								9/14/2009	30.64	42.06	11.42	3,512.45*
								3/29/2010	35.34	38.45	3.11	3,510.25*
								9/13/2010	35.51	37.73	2.22	3,510.34*
								10/11/2011	--	39.20	--	3,507.32
								5/30/2012	35.33	38.28	2.95	3,510.32*
								9/24/2012	35.35	38.66	3.31	3,510.18*
								5/20/2013	34.00	38.45	4.45	3,511.18*
								10/15/2013	34.55	37.70	3.15	3,511.02*
MW-02-10	9/29/1992	72.90	4	3,545.4	65 - 75	3.00	3,548.40	9/29/1992	--	64.00	--	3,484.40
								3/27/2007	52.38	*	>10.52	--
								6/18/2007	52.74	58.38	5.64	3,493.92*
								9/17/2007	52.48	58.76	6.28	3,494.04*
								12/10/2007	53.18	58.22	5.04	3,493.70*
								3/11/2008	53.22	55.14	1.92	3,494.60*
								9/15/2008	54.12	62.90	8.78	3,491.65*
								3/9/2009	54.60	**	>8.30	--
								7/14/2009	54.12	**	>8.78	--
								9/14/2009	53.80	**	>9.10	--
								3/29/2010	58.61	63.72	5.11	3,488.26*
								9/13/2010	59.65	**	>3.25	--
								3/15/2011	61.16	--	--	--
								10/11/2011	60.49	--	--	--
MW-02-11	9/29/1992	23.42	4	3,544.0	10 - 20	2.79	3,546.79	9/29/1992	--	--	--	--
								3/26/2007	--	22.62	--	3,524.17
								6/18/2007	18.05	19.30	1.25	3,528.36*
								9/17/2007	20.82	22.02	1.20	3,525.61*
								12/10/2007	21.67	22.18	0.51	3,524.97*
								3/11/2008	23.79	26.79	3.00	3,522.10*
								9/15/2008	21.72	22.27	0.55	3,524.90*
								3/9/2009	22.52	**	**	--
								7/14/2009	--	22.91	--	3,523.88
								9/14/2009	21.46	22.11	0.65	3,525.13*
								3/29/2010	22.10	22.73	0.63	3,524.45*
								9/13/2010	20.87	21.62	0.75	3,525.69*
								3/14/2011	20.01	20.50	0.49	3,526.63*
								10/11/2011	53.46	57.56	--	3,489.23
MW-02-12	10/1/1992	85.85	4	3,540.3	70 - 80	3.02	3,543.32	5/30/2012	17.81	17.92	0.11	3,528.95*
								9/24/2012	17.67	17.75	0.08	3,529.10*
								5/20/2013	21.78	21.90	0.12	3,524.97*
								10/15/2013	18.25	18.30	0.05	3,528.52*
								10/1/1992	--	74.00	--	3,469.32
								2/12/2007	**	55.15	**	3,488.17
								3/27/2007	55.10	55.50	0.40	3,488.10*
								6/18/2007	**	54.20	**	3,489.12
								9/17/2007	**	54.29	**	3,489.03
								12/10/2007	**	--	**	--
								3/11/2008	**	54.32	**	3,489.00
								9/15/2008	**	55.89	**	3,487.43
								3/9/2009	**	56.04	**	3,487.28
								7/14/2009	**	56.23	**	3,487.09
								9/14/2009	55.30	55.45	0.15	3,487.97*
								3/29/2010	58.81	58.91	0.10	3,484.48*
								9/13/2010	63.36	63.37	0.01	3,479.95*

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								3/14/2011	--	65.26	--	3,478.06
								10/11/2011	--	64.54	--	3,478.78
								5/30/2012	--	64.08	--	3,479.24
								9/24/2012	67.78	67.80	0.02	3,475.53*
								5/20/2013	--	66.84	--	3,476.48
								10/15/2013	--	67.80	--	3,475.52
MW-02-13	10/7/1992	50.05	4	3,542.7	36 - 46	2.89	3,545.59	10/7/1992	--	40.00	--	3,505.59
								2/12/2007	41.20	42.65	1.45	3,503.95*
								3/27/2007	41.25	42.23	0.98	3,504.05*
								6/18/2007	36.66	39.81	3.15	3,507.98*
								9/17/2007	38.31	41.44	3.13	3,506.34*
								12/10/2007	39.90	43.00	3.10	3,504.76*
								3/11/2008	41.03	43.24	2.21	3,503.90*
								9/15/2008	sheen	36.65	sheen	3,508.94
								3/9/2009	40.81	43.98	3.17	3,503.83*
								7/14/2009	--	39.61	--	3,505.98
								9/14/2009	34.80	44.13	9.33	3,507.99*
								3/29/2010	40.28	43.92	3.64	3,504.18*
								9/13/2010	41.38	47.01	5.63	3,502.52
								3/15/2011	42.80	46.75	3.95	3,501.60*
								10/11/2011	40.32	45.59	--	3,500.00
								5/30/2012	41.06	47.39	6.33	3,502.63*
								9/24/2012	42.70	46.83	4.13	3,501.65*
								5/20/2013	43.80	47.42	3.62	3,500.70*
								10/15/2013	43.82	47.40	3.58	3,500.70*
MW-02-14	10/5/1992	78.80	4	3,541.3	63 - 73	3.23	3,544.53	10/5/1992	--	67.00	--	3,477.53
								3/27/2007	46.40	46.78	0.38	3,498.02*
								6/18/2007	46.44	46.89	0.45	3,497.95*
								9/17/2007	46.09	46.58	0.49	3,498.29*
								12/10/2007	46.94	47.60	0.66	3,497.39*
								3/11/2008	47.53	48.01	0.48	3,496.86*
								9/15/2008	47.31	47.87	0.56	3,497.05*
								3/9/2009	49.40	49.68	0.28	3,495.05*
								7/14/2009	--	48.75	--	3,495.78
								9/14/2009	--	48.60	--	3,495.93
								3/29/2010	53.33	54.48	1.15	3,490.85*
								9/13/2010	57.08	58.03	0.95	3,487.16*
								3/15/2011	57.39	58.01	0.62	3,486.95*
								10/11/2011	57.48	58.14	--	3,486.39
								5/30/2012	58.70	59.32	0.62	3,485.64*
								9/24/2012	60.13	60.98	0.85	3,484.14*
								5/20/2013	59.47	60.35	0.88	3,484.80*
								10/15/2013	60.15	60.85	0.70	3,484.17*
MW-02-15	10/2/1992	75.95	4	3,540.2	60 - 70	3.09	3,543.29	10/2/1992	--	64.00	--	3,479.29
								3/27/2007	--	50.76	--	3,492.53
								6/18/2007	--	50.73	--	3,492.56
								9/17/2007	--	50.78	--	3,492.51
								12/10/2007	--	51.41	--	3,491.88
								3/11/2008	--	51.34	--	3,491.95
								9/15/2008	--	52.09	--	3,491.20
								3/9/2009	--	53.08	--	3,490.21
								7/13/2009	--	52.62	--	3,490.67
								9/14/2009	--	52.43	--	3,490.86
								3/29/2010	--	56.74	--	3,486.55
								9/13/2010	--	59.04	--	3,484.25
								3/14/2011	--	59.58	--	3,483.71
								10/11/2011	--	59.23	--	3,484.06
								5/30/2012	--	60.79	--	3,482.50
								9/25/2012	--	61.68	--	3,481.61
								5/20/2013	--	61.04	--	3,482.25
								10/15/2013	--	61.50	--	3,481.79
MW-02-16	9/30/1992	86.10	4	3,541.0	70 - 80	3.24	3,544.24	9/30/1992	--	74.00	--	3,470.24
								2/12/2007	--	55.92	--	3,488.32
								3/27/2007	--	55.59	--	3,488.65
								6/18/2007	--	55.09	--	3,489.15
								9/17/2007	--	55.18	--	3,489.06

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								12/10/2007	--	55.63	--	3,488.61
								3/11/2008	--	55.53	--	3,488.71
								9/15/2008	--	56.40	--	3,487.84
								3/9/2009	--	56.32	--	3,487.92
								7/13/2009	--	56.50	--	3,487.74
								9/14/2009	--	55.94	--	3,488.30
								3/29/2010	--	59.13	--	3,485.11
								9/13/2010	--	64.08	--	3,480.16
								3/14/2011	--	65.64	--	3,478.60
MW-02-16	9/30/1992	86.10	4	3,541.0	70 - 80	3.24	3,544.24	10/11/2011	--	65.20	--	3,479.04
								5/30/2012	--	67.13	--	3,477.11
								9/24/2012	--	67.87	--	3,476.37
								5/20/2013	--	67.25	--	3,476.99
								10/15/2013	--	67.90	--	3,476.34
MW-02-18	10/7/1992	39.80	4	3,542.7	26 - 36	3.00	3,545.70	10/7/1992	--	30.00	--	3,515.70
								2/12/2007	--	21.84	--	3,523.86
								3/26/2007	--	21.36	--	3,524.34
								6/18/2007	--	17.48	--	3,528.22
								9/17/2007	--	20.23	--	3,525.47
								12/10/2007	--	20.69	--	3,525.01
								3/11/2008	--	21.73	--	3,523.97
								9/15/2008	--	20.34	--	3,525.36
								3/9/2009	--	21.65	--	3,524.05
								7/13/2009	--	22.04	--	3,523.66
								9/14/2009	--	20.73	--	3,524.97
								3/29/2010	--	21.08	--	3,524.62
								9/13/2010	--	20.02	--	3,525.68
								3/14/2011	--	19.37	--	3,526.33
								10/11/2011	--	15.53	--	3,530.17
								5/30/2012	--	17.09	--	3,528.61
								9/25/2012	--	17.24	--	3,528.46
								5/20/2013	--	20.65	--	3,525.05
								10/15/2013	--	17.15	--	3,528.55
MW-03	12/20/1991	63.30	4	3,552.4	69 - 89	2.90	3,555.30	--	--	--	--	--
								3/27/2007	--	59.51	--	3,495.79
								6/18/2007	58.74	59.23	0.49	3,496.41*
								9/17/2007	58.39	59.46	1.07	3,496.59*
								12/10/2007	59.10	60.28	1.18	3,495.84*
								3/11/2008	58.47	61.11	2.64	3,496.04*
								9/15/2008	60.98	64.03	3.05	3,493.40*
								3/9/2009	60.93	63.60	2.67	3,493.57*
								7/13/2009	--	63.36	--	3,491.94
								9/14/2009	60.11	63.11	3.00	3,494.29*
								3/29/2010	66.15	69.32	3.17	3,488.19*
								9/13/2010	67.92	72.14	4.22	3,486.11*
								3/15/2011	70.13	72.06	1.93	3,484.58*
								10/11/2011	68.27	70.64	2.37	3,486.32*
								5/30/2012	75.64	76.02	0.38	3,479.55*
								9/24/2012	76.11	76.32	0.21	3,479.13*
								5/20/2013	--	72.62	--	3,482.68
								10/15/2013	--	75.90	--	3,479.40
MW-03-01	5/3/1994	73.40	4	3,539.9	50 - 70	2.66	3,542.56	--	--	--	--	--
								3/27/2007	--	43.78	--	3,498.78
								6/18/2007	--	43.65	--	3,498.91
								9/17/2007	--	43.22	--	3,499.34
								12/10/2007	--	44.09	--	3,498.47
								3/11/2008	--	43.98	--	3,498.58
								9/15/2008	40.88	56.37	15.49	3,497.03*
								3/9/2009	44.73	55.42	10.69	3,494.63*
								7/13/2009	44.00	55.16	11.16	3,495.21*
								9/14/2009	44.00	55.10	11.10	3,495.23*
								3/29/2010	51.64	55.95	4.31	3,489.63*
								9/13/2010	53.55	55.79	2.24	3,488.33*
								3/15/2011	53.79	55.67	1.88	3,488.21*
								10/11/2011	54.12	55.72	1.60	3,487.96*
								5/30/2012	55.60	57.28	1.68	3,486.46*

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								9/24/2012 5/20/2013 10/15/2013	57.32 -- 58.10	58.50 57.50 58.70	1.18 -- 0.60	3,484.88* 3,485.06 3,484.28*
MW-03-02	5/4/1994	105.75	4	3,538.6	60 - 100	2.48	3,541.08	-- 3/27/2007 6/18/2007 9/17/2007 12/10/2007 3/11/2008 9/15/2008 3/9/2009	-- -- -- -- -- -- --	-- 56.33 56.13 56.19 56.38 53.91 56.40 59.60	-- -- -- -- -- -- --	-- 3,484.75 3,484.95 3,484.89 3,484.70 3,487.17 3,484.68 3,481.48
MW-03-02	5/4/1994	105.75	4	3,538.6	60 - 100	2.48	3,541.08	7/14/2009 9/14/2009 3/29/2010 9/13/2010 3/14/2011 10/11/2011 5/30/2012 9/24/2012 5/20/2013 10/15/2013	** ** 58.73 64.70 67.43 66.25 67.50 68.00 68.75 65.80	-- 55.96 58.92 64.73 67.47 66.29 67.60 68.63 69.10 69.00	-- -- 0.19 0.03 0.04 0.04 0.10 0.63 0.35 3.20	3,484.48 3,485.12 3,482.28* 3,476.37* 3,473.64* 3,474.82* 3,473.55* 3,472.89* 3,472.22* 3,474.32*
MW-03-03	5/4/1994	85.40	4	3,542.3	55 - 80	2.42	3,544.72	-- 3/26/2007 6/18/2007 9/17/2007 12/10/2007 3/11/2008 9/15/2008 3/9/2009 7/14/2009 9/14/2009 3/29/2010 9/13/2010 3/14/2011 10/11/2011 5/30/2012 9/24/2012 5/20/2013 10/15/2013	-- 59.59 -- -- -- -- 60.61 sheen -- 59.98 63.49 68.91 69.66 -- -- 71.46 -- --	-- 59.60 58.96 59.28 59.52 59.43 60.62 60.69 60.92 60.00 63.68 68.93 69.67 69.17 70.92 71.48 71.30 71.65	-- 0.01 -- -- -- 0.01 sheen -- 0.02 0.19 0.02 0.01 -- -- 0.02 -- --	-- 3,485.12 3,485.76 3,485.44 3,485.20 3,485.29 3,484.10 3,484.03 3,483.80 3,484.73* 3,481.17* 3,475.80* 3,475.05 3,475.55 3,473.80 3,473.25* 3,473.42 3,473.07
MW-03-04	5/4/1994	117.50	4	3,555.7	65 - 110	2.75	3,558.45	-- 3/26/2007 6/18/2007 9/17/2007 12/10/2007 3/11/2008 9/15/2008 3/9/2009 7/14/2009 9/14/2009 3/29/2010 9/13/2010 3/15/2011 10/11/2011 5/30/2012 9/24/2012 5/20/2013 10/15/2013	-- 60.85 60.68 60.28 60.43 61.01 62.16 62.02 61.67 61.35 67.63 68.73 71.00 69.58 79.85 80.92 78.12 81.55	-- 60.98 61.51 61.44 61.34 61.98 62.95 62.84 62.50 62.14 68.40 70.29 72.56 71.11 80.37 81.00 78.42 81.95	-- 0.13 0.83 1.16 0.91 0.97 0.79 0.82 0.83 0.79 0.77 1.56 1.56 1.53 0.52 0.08 0.30 0.40	-- 3,497.56* 3,487.52* 3,497.82* 3,497.75* 3,497.15* 3,496.05* 3,496.18* 3,496.53* 3,496.86* 3,490.59* 3,489.25* 3,486.98* 3,488.41* 3,478.44* 3,477.51* 3,480.24* 3,476.78*
MW-04	12/21/1991	62.59	4	3,547.8	45 - 60	3.19	3,550.99	-- 3/26/2007 6/18/2007 9/17/2007 12/10/2007 3/11/2008 9/15/2008 3/9/2009	-- -- 47.18 * 45.49 47.81 45.57 46.90	-- 48.15 48.23 44.41 47.45 50.18 50.66 51.55	-- -- 1.05 * 1.96 2.37 5.09 4.65	-- 3,502.84 3,503.49* 3,506.58 3,504.91* 3,502.47* 3,503.89* 3,502.69*

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								7/14/2009	42.20	48.00	5.80	3,507.05*
								9/14/2009	41.88	51.28	9.40	3,506.29*
								3/29/2010	51.80	51.99	0.19	3,499.13*
								9/13/2010	49.12	51.09	1.97	3,501.28*
								3/15/2011	51.32	53.05	1.73	3,499.15*
								10/11/2011	48.02	50.94	2.92	3,502.09*
								5/30/2012	55.94	56.39	0.45	3,494.91*
								9/24/2012	53.56	53.65	0.09	3,487.40*
								5/20/2013	52.03	52.10	0.07	3,498.94*
								10/15/2013	53.25	53.45	0.20	3,497.68*
MW-05	12/22/1991	95.30	4	3,540.6	71 - 96	3.17	3,543.77	--	--	--	--	--
								3/27/2007	--	54.69	--	3,489.08
								6/18/2007	--	54.18	--	3,489.59
								9/17/2007	--	54.22	--	3,489.55
MW-05	12/22/1991	95.30	4	3,540.6	71 - 96	3.17	3,543.77	12/10/2007	--	54.71	--	3,489.06
								3/11/2008	--	54.58	--	3,489.19
								9/15/2008	--	55.92	--	3,487.85
								3/9/2009	--	55.84	--	3,487.93
								7/13/2009	--	55.97	--	3,487.80
								9/14/2009	--	55.04	--	3,488.73
								3/29/2010	--	58.56	--	3,485.21
								9/13/2010	--	63.40	--	3,480.37
								3/14/2011	--	64.84	--	3,478.93
								3/16/2011	--	64.84	--	3,478.93
								10/11/2011	--	64.36	--	3,479.41
								5/30/2012	--	66.72	--	3,477.05
								9/24/2012	--	67.40	--	3,476.37
								5/20/2013	--	66.73	--	3,477.04
								10/15/2013	--	67.60	--	3,476.17
MW-06	12/22/1991	76.90	4	3,541.8	30 - 50	2.70	3,544.50	--	--	--	--	--
								3/27/2007	43.40	44.75	1.35	3,500.69*
								6/18/2007	35.93	36.10	0.17	3,508.52*
								9/17/2007	37.89	37.96	0.07	3,506.59*
								12/10/2007	39.84	40.03	0.19	3,504.60*
								3/11/2008	40.18	41.09	0.91	3,504.05*
								9/15/2008	31.74	45.13	13.39	3,508.74*
								3/9/2009	38.32	45.66	7.34	3,503.98*
								7/14/2009	--	37.57	--	3,506.93
								9/14/2009	32.65	44.15	11.50	3,508.40*
								3/29/2010	36.39	46.62	10.23	3,505.04*
								9/13/2010	37.59	46.89	9.30	3,504.12*
								3/15/2011	40.18	46.85	6.67	3,502.32*
								10/11/2011	36.43	46.50	10.07	3,505.05*
								5/30/2012	37.76	46.63	8.87	3,504.08*
								9/24/2012	39.69	46.55	6.86	3,502.75*
								5/20/2013	42.48	46.30	3.82	3,500.88*
								10/15/2013	41.68	46.80	5.12	3,501.28*
MW-07	12/22/1991	26.35	4	3,546.0	11 - 26	0.49	3,546.49	--	--	--	--	--
								3/26/2007	--	8.20	--	3,538.29
								6/18/2007	--	8.13	--	3,538.36
								9/17/2007	--	8.06	--	3,538.43
								12/10/2007	--	8.58	--	3,537.91
								3/11/2008	--	9.38	--	3,537.11
								9/15/2008	7.50	7.61	0.11	3,538.96*
								3/9/2009	9.20	9.50	0.30	3,537.20*
								7/13/2009	sheen	3.73	sheen	3,542.76
								9/14/2009	3.78	*	*	--
								3/29/2010	8.45	8.89	0.44	3,537.91*
								9/13/2010	7.93	7.95	0.02	3,538.55*
								3/14/2011	8.36	8.37	0.01	3,538.13
								3/17/2011	--	7.95	--	3,538.54
								10/11/2011	--	8.38	--	3,538.11
								5/30/2012	--	7.64	--	3,538.85
								9/24/2012	--	7.17	--	3,539.32
								5/20/2013	--	4.30	--	3,542.19
								10/15/2013	--	8.05	--	3,538.44

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
MW-08	12/29/1991	88.95	4	3,540.5	69 - 89	3.23	3,543.73	--	--	--	--	--
								2/13/2007	--	54.19	--	3,489.54
								3/27/2007	--	54.62	--	3,489.11
								6/18/2007	--	53.20	--	3,490.53
								9/17/2007	--	53.29	--	3,490.44
								12/10/2007	--	53.92	--	3,489.81
								3/11/2008	--	53.82	--	3,489.91
								9/15/2008	--	54.42	--	3,489.31
								3/9/2009	--	55.13	--	3,488.60
								7/13/2009	--	55.11	--	3,488.62
								9/14/2009	--	54.50	--	3,489.23
								3/29/2010	--	57.92	--	3,485.81
								9/13/2010	--	62.18	--	3,481.55
								3/14/2011	--	63.60	--	3,480.13
								10/11/2011	--	63.69	--	3,480.04
								5/30/2012	--	65.25	--	3,478.48
								9/24/2012	--	66.25	--	3,477.48
MW-08	12/29/1991	88.95	4	3,540.5	69 - 89	3.23	3,543.73	5/20/2013	--	66.07	--	3,477.66
								10/15/2013	--	66.45	--	3,477.28
MW-09	12/29/1991	75.80	4	3,540.4	52 - 72	2.42	3,542.82	--	--	--	--	--
								2/13/2007	44.05	44.99	0.94	3,498.48*
								3/27/2007	43.88	44.25	0.37	3,498.83*
								6/18/2007	43.90	44.18	0.28	3,498.84*
								9/17/2007	43.34	43.83	0.49	3,499.33*
								12/10/2007	**	44.25	**	3,498.57
								3/11/2008	44.28	45.91	1.63	3,498.05*
								9/15/2008	43.79	44.02	0.23	3,498.86*
								3/9/2009	46.51	46.57	0.06	3,496.29*
								7/14/2009	45.60	45.69	0.09	3,497.19*
								9/14/2009	45.98	46.10	0.12	3,496.80*
								3/29/2010	52.30	52.55	0.25	3,490.44*
								9/13/2010	**	55.25	**	3,487.57
								3/14/2011	54.60	54.82	0.22	3,488.15*
								10/11/2011	54.53	55.15	0.62	3,488.10*
								5/30/2012	56.02	56.34	0.32	3,486.70*
								9/24/2012	57.72	58.09	0.37	3,484.99*
MW-10	7/28/2008	53.24	4	3,541.8	15 - 50	2.64	3,544.44	5/20/2013	--	56.50	--	3,486.32
								10/15/2013	57.25	57.55	0.30	3,485.48*
								7/31/2008	27.62	53.04	25.42	3,509.19*
								9/15/2008	25.11	25.77	0.66	3,519.13*
								3/9/2009	40.96	57.82	16.86	3,498.42*
								7/14/2009	41.00	46.61	5.61	3,501.76*
								9/14/2009	30.49	51.23	20.74	3,507.73*
MW-11	7/29/2008	58.98	4	3,540.2	21 - 56	2.53	3,542.73	3/29/2010	42.40	53.00	10.60	3,498.86*
								9/13/2010	44.23	52.69	8.46	3,497.67*
								3/15/2011	44.65	52.57	7.92	3,497.41*
								5/30/2012	43.98	52.13	8.15	3,498.01*
								9/24/2012	46.67	52.15	5.48	3,496.13*
								5/20/2013	45.55	51.60	6.05	3,497.07*
								10/15/2013	47.55	52.00	4.45	3,495.55*
								7/31/2008	38.70	57.58	18.88	3,498.37*
								9/15/2008	38.39	57.66	19.27	3,497.56*
								3/9/2009	42.93	57.79	14.86	3,495.37*
								7/14/2009	42.10	57.50	15.40	3,496.01*
								9/14/2009	43.16	43.98	0.82	3,499.32*
MW-12	7/29/2008	74.11	4	3,522.6	36 - 71	2.65	3,525.25	3/29/2010	49.99	57.90	7.91	3,490.37*
								9/13/2010	52.96	57.79	4.83	3,488.32*
								3/15/2011	53.61	57.75	4.14	3,487.88*
								5/30/2012	55.29	57.79	2.50	3,486.69*
								9/25/2012	57.63	57.80	0.17	3,485.05*
								5/20/2013	--	56.10	--	3,486.63
								10/15/2013	--	57.00	--	3,485.73
MW-12	7/29/2008	74.11	4	3,522.6	36 - 71	2.65	3,525.25	7/31/2008	47.49	47.55	0.06	3,477.74*
								9/15/2008	47.81	47.82	0.01	3,477.43

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								3/9/2009	sheen	47.57	sheen	3,477.68
								7/14/2009	--	47.98	--	3,477.27
								9/14/2009	--	47.29	--	3,477.96
								3/29/2010	--	48.98	--	3,476.27
								9/13/2010	--	56.86	--	3,468.39
								3/14/2011	--	58.10	--	3,467.15
								3/16/2011	--	58.10	--	3,467.15
								5/30/2012	--	59.61	--	3,465.64
								9/24/2012	--	60.38	--	3,464.87
								5/20/2013	--	62.00	--	3,463.25
								10/15/2013	--	61.20	--	3,464.05
MW-13	7/29/2008	88.64	4	3,558.5	50 - 85	2.90	3,561.40	7/31/2008	--	62.80	--	3,498.60
								9/15/2008	--	63.64	--	3,497.76
								3/9/2009	--	62.49	--	3,498.91
								7/13/2009	--	62.18	--	3,499.22
								9/14/2009	--	62.29	--	3,499.11
								3/29/2010	--	69.63	--	3,491.77
								9/13/2010	--	68.39	--	3,493.01
								3/15/2011	68.97	68.98	0.01	3,492.42
								5/30/2012	--	73.79	--	3,487.61
								9/24/2012	--	84.84	--	3,476.56
MW-13	7/29/2008	88.64	4	3,558.5	50 - 85	2.90	3,561.40	5/20/2013	--	71.88	--	3,489.52
								10/14/2013	--	83.00	--	3,478.40
MW-14	7/30/2008	72.50	4	3,517.7	33 - 68	2.62	3,520.32	7/31/2008	--	44.10	--	3,476.22
								9/15/2008	44.89	45.18	0.29	3,475.34*
								3/9/2009	44.55	46.20	1.65	3,475.27*
								7/13/2009	45.31	46.50	1.19	3,474.65*
								9/14/2009	44.66	45.41	0.75	3,475.43*
								3/29/2010	45.30	45.31	0.01	3,475.01
								9/13/2010	52.41	52.55	0.14	3,467.87*
								3/15/2011	53.36	53.51	0.15	3,466.91*
								5/30/2012	--	58.61	--	3,461.71
								9/24/2012	--	59.72	--	3,460.60
								5/20/2013	61.52	61.54	0.02	3,458.79*
								10/14/2013	--	60.61	--	3,459.71
MW-15	7/30/2008	80.20	4	3,559.7	42 - 77	2.75	3,562.45	7/31/2008	--	61.05	--	3,501.40
								9/15/2008	--	61.62	--	3,500.83
								3/9/2009	sheen	61.19	sheen	3,501.26
								7/13/2009	--	61.35	--	3,501.10
								9/14/2009	--	61.46	--	3,500.99
								3/29/2010	--	66.28	--	3,496.17
								9/13/2010	--	66.21	--	3,496.24
								3/15/2011	--	66.59	--	3,495.86
								5/30/2012	--	67.45	--	3,495.00
								9/24/2012	--	67.48	--	3,494.97
								5/20/2013	--	67.30	--	3,495.15
								10/14/2013	--	66.52	--	3,495.93
MW-16	6/24/2009	117.39	4	3,582.6	80 - 115	2.86	3,585.46	7/13/2009	--	94.00	--	3,491.46
								9/14/2009	--	94.11	--	3,491.35
								3/29/2010	--	97.00	--	3,488.46
								9/13/2010	--	101.15	--	3,484.31
								3/15/2011	--	104.19	--	3,481.27
								5/30/2012	--	107.71	--	3,477.75
								9/24/2012	--	109.28	--	3,476.18
								5/20/2013	--	111.70	--	3,473.76
								10/14/2013	--	112.30	--	3,473.16
MW-17	6/23/2009	101.60	4	3,568.0	60 - 95	2.84	3,570.84	7/13/2009	--	78.61	--	3,492.23
								9/14/2009	--	78.93	--	3,491.91
								3/29/2010	--	83.91	--	3,486.93
								9/13/2010	--	87.18	--	3,483.66
								8/15/2011	--	90.15	--	3,480.69
								5/30/2012	--	94.41	--	3,476.43
								9/24/2012	--	95.31	--	3,475.53

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								5/20/2013 10/15/2013	-- --	93.36 93.00	-- --	3,477.48 3,477.84
MW-18	6/24/2009	56.53	4	3,529.7	33 - 53	2.93	3,532.63	7/13/2009	--	37.33	--	3,495.30
								9/14/2009	--	37.92	--	3,494.71
								3/29/2010	--	45.17	--	3,487.46
								9/13/2010	--	48.35	--	3,484.28
								3/14/2011	--	48.84	--	3,483.79
								3/16/2011	--	19.37	--	3,513.26
								5/30/2012	--	49.75	--	3,482.88
								9/24/2012	--	50.41	--	3,482.22
								5/20/2013	--	50.95	--	3,481.68
								10/14/2013	Sheen	50.50	--	3,482.13
MW-19	6/17/2009	79.42	4	3,540.6	41 - 76	2.74	3,543.34	7/14/2009	57.01	62.36	5.35	3,484.72*
								9/14/2009	54.95	62.40	7.45	3,486.15*
								3/29/2010	58.30	62.40	4.10	3,483.81*
								9/13/2010	62.15	68.57	6.42	3,479.26*
								3/15/2011	62.56	70.06	7.50	3,478.53*
								5/30/2012	65.36	69.50	4.14	3,476.79*
								9/25/2012	67.40	70.42	3.02	3,475.03*
								5/20/2013	67.10	71.15	4.05	3,475.02*
								10/15/2013	67.00	71.10	4.10	3,475.11*
MW-20	6/18/2009	79.39	4	3,538.7	41 - 76	2.77	3,541.47	7/14/2009	55.71	73.00	17.29	3,480.57*
								9/14/2009	--	55.10	--	3,486.37
								3/29/2010	60.35	60.71	0.36	3,481.01*
								9/13/2010	68.29	68.77	0.48	3,473.04*
								3/15/2011	70.13	70.63	0.50	3,471.19*
								5/30/2012	70.02	70.54	0.52	3,471.29*
								9/25/2012	70.35	70.85	0.50	3,470.97*
								5/20/2013	71.02	71.05	0.03	3,470.44*
								10/15/2013	70.40	70.45	0.05	3,471.05*
MW-21	6/18/2009	81.48	4	3,540.2	43 - 78	2.95	3,543.15	7/14/2009	56.20	56.40	0.20	3,486.69*
								9/14/2009	56.00	56.40	0.40	3,487.03*
								3/29/2010	59.11	67.73	8.62	3,481.45*
								9/13/2010	62.68	67.57	4.89	3,479.00*
								3/15/2011	64.46	66.75	2.29	3,478.00*
								5/30/2012	66.87	67.94	1.07	3,475.96*
								9/25/2012	67.32	68.41	1.09	3,475.50*
								5/20/2013	66.65	67.65	1.00	3,476.20*
								10/15/2013	67.40	68.60	1.20	3,475.39*
MW-22	6/19/2009	41.07	4	3,542.9	13 - 38	2.97	3,545.87	7/13/2009	--	22.31	--	3,523.56
								9/14/2009	--	20.76	--	3,525.11
								3/29/2010	--	21.35	--	3,524.52
								9/13/2010	--	20.24	--	3,525.63
								3/14/2011	--	19.57	--	3,526.30
								3/16/2011	--	19.57	--	3,526.30
								5/30/2012	--	17.19	--	3,528.68
								9/25/2012	--	17.00	--	3,528.87
								5/20/2013	--	20.90	--	3,524.97
								10/15/2013	--	17.40	--	3,528.47
MW-23	6/19/2009	85.74	4	3,539.2	49 - 84	3.01	3,542.21	7/13/2009	--	62.42	--	3,479.79
								9/14/2009	61.79	61.95	0.16	3,480.38*
								3/29/2010	62.89	63.07	0.18	3,478.27*
								9/13/2010	--	68.54	--	3,473.67
								3/14/2011	--	69.26	--	3,472.95
								5/30/2012	--	71.25	--	3,470.96
								9/24/2012	--	72.00	--	3,470.21
								5/20/2013	--	72.71	--	3,469.50
								10/14/2013	--	72.72	--	3,469.49
MW-24	9/28/2011	36	2	3,526.9	19 - 33	2.24	3,529.10	5/30/2012	--	29.69	--	3,499.41
								9/24/2012	--	33.00	--	3,496.10
EB-01	3/29/2004	37.05	1	3,491.5	33 - 38	0.65	3,492.15	--	---	---	---	---

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								3/26/2007	--	23.71	--	3,468.44
								6/18/2007	--	23.06	--	3,469.09
								9/17/2007	--	22.81	--	3,469.34
								12/10/2007	--	22.83	--	3,469.32
								3/10/2008	--	23.09	--	3,469.06
								9/15/2008	--	23.18	--	3,468.97
								3/9/2009	--	22.67	--	3,469.48
								7/13/2009	--	23.43	--	3,468.72
								9/14/2009	--	23.41	--	3,468.74
								3/29/2010	--	21.18	--	3,470.97
								9/13/2010	--	26.26	--	3,465.89
								3/14/2011	--	30.02	--	3,462.13
								5/30/2012	--	Dry	--	--
								9/24/2012	--	32.90	--	3,459.25
								5/20/2013	--	DRY	--	--
								10/14/2013	--	DRY	--	--
EB-02	3/29/2004	57.47	2	3,522.6	35 - 55	2.74	3,525.34	--	--	--	--	--
								3/26/2007	--	43.83	--	3,481.51
								6/18/2007	--	43.02	--	3,482.32
								9/17/2007	--	42.68	--	3,482.66
								12/10/2007	--	42.29	--	3,483.05
								3/10/2008	--	40.84	--	3,484.50
								9/15/2008	--	42.33	--	3,483.01
								3/9/2009	--	40.88	--	3,484.46
								7/13/2009	--	40.50	--	3,484.84
								9/14/2009	--	40.45	--	3,484.89
EB-02	3/29/2004	57.47	2	3,522.6	35 - 55	2.74	3,525.34	3/29/2010	--	39.77	--	3,485.57
								9/13/2010	--	39.92	--	3,485.42
								3/15/2011	--	40.32	--	3,485.02
								5/30/2012	--	41.25	--	3,484.09
								9/24/2012	--	41.70	--	3,483.64
								5/20/2013	Sheen	42.05	--	3,483.29
								10/14/2013	--	42.45	--	3,482.89
EB-03	3/30/2004	69.84	2	3,517.8	46 - 66	3.25	3,521.05	--	--	--	--	--
								3/26/2007	46.04	46.35	0.31	3,474.92*
								6/18/2007	45.41	45.55	0.14	3,475.60*
								9/17/2007	45.81	46.16	0.35	3,474.83*
								12/10/2007	45.89	46.28	0.39	3,475.04*
								3/11/2008	43.27	45.79	2.52	3,477.02*
								9/15/2008	45.95	46.38	0.43	3,474.97*
								3/9/2009	45.69	46.63	0.94	3,475.09*
								7/14/2009	46.03	47.70	1.67	3,474.52*
								9/14/2009	45.44	47.36	1.92	3,475.03*
								3/29/2010	45.96	48.98	3.02	3,474.18*
								9/13/2010	53.04	53.68	0.64	3,467.82*
								3/15/2011	53.92	54.57	0.65	3,466.93*
								5/30/2012	--	60.70	--	3,460.35
								9/24/2012	59.02	59.17	0.15	3,461.98*
								5/20/2013	61.32	61.36	0.04	3,459.72*
								10/14/2013	Sheen	60.78	--	3,460.27
EB-04	3/31/2004	53.91	2	3,505.3	31 - 51	3.08	3,508.38	--	--	--	--	--
								3/26/2007	--	40.91	--	3,467.47
								6/18/2007	--	40.19	--	3,468.19
								9/17/2007	--	40.51	--	3,467.87
								12/10/2007	--	40.74	--	3,467.64
								3/10/2008	--	42.18	--	3,466.20
								9/15/2008	--	41.14	--	3,467.24
								3/9/2009	--	40.88	--	3,467.50
								7/13/2009	--	41.58	--	3,466.80
								9/14/2009	--	40.45	--	3,467.93
								3/29/2010	--	40.96	--	3,467.42
								9/13/2010	--	45.50	--	3,462.88
								3/14/2011	--	48.17	--	3,460.21
								5/30/2012	--	50.61	--	3,457.77
								9/24/2012	--	53.57	--	3,454.81
								5/20/2013	Sheen	52.63	--	3,455.75

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								10/14/2013	--	52.70	--	3,455.68
EB-05	3/31/2004	57.93	2	3,523.7	44 - 54	2.91	3,526.61	--	--	--	--	--
								3/26/2007	--	35.08	--	3,491.53
								6/18/2007	--	35.61	--	3,491.00
								9/17/2007	--	35.79	--	3,490.82
								12/10/2007	--	35.70	--	3,490.91
								3/10/2008	--	40.84	--	3,485.77
								9/15/2008	--	33.78	--	3,492.83
								3/9/2009	sheen	35.60	sheen	3,491.01
								7/13/2009	--	35.24	--	3,491.37
								9/14/2009	--	35.56	--	3,491.05
								3/29/2010	--	44.79	--	3,481.82
								9/13/2010	--	46.92	--	3,479.69
								3/14/2011	--	47.75	--	3,478.86
								5/30/2012	--	48.79	--	3,477.82
								9/24/2012	--	49.42	--	3,477.19
								5/20/2013	Sheen	50.15	--	3,476.46
								10/14/2013	--	49.92	--	3,476.69
EB-06	3/31/2004	58.35	1	3,555.6	72 - 82	1.03	3,556.63	--	--	--	--	--
								3/26/2007	--	54.39	--	3,502.24
								6/18/2007	--	54.37	--	3,502.26
								9/17/2007	--	54.66	--	3,501.97
								12/10/2007	--	55.83	--	3,500.80
								3/10/2008	--	54.73	--	3,501.90
								9/15/2008	--	55.38	--	3,501.25
								3/9/2009	--	55.92	--	3,500.71
								7/13/2009	--	57.51	--	3,499.12
								9/14/2009	--	56.78	--	3,499.85
EB-06	3/31/2004	58.35	1	3,555.6	72 - 82	1.03	3,556.63	3/29/2010	--	58.56	--	3,498.07
								9/13/2010	--	66.40	--	3,490.23
								3/14/2011	--	67.86	--	3,488.77
								5/30/2012	--	71.04	--	3,485.59
								9/24/2012	--	72.20	--	3,484.43
								5/20/2013	--	73.45	--	3,483.18
								10/14/2013	Sheen	73.04	--	3,483.59
EB-07	4/1/2004	56.08	2	3,501.3	43 - 53	2.67	3,503.97	--	--	--	--	--
								3/26/2007	--	35.74	--	3,468.23
								6/18/2007	--	33.82	--	3,470.15
								9/17/2007	--	34.64	--	3,469.33
								12/10/2007	--	34.85	--	3,469.12
								3/10/2008	--	35.17	--	3,468.80
								9/15/2008	--	35.48	--	3,468.49
								3/9/2009	--	35.62	--	3,468.35
								7/13/2009	--	36.44	--	3,467.53
								9/14/2009	--	35.26	--	3,468.71
								3/29/2010	--	34.92	--	3,469.05
								9/13/2010	--	42.88	--	3,461.09
								3/14/2011	--	47.21	--	3,456.76
								5/30/2012	--	52.48	--	3,451.49
								9/24/2012	--	52.01	--	3,451.96
								5/20/2013	--	53.92	--	3,450.05
								10/15/2013	--	54.58	--	3,449.39
EB-08	4/2/2004	86.22	2	3,533.8	66 - 81	3.27	3,537.07	--	--	--	--	--
								3/26/2007	--	57.19	--	3,479.88
								6/18/2007	--	56.47	--	3,480.60
								9/17/2007	--	56.85	--	3,480.22
								12/10/2007	--	57.03	--	3,480.04
								3/10/2008	--	56.99	--	3,480.08
								9/15/2008	--	57.86	--	3,479.21
								3/9/2009	--	57.68	--	3,479.39
								7/13/2009	--	58.26	--	3,478.81
								9/14/2009	--	57.33	--	3,479.74
								3/29/2010	--	59.05	--	3,478.02
								9/13/2010	--	66.41	--	3,470.66
								3/15/2011	68.61	68.63	0.02	3,468.46*

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								5/30/2012 9/24/2012 5/20/2013 10/14/2013	69.94 70.19 71.2 70.9	72.39 74.30 73.60 73.20	2.45 4.11 2.40 2.30	3,466.39* 3,465.65* 3,465.15* 3,465.48*
P-01	12/29/2005	54.60	2	3,527.9	40 - 50	2.31	3,530.21	-- 3/26/2007 6/18/2007 9/17/2007 12/10/2007 3/10/2008 9/15/2008 3/9/2009 7/13/2009 9/14/2009 3/29/2010 9/13/2010 3/15/2011 5/30/2012 9/24/2012 5/20/2013 10/14/2013	-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- Sheen --	-- 29.73 28.93 29.23 29.14 34.78 30.76 36.96 35.32 35.89 50.25 50.89 50.91 50.86 50.93 50.87 50.85	-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --	-- 3,500.48 3,501.28 3,500.98 3,501.07 3,495.43 3,499.45 3,493.25 3,494.89 3,494.32 3,479.96 3,479.32 3,479.30 3,479.35 3,479.28 3,479.34 3,479.36
P-02	12/27/2005	27.45	2	3,542.3	19.5 - 22.5	2.43	3,544.73	-- 3/26/2007 6/18/2007 9/17/2007 12/10/2007 3/10/2008 9/15/2008 3/9/2009 7/13/2009 9/14/2009	-- -- -- -- -- -- -- -- -- --	-- 22.22 19.90 20.98 21.29 24.01 21.87 22.18 22.33 21.26	-- -- -- -- -- -- -- -- -- --	-- 3,522.51 3,524.83 3,523.75 3,523.44 3,520.72 3,522.86 3,522.55 3,522.40 3,523.47
P-02	12/27/2005	27.45	2	3,542.3	19.5 - 22.5	2.43	3,544.73	3/29/2010 9/13/2010 3/15/2011 5/30/2012 9/24/2012 5/20/2013 10/14/2013	-- -- -- -- -- -- --	20.09 20.76 22.12 21.58 22.19 22.70 20.92	-- -- -- -- -- -- --	3,524.64 3,523.97 3,522.61 3,523.15 3,522.54 3,522.03 3,523.81
P-03	12/27/2005	78.65	2	3,534.4	58 - 78	2.43	3,536.83	-- 3/26/2007 6/18/2007 9/17/2007 12/10/2007 3/10/2008 9/15/2008 3/9/2009 7/13/2009 9/14/2009 3/29/2010 9/13/2010 3/15/2011 5/30/2012 9/24/2012 5/20/2013 10/14/2013	-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --	65.45 63.15 63.34 63.78 64.12 65.37 65.17 65.69 64.64 64.62 69.93 71.07 73.24 73.61 72.72 56.39	-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --	-- 3,471.38 3,473.68 3,473.49 3,473.05 3,472.71 3,471.46 3,471.66 3,471.14 3,472.19 3,472.21 3,466.90 3,465.76 3,463.59 3,463.22 3,464.11 3,480.44
P-04	12/28/2005	61.65	2	3,513.5	51 - 61	2.27	3,515.77	-- 3/26/2007 6/18/2007 9/17/2007 12/10/2007 3/10/2008 9/15/2008 3/9/2009 7/13/2009 9/14/2009	-- -- -- -- -- -- -- -- -- --	-- 48.53 46.02 47.00 47.32 47.78 48.34 48.43 49.23 48.02	-- -- -- -- -- -- -- -- -- --	-- 3,467.24 3,469.75 3,468.77 3,468.45 3,467.99 3,467.43 3,467.34 3,466.54 3,467.75

Table 1
Monitor Well Completion and Gauging Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Well Information								Groundwater Data				
Well ID	Date Drilled	Total Depth (toc)	Well Dia. (inches)	Surface Elevation	Screen Interval (bgs)	Casing Stickup	TOC Elevation	Date Gauged	Depth to Product	Depth to Water	Product Thickness (ft)	Corrected Water Elevation
								3/29/2010	--	47.61	--	3,468.16
								9/13/2010	--	54.91	--	3,460.86
								3/15/2011	--	58.85	--	3,456.92
								5/30/2012	--	Dry	--	--
								9/24/2012	--	Dry	--	--
								5/20/2013	--	DRY	--	--
								10/14/2013	--	DRY	--	--
P-05	12/28/2005	47.35	2	3,504.9	35 - 45	2.58	3,507.48	--	--	--	--	--
								3/26/2007	--	37.60	--	3,469.88
								6/18/2007	--	36.43	--	3,471.05
								9/17/2007	--	37.19	--	3,470.29
								12/20/2007	--	37.29	--	3,470.19
								3/10/2008	--	37.29	--	3,470.19
								9/15/2008	--	37.25	--	3,470.23
								3/9/2009	--	37.68	--	3,469.80
								7/13/2009	--	38.51	--	3,468.97
								9/14/2009	--	37.38	--	3,470.10
								3/29/2010	--	37.18	--	3,470.30
								9/13/2010	--	44.57	--	3,462.91
								3/15/2011	--	46.98	--	3,460.50
								5/30/2012	--	47.29	--	3,460.19
								9/24/2012	--	Dry	--	--
								5/20/2013	--	47.34	--	3460.25
								10/14/2013	--	47.3	--	3460.18

Notes: Wells drilled Eades Drilling, Atkins Engineering and Scarborough Drilling. Wells completed with Schedule 40 threaded PVC.

All values are in feet, unless otherwise noted.

Survey datum based upon NAD 1927/NAVD 1929

bgs - below ground surface

TOC - top of casing

Wells drilled and installed by Alan Eades and Atkins Engineering. Schedule 40 threaded PVC casing and screen set.

* Groundwater corrected for LNAPL thickness assuming 0.70 specific gravity.

** Emulsion observed in well

>Groundwater not observed over entire screen interval

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-02	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	0.0221	0.0397	0.00746	0.06627
	3/11/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	8.91	2.06	3.55	2.79
	3/10/2009	1.79	0.107	<0.1	<0.150
	9/15/2009	0.315	0.0605	<0.1	0.0434
	3/31/2010	0.210	0.0383	<0.004	0.0141
	9/14/2010	0.0854	0.0125	<0.002	0.00947
	3/16/2011	<0.001	<0.001	<0.001	<0.001
	10/13/2011	<0.001	<0.001	<0.001	<0.001
	3/13/2012	<0.0008	<0.002	<0.002	<0.003
	9/28/2012	<0.0008	<0.002	<0.002	<0.003
	5/22/2013	<0.0008	<0.002	<0.002	<0.003
	10/17/2013	0.0057	<0.002	<0.002	<0.003
MW-02-02	3/27/2007	<0.002	<0.003	<0.007	<0.0009
	6/19/2007	0.00066	<0.0006	<0.0014	<0.0018
	9/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/11/2007	<0.002	<0.003	<0.007	<0.009
	3/11/2008	<0.0008	<0.002	<0.002	<0.003
	9/17/2008	<0.0008	<0.002	<0.002	<0.003
	3/11/2009	0.000979	<0.002	<0.002	<0.003
	9/16/2009	0.000949	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/15/2010	0.00168	<0.002	<0.002	<0.003
	3/16/2011	<0.002	<0.002	<0.002	<0.002
	10/14/2011	<0.05	<0.05	<0.05	<0.05
	3/14/2012	<0.0008	<0.002	<0.002	<0.003
	9/28/2012	0.00106	<0.00200	<0.00200	<0.00300
	5/23/2013	0.000814	<0.002	<0.002	<0.003
	10/16/2013	0.00104	<0.002	<0.002	<0.003
	5/15/2014	<0.008	<0.02	<0.02	<0.03
MW-02-03	3/29/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/20/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/18/2007	0.00055	<0.0003	<0.0007	0.00114
	12/11/2007	0.00283	0.00137	<0.0007	0.0028
	3/11/2008	<0.0008	<0.002	<0.002	<0.003
	9/17/2008	<0.0008	<0.002	<0.002	<0.003
	3/11/2009	0.0224	0.0035	<0.002	0.00595
	9/16/2009	0.00743	0.00219	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/14/2010	0.00213	<0.002	<0.002	<0.003
	3/15/2011	<0.001	<0.001	<0.001	<0.001
	10/13/2011	<0.001	<0.001	<0.001	<0.001
	3/14/2012	<0.0008	<0.002	<0.002	<0.003
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/23/2013	<0.0008	<0.002	<0.002	<0.003
	10/16/2013	0.00134	<0.002	<0.002	<0.003
	5/15/2014	<0.0008	<0.002	<0.002	<0.003

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-02-04	3/28/2007	<0.002	0.00041	<0.007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	0.00021	<0.0003	<0.0007	0.00084
	3/11/2008	0.00685	0.00987	<0.002	0.0157
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	0.332	0.0247	0.00271	0.0237
	3/31/2010	0.0316	0.0111	<0.002	0.00488
	9/14/2010	0.00873	0.00712	<0.002	0.00604
	3/15/2011	<0.001	<0.001	<0.001	<0.001
	10/13/2011	<0.001	<0.001	<0.001	<0.001
	3/13/2012	<0.0008	<0.002	<0.002	<0.003
	9/28/2012	<0.0008	<0.002	<0.002	<0.003
	5/23/2013	0.00447	0.00212	<0.002	0.00301
	10/16/2013	<0.0008	<0.002	<0.002	<0.003
	5/15/2014	<0.0008	<0.002	<0.002	<0.003
MW-02-05	3/27/2007	<0.002	<0.003	<0.007	<0.0009
	6/19/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/11/2007	<0.002	<0.003	<0.007	<0.0009
	3/11/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/11/2009	0.00115	<0.002	<0.002	<0.003
	9/16/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/15/2010	0.00137	<0.002	<0.002	<0.003
	3/16/2011	<0.002	<0.002	<0.002	<0.002
	10/14/2011	<0.001	<0.001	<0.001	<0.001
	3/14/2012	<0.0008	<0.002	<0.002	<0.003
	9/28/2012	0.00107	<0.00200	<0.00200	<0.00300
	5/23/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/15/2014	<0.008	<0.02	<0.02	<0.03
MW-02-06	3/28/2007	4.58	0.148	<0.035	0.222
	6/20/2007	4.89	0.421	0.243	0.8112
	9/18/2007	5.42	0.296	0.0467	0.3636
	12/11/2007	8.26	0.618	0.298	0.3636
	3/11/2008	6.59	1.04	0.443	1.95
	9/16/2008	5.36	1.18	<0.02	1.37
	3/10/2009	5.35	0.591	0.122	0.662
	9/15/2009	9.02	0.468	<0.02	0.518
	5/23/2013	--	--	--	--
	10/15/2013	--	--	--	--
MW-02-07	3/28/2007	1.24	0.133	<0.007	0.276
	6/19/2007	1.25	0.12	<0.007	0.24
	9/18/2007	1.5	0.138	0.0013	0.311
	12/10/2007	1.75	0.124	<0.007	0.35

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-02-07	3/11/2008	1.43	0.0901	<0.02	0.322
	9/17/2008	4.59	0.115	<0.04	0.325
	3/10/2009	5.85	0.108	<0.1	0.387
	9/15/2009	12.6	<0.2	<0.2	0.352
	3/31/2010	11.9	<0.2	<0.2	<0.3
	9/14/2010	13.7	<0.2	<0.2	<0.3
	3/17/2011	6.23	0.748	<0.100	1.98
	10/13/2011	8.04	0.2	<0.0500	0.225
	5/22/2013	3.19	0.0489	<0.0400	0.0605
	5/15/2014	5.09	0.0742	0.608	0.069
MW-02-12	9/15/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	0.0017	0.0048
	10/13/2011	<0.001	<0.001	<0.001	<0.001
	3/14/2012	<0.0008	<0.002	<0.002	<0.003
	5/23/2013	0.00172	<0.002	<0.002	<0.003
	10/16/2013	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	0.00134	<0.002	<0.002	<0.003
MW-02-15	3/29/2007	0.0193	<0.0003	<0.0007	0.00357
	6/20/2007	0.0268	<0.0003	<0.0007	<0.0009
	9/18/2007	0.041	0.00059	<0.0007	0.00419
	12/11/2007	0.0421	0.00104	<0.0007	0.00359
	3/11/2008	0.0208	<0.002	<0.002	0.00366
MW-02-15	9/17/2008	0.0294	0.00731	<0.002	0.0112
	3/10/2009	0.169	0.00639	<0.002	0.0135
	9/16/2009	0.329	<0.002	<0.002	0.00347
	3/31/2010	0.285	<0.004	<0.004	<0.006
	9/14/2010	0.664	0.00630	0.00487	0.00843
	3/17/2011	1.51	<0.100	<0.100	<0.100
	10/13/2011	0.315	<0.05	<0.05	<0.05
	9/27/2012	1.33	<0.01	<0.01	<0.015
	5/22/2013	0.973	<0.02	<0.02	<0.03
	10/15/2013	0.376	<0.002	<0.002	<0.003
	5/14/2014	0.722	<0.002	<0.002	<0.003
MW-02-16	3/29/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/19/2007	0.00032	<0.0003	<0.0007	<0.0009
	9/18/2007	<0.001	<0.0015	<0.0035	<0.0045
	12/11/2007	<0.0002	<0.0003	<0.0007	<0.0009
	3/11/2008	0.0131	0.00247	<0.002	<0.003
	9/17/2008	<0.0008	<0.002	<0.002	<0.003
	3/11/2009	0.0055	<0.002	<0.002	<0.003
	9/15/2009	0.00934	0.00706	<0.002	0.0076
	3/31/2010	0.0102	<0.002	<0.002	<0.003
	9/15/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.001
	10/13/2011	<0.001	<0.001	<0.001	0.0013
	3/14/2012	<0.0008	<0.002	<0.002	<0.003
	9/27/2012	0.103	<0.002	<0.002	<0.003
	5/22/2013	0.138	0.002	<0.002	<0.003

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-02-16	10/16/2013	0.384	0.0049	<0.002	<0.003
	5/14/2014	2.22	0.148	0.0656	0.0977
MW-02-18	3/28/2007	8.08	0.400	<0.035	0.188
	6/19/2007	6.63	0.405	<0.07	0.192
	9/18/2007	6.06	0.328	<0.0035	0.147
	12/11/2007	17.2	0.481	<0.007	0.251
	3/11/2008	11	0.250	<0.2	<0.3
	9/16/2008	15	0.362	<0.2	0.170
	3/10/2009	16.4	0.412	<0.4	<0.6
	9/15/2009	25.9	0.530	<0.4	<0.6
	3/31/2010	11.2	0.242	<0.2	<0.3
	9/14/2010	21.4	0.331	<0.2	<0.3
	3/16/2011	22.9	1.190	<0.100	<0.100
	10/13/2011	28.2	0.340	<0.200	<0.200
	9/27/2012	28.1	<0.400	<0.400	<0.600
	5/23/2013	19.2	<0.400	<0.400	<0.600
	10/16/2103	15.5	0.335	0.002	0.155
	5/15/2014	7.61	0.132	<0.002	0.0604
MW-03	5/23/2013	1.3	0.318	0.00501	0.271
	10/16/2013	2.42	0.0823	<0.0200	0.158
MW-03-01	3/28/2007	0.32	0.0788	<0.0035	0.22
	6/19/2007	0.0897	0.0149	<0.007	0.0598
	9/18/2007	0.28	0.0513	<0.0007	0.192
	12/11/2007	0.131	0.0149	<0.0007	0.111
	3/11/2008	0.156	0.141	<0.01	0.103
	5/22/2013	32	0.745	11.5	0.841
	10/16/2013	--	--	--	--
MW-03-02	3/29/2007	<0.0002	<0.0003	<0.0007	0.00077
	6/19/2007	<0.0002	0.00086	<0.0007	<0.0009
	12/11/2007	0.00233	0.00151	<0.0007	0.00331
	3/17/2011	0.0269	<0.001	<0.001	<0.001
	5/22/2013	--	--	--	--
	10/16/2013	--	--	--	--
MW-03-03	3/28/2007	1.02	0.346	<0.007	0.396
	6/17/2007	0.913	0.119	<0.007	0.187
	9/18/2007	0.983	0.110	<0.007	0.179
	3/11/2009	1.49	0.0569	<0.02	0.193
	9/16/2009	0.0705	0.00243	<0.02	0.0085
MW-03-03	3/16/2011	2.63	<0.100	<0.100	1.91
	10/14/2011	2.9	<0.0500	<0.0500	0.0811
	3/13/2012	2.79	0.0367	0.00309	0.159
	5/23/2013	2.36	<0.0400	<0.0400	0.0625
	10/16/2013	1.52	<0.0400	<0.0400	<0.0600
	5/15/2014	1.58	<0.100	<0.100	<0.150

Table 2
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Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-05	3/29/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/19/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/18/2007	0.0008	<0.0003	<0.0007	0.0012
	12/11/2007	<0.0002	<0.0003	<0.0007	<0.0009
	3/11/2008	0.00668	<0.002	<0.002	<0.003
	9/17/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	0.106	0.0107	<0.002	0.0188
	9/15/2009	0.0129	<0.002	<0.002	0.0037
	3/31/2010	0.000983	<0.002	<0.002	<0.003
	9/14/2010	0.00138	<0.002	<0.002	<0.003
	3/16/2011	<0.001	<0.001	<0.001	<0.001
	10/13/2011	<0.001	<0.001	<0.001	<0.001
	3/14/2012	<0.0008	<0.002	<0.002	<0.003
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/22/2013	0.00211	<0.002	<0.002	<0.003
	10/16/2013	0.0016	<0.002	<0.002	<0.003
	5/14/2014	<0.0008	<0.002	<0.002	<0.003
MW-07	3/28/2007	0.839	0.0211	<0.007	0.0178
	6/19/2007	0.791	0.0304	<0.007	0.0175
	9/18/2007	1.26	0.0369	<0.007	0.0291
	12/10/2007	1.36	0.0479	<0.007	0.043
	3/11/2008	0.657	<0.02	<0.02	<0.03
	3/17/2011	4.23	<0.02	0.307	<0.02
	10/13/2011	16.1	0.15	1.69	0.154
	9/28/2012	7.13	<0.0400	0.371	<0.0600
	5/22/2013	14.4	0.207	2.26	<0.300
	10/17/2013	14.6	<0.002	1.2	<0.300
	5/15/2014	9.24	0.102	1.29	0.0954
MW-08	3/28/2007	<0.0002	<0.0003	<0.0007	0.00075
	6/19/2007	0.00056	0.0005	<0.0007	<0.0009
	9/18/2007	0.00044	<0.0003	<0.0007	0.00113
	12/11/2007	0.00336	0.00196	<0.0007	0.00553
	3/11/2008	0.0311	0.00436	<0.002	<0.003
	9/17/2008	0.0254	0.00684	<0.002	0.00916
	3/11/2009	0.0174	0.00281	<0.002	0.0047
	9/16/2009	0.00924	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/15/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.001
	10/13/2011	<0.001	<0.001	<0.001	<0.001
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/22/2013	0.00373	<0.002	0.00218	<0.003
	10/16/2013	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	<0.0008	<0.002	<0.002	<0.003
MW-09	5/22/2013	4.4	0.0448	0.0378	0.216
	10/15/2013	--	--	--	--

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-12	3/11/2009	0.708	<0.02	<0.02	<0.03
	9/15/2009	2.11	<0.04	<0.04	<0.04
	3/31/2010	0.982	<0.02	<0.02	<0.03
	9/14/2010	0.128	0.0110	<0.002	0.00871
	3/16/2011	0.0093	<0.001	<0.001	<0.001
	10/13/2011	0.0072	<0.001	<0.001	<0.001
	3/13/2012	0.00469	<0.002	<0.002	<0.003
	9/28/2012	0.00122	<0.002	<0.002	<0.003
	5/22/2013	0.0495	<0.002	<0.002	<0.003
	10/16/2013	1.48	0.0385	<0.002	0.0307
	5/14/2014	<0.0008	<0.002	<0.002	<0.003
MW-13	9/16/2008	0.767	<0.002	0.002	<0.003
	3/10/2009	0.00133	<0.002	0.002	<0.003
	9/15/2009	6.15	0.0286	<0.002	0.0802
MW-13	3/30/2010	<0.0008	<0.002	<0.002	<0.003
	9/14/2010	1.34	<0.002	<0.002	0.00481
	10/12/2011	0.0039	<0.001	<0.001	0.0015
	3/13/2012	<0.0008	<0.002	<0.002	<0.003
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/21/2013	2.71	<0.002	<0.002	0.11
MW-14	3/30/2010	0.141	0.00369	0.00209	0.00634
	10/12/2011	0.0089	<0.00100	<0.00100	0.0102
	9/28/2012	0.0306	<0.002	<0.002	<0.003
	5/20/2013	--	--	--	--
	10/15/2013	0.0941	<0.001	<0.001	0.0015
MW-15	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	0.0104	<0.002	<0.002	<0.003
	3/30/2010	<0.0008	<0.002	<0.002	<0.003
	9/14/2010	0.00885	<0.002	<0.002	<0.003
	3/15/2011	<0.001	<0.001	<0.001	<0.001
	10/11/2011	<0.001	<0.001	<0.001	<0.003
	3/13/2012	<0.0008	<0.002	<0.002	<0.003
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/21/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
MW-16	7/15/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	0.0105	<0.002	<0.002	<0.003
	3/30/2010	<0.0008	<0.002	<0.002	<0.003
	9/14/2010	<0.0008	<0.002	<0.002	<0.003
	3/16/2011	<0.001	<0.001	<0.001	<0.001
	10/11/2011	<0.001	<0.001	<0.001	<0.003
	3/13/2012	<0.0008	<0.002	<0.002	<0.003

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-16	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/21/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/213	<0.0008	<0.002	<0.002	<0.003
MW-17	7/15/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	1.97	<0.002	<0.002	<0.003
	3/30/2010	0.0511	<0.002	<0.002	<0.003
	9/14/2010	0.331	<0.002	<0.002	<0.003
	3/16/2011	0.0223	<0.001	<0.001	<0.001
	10/12/2011	<0.007	<0.001	<0.001	<0.001
	3/13/2012	<0.0008	<0.002	<0.002	<0.003
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/21/2013	0.0427	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
MW-18	7/15/2009	0.0130	0.0101	<0.002	0.00703
	9/15/2009	0.0135	0.00408	<0.002	0.00399
	3/30/2010	<0.0008	<0.002	<0.002	<0.003
	9/13/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.003
	10/11/2011	<0.001	<0.001	<0.001	<0.003
	3/12/2012	<0.001	<0.001	<0.001	<0.003
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/20/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/13/2014	<0.0008	<0.002	<0.002	<0.003
MW-20	7/15/2009	0.0176	0.0133	<0.002	0.0161
	9/16/2009	0.0603	<0.002	<0.002	<0.003
	5/20/2013	--	--	--	--
	10/15/2013	--	--	--	--
MW-22	7/15/2009	6.35	0.653	0.00458	0.466
	9/15/2009	5.99	0.481	<0.200	0.328
	3/31/2010	2.83	0.438	<0.0400	0.149
	9/14/2010	23.8	0.576	<0.0400	0.369
	3/16/2011	31.3	1.27	<0.100	2.23
	9/27/2012	14.8	<0.400	<0.400	<0.600
	5/23/2013	10.2	<0.002	<0.002	<0.003
	10/16/2013	5.48	<0.002	<0.002	<0.003
	5/15/2014	5.21	<0.200	<0.200	<0.300
MW-23	7/15/2009	2.26	0.164	<0.002	0.102
	9/15/2010	0.00803	0.00323	<0.002	<0.003
	3/15/2011	0.0085	0.0148	<0.001	0.0074
	10/12/2011	0.0053	<0.001	<0.001	<0.001
	9/28/2012	0.00372	<0.002	<0.002	<0.003

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
MW-23	5/21/2013	0.0234	<0.002	<0.002	<0.003
	10/16/2013	0.00599	<0.002	<0.002	<0.003
	5/13/2014	0.0875	<0.002	<0.002	<0.003
MW-24	3/13/2012	4.16	1.78	0.00541	0.82
	9/27/2012	5.1	1.45	<0.100	0.461
EB-01	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	<0.0002	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/13/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.001
	5/20/2013	dry	dry	dry	dry
	10/15/2013	dry	dry	dry	dry
EB-02	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	<0.0002	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/13/2010	<0.0008	<0.002	<0.002	<0.003
	3/15/2011	<0.001	<0.001	0.0075	<0.001
	10/12/2011	<0.001	<0.001	<0.001	<0.001
	3/12/2012	<0.001	<0.001	<0.001	<0.001
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/20/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/13/2014	<0.0008	<0.002	<0.002	<0.003
EB-03	3/27/2007	0.0115	0.00493	<0.0007	0.00473
	10/15/2013	0.0982	<0.002	<0.002	0.0173
EB-04	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	0.00091	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
EB-04	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	<0.0008	<0.002	<0.002	<0.003
EB-04	3/30/2010	<0.0008	<0.002	<0.002	<0.003
	9/14/2010	0.00179	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.001
	3/12/2012	<0.001	<0.001	<0.001	<0.001
	9/28/2012	<0.000800	<0.0020	<0.00200	<0.00300
	5/20/2013	<0.000800	<0.0020	<0.00200	<0.00300
	10/15/2013	<0.000800	<0.0020	<0.00200	<0.00300
EB-05	3/26/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	0.00061	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/13/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.001
	10/12/2011	<0.001	<0.001	<0.001	<0.001
	3/12/2012	<0.001	<0.001	<0.001	<0.001
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/20/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
EB-06	3/26/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	<0.0002	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/13/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.001
	10/11/2011	<0.001	<0.001	<0.001	<0.001
	3/12/2012	<0.001	<0.001	<0.001	<0.001
	9/28/2012	<0.0008	<0.002	<0.002	<0.003
	5/20/2013	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	<0.0008	<0.002	0.00219	0.00338
EB-07	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	0.00026	<0.0003	<0.0007	<0.0009

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
EB-07	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	0.0356	<0.002	<0.002	<0.003
	3/31/2010	0.00174	0.00286	<0.002	0.00374
	9/14/2010	<0.0008	<0.002	<0.002	<0.003
	3/14/2011	<0.001	<0.001	<0.001	<0.001
EB-07	10/12/2011	<0.001	<0.001	<0.001	<0.001
	3/12/2012	<0.001	<0.001	<0.001	<0.001
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/20/2013	<0.000800	<0.0020	<0.00200	<0.00300
EB-08	3/27/2007	4.59	1.3	0.524	2.029
	6/18/2007	4.95	1.48	0.676	2.543
	9/17/2007	3.84	0.973	0.429	1.564
	12/10/2007	2.58	0.656	0.243	1.036
	3/10/2008	3.79	0.964	0.331	1.54
	9/16/2008	5.77	1.43	0.668	2.31
	3/10/2009	5.04	1.37	0.619	2.21
	9/15/2009	4.22	1.11	0.431	1.64
	3/30/2010	4.36	1.15	0.369	1.20
	9/14/2010	2.55	0.257	<0.1	0.201
	3/16/2011	1.85	0.411	<0.0500	0.986
	10/12/2011	7.25	2.2	<0.0500	3.110
P-01	3/26/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	0.00076	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	0.0127	<0.002	<0.002	<0.003
	3/10/2009	0.00148	<0.002	<0.002	<0.003
	9/15/2009	0.00130	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/13/2010	<0.0008	<0.002	<0.002	<0.003
	3/15/2011	<0.001	<0.001	<0.001	<0.001
	10/12/2011	<0.001	<0.001	<0.001	<0.001
	3/12/2012	<0.001	<0.001	<0.001	<0.001
	9/27/2012	<0.0008	<0.002	<0.002	<0.003
	5/20/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/13/2014	<0.0008	<0.002	<0.002	<0.003
P-02	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/19/2007	<0.0002	0.45	<0.0007	0.206
	9/17/2007	0.00206	0.00309	<0.0007	0.0075
	12/10/2007	0.104	0.0932	0.0230	0.1506

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
P-02	3/10/2008	0.016	0.0259	<0.01	0.0434
	9/16/2008	0.104	0.0901	0.0208	0.138
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	0.00406	0.00839	<0.002	0.0112
	9/14/2010	0.0621	0.124	<0.002	0.0989
	3/16/2011	<0.001	<0.001	<0.001	<0.001
	10/12/2011	0.02040	0.161	<0.00100	0.124
P-02	3/13/2012	<0.0008	<0.002	<0.002	<0.003
	5/21/2013	0.00139	<0.002	<0.002	<0.003
	10/16/2013	0.12200	<0.002	0.00816	0.00343
	5/15/2014	0.09920	0.00544	0.0118	0.00447
P-03	3/27/2007	0.00507	<0.0003	<0.0007	<0.0009
	6/18/2007	0.0057	<0.0003	<0.0007	<0.0009
	9/17/2007	0.0154	<0.0003	<0.0007	0.00154
	12/10/2007	0.00245	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	0.00115	<0.002	<0.002	<0.003
	9/15/2009	0.00284	<0.002	<0.002	<0.003
	3/30/2010	0.101	0.123	0.024	0.149
	9/14/2010	0.0413	0.0115	<0.002	0.00949
	3/15/2011	<0.001	<0.001	<0.001	<0.001
	10/12/2011	1.1	0.0537	<0.05	0.0978
	3/13/2012	0.00218	<0.002	<0.002	<0.003
	9/28/2012	0.00506	<0.002	<0.002	<0.003
	5/21/2013	0.00308	<0.002	<0.002	<0.003
P-04	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	0.00041	<0.0003	<0.0007	<0.0009
	12/10/2007	0.00026	<0.0003	<0.0007	<0.0009
	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	<0.0008	<0.002	<0.002	<0.003
	9/15/2009	0.00466	<0.002	<0.002	<0.003
	3/31/2010	0.0185	0.0286	0.00399	0.0328
	9/14/2010	<0.0008	<0.002	<0.002	<0.003
	3/15/2011	<0.001	<0.001	<0.001	<0.001
	5/20/2013	dry	dry	dry	dry
	10/15/2013	dry	dry	dry	dry
P-05	3/27/2007	<0.0002	<0.0003	<0.0007	<0.0009
	6/18/2007	<0.0002	<0.0003	<0.0007	<0.0009
	9/17/2007	<0.0002	<0.0003	<0.0007	<0.0009
	12/10/2007	0.00033	<0.0003	<0.0007	0.00083
	3/10/2008	<0.0008	<0.002	<0.002	<0.003

Table 2
Groundwater BTEX Analytical Data Summary
Frontier Field Services - Empire Abo Gas Plant
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethylbenzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
P-05	9/16/2008	<0.0008	<0.002	<0.002	<0.003
	3/10/2009	0.00322	<0.002	<0.002	<0.003
	9/15/2009	0.0119	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	<0.002	<0.003
	9/14/2010	0.242	<0.002	<0.002	0.00388

Notes

Volatiles analyzed via EPA SW846 Method 8021B by DHL Analytical, Inc.

All values reported in Milligrams per liter (mg/L, parts per million).

Blue and bold indicates the compound exceeded NMWQCC standards.

< values - Indicate the value is less than Method Detection Limit MDL.

Table 2a
Groundwater VOC Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethyl benzene	Toluene	Total Xylenes
NMWQCC Standard (mg/L)		0.01	0.75	0.75	0.62
Duplicate-01 (P-02)	3/10/2008	0.0335	0.0401	0.00827	0.0697
Duplicate-01 (MW-13)	9/16/2008	0.760	<0.002	<0.002	<0.003
Duplicate-01 (MW-13)	3/10/2009	0.00148	<0.002	<0.002	<0.003
Duplicate-01 (MW-16)	7/15/2009	<0.0008	<0.002	<0.002	<0.003
Duplicate-01 (EB-05)	9/15/2009	<0.0008	<0.002	<0.002	<0.003
Duplicate-01 (MW-14)	3/30/2010	0.143	0.00286	0.0023	0.00542
Duplicate-01 (MW-17)	9/14/2010	0.337	<0.004	<0.004	<0.006
Duplicate-01 (MW-02-04)	3/15/2011	<0.00100	<0.00100	<0.00100	<0.00100
Duplicate-01	10/11/2011	<0.00100	<0.00100	<0.00100	<0.00100
	3/13/2012	<0.000800	<0.00200	<0.00200	<0.00300
	9/27/2012	16.3	<0.400	<0.400	<0.600
Duplicate-01 (EB-05)	5/20/2013	<0.000800	<0.00200	<0.00200	<0.00300
Duplicate-02 (MW-02-16)	3/11/2008	0.0109	0.00228	<0.002	<0.003
Duplicate-02 (MW-02-07)	9/17/2008	4.42	0.116	0.0293	0.319
Duplicate-02 (MW-12)	3/11/2009	0.723	<0.02	<0.02	<0.03
Duplicate-02 (MW-02-15)	9/16/2009	0.327	<0.02	<0.02	0.00326
Duplicate-02 (MW-12)	3/31/2010	0.917	<0.02	<0.02	<0.03
Duplicate-02 (MW-02-12)	9/15/2010	<0.0008	<0.002	<0.002	<0.003
Duplicate-02	10/12/2011	0.0126	0.1	<0.00100	<0.0758
	3/14/2012	<0.000800	<0.00200	<0.00200	<0.00300
	9/28/2012	<0.0008	<0.002	<0.002	<0.003
Duplicate-02 (P-03)	5/21/2013	0.00246	<0.002	<0.002	<0.003
Duplicate-03 MW-09	5/22/2013	4.4	0.0289	<0.02	0.181
Duplicate-04 MW 02-12	5/23/2013	0.00111	<0.002	<0.002	<0.003
Equipment Rinse-01	3/11/2008	<0.0008	<0.002	0.0104	<0.003
	3/10/2009	<0.0008	<0.002	0.00212	<0.003
	3/11/2009	<0.0008	<0.002	0.00204	<0.003
	9/15/2009	<0.0008	<0.002	<0.002	<0.003
	3/30/2010	<0.0008	<0.002	0.0145	<0.003
	9/14/2010	0.00103	<0.002	0.00287	<0.003
	3/15/2011	<0.00100	<0.00100	<0.00100	<0.00100
	10/12/2011	<0.00100	<0.00100	<0.00100	<0.00100
	3/12/2012	<0.00100	<0.00100	0.0185	<0.00100
	9/27/2012	0.000983	<0.002	<0.002	<0.003
	5/20/2013	<0.000800	<0.00200	<0.00200	<0.00300
Equipment Rinse-02	9/16/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	0.0135	<0.003
	9/15/2010	<0.0008	<0.002	0.00214	<0.003
	3/17/2011	<0.00100	<0.00100	<0.00100	<0.00100
	10/13/2011	<0.00100	<0.00100	<0.00100	<0.00100
	3/13/2012	<0.000800	<0.00200	0.0185	<0.00300
	9/28/2012	<0.000800	<0.00200	<0.00200	<0.00300
	5/21/2013	<0.000800	<0.00200	<0.00200	<0.00300

Table 2a
Groundwater VOC Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Volatile Organic Compounds	Collection Date	Benzene	Ethyl benzene	Toluene	Total Xylenes
Equipment Rinse-03	3/14/2012 5/22/2013	<0.000800 0.000971	<0.00200 <0.00200	0.0147 <0.00200	<0.00300 <0.00300
Equipment Rinse-04	5/23/2013	<0.000800	<0.00200	<0.00200	<0.00300
Field Blank-01	3/10/2008 9/17/2008 3/10/2009 9/15/2009 3/30/2010 9/14/2010	<0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002	0.00961 0.00528 0.00204 <0.002 0.0177 0.00375	<0.003 <0.003 <0.003 <0.003 <0.003 <0.003
Field Blank-02	9/16/2009 3/31/2010 9/15/2010	<0.0008 <0.0008 <0.0008	<0.002 <0.002 <0.002	<0.002 0.0224 0.00225	<0.003 <0.003 <0.003
Trip Blank-01	3/10/2008 9/16/2008 3/10/2009 9/15/2009 3/30/2010 9/14/2010 3/8/2011 3/15/2011 3/17/2011 10/13/2011 10/12/2011 3/12/2012 3/13/2012 9/27/2012 5/23/2013	<0.0008 0.00122 <0.0008 <0.0008 <0.0008 <0.0008 <0.00100 <0.00100 0.0071 <0.00100 <1.00 <0.0008 <0.000800 <0.000800 <0.000800	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002 <0.00100 <0.00100 <0.00100 <0.00100 <0.000860 <0.002 <0.00200 <0.00200 <0.00200	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002 <0.00100 <0.00100 <0.00100 <0.00100 <0.000719 <0.002 <0.00200 <0.00200 <0.00200	<0.003 <0.003 <0.003 <0.003 <0.003 <0.003 <0.00100 <0.00100 <0.00100 <0.00100 <0.000942 <0.003 <0.00300 <0.00300 <0.00300
Trip Blank-02	3/11/2008 9/17/2008 3/11/2009 9/16/2009 3/31/2010 9/15/2010 3/13/2012 9/28/2012 5/22/2013	<0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.000800 <0.000800 <0.000800	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002 <0.00200 <0.00200 <0.00200	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002 <0.00200 <0.00200 <0.00200	<0.003 <0.003 <0.003 <0.003 <0.003 <0.003 <0.00300 <0.00300 <0.00300
Trip Blank-03	3/14/2012	<0.000800	<0.00200	<0.00200	<0.00300

Notes

Volatiles analyzed via EPA SW846 Method 8021B by DHL Analytical, Inc.

All values reported in Milligrams per liter (mg/L, parts per million).

Blue indicates the compound exceeded NMWQCC standards.

< values - Indicate the value is less than Method Detection Limit MDL.

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-02	3/27/2007	0.0198	0.1550	<0.0003	555	0.00265	<0.0003	65.3	<0.00008	9.72	0.00926	<0.001	131
	6/18/2007	0.0159	0.0982	<0.0003	620	0.00228	<0.0003	77.6	<0.00008	8.25	0.01820	<0.001	113
	9/17/2007	0.00887	0.0677	<0.0003	536	<0.002	<0.0003	40.3	<0.00008	4.68	0.00686	<0.001	51.8
	12/10/2007	0.00991	0.0631	<0.0003	629	0.00427	<0.0003	74.4	<0.00008	9.59	0.00267	<0.001	124
	3/11/2008	0.0048	0.0350	<0.003	561	0.0027	<0.0003	43.6	<0.00008	5.55	0.00390	<0.001	59.2
	9/16/2008	0.127	0.0519	<0.0003	564	0.0105	<0.0003	54.9	<0.00008	8.06	<0.002	<0.001	77.2
	3/10/2009	0.0651	0.0593	<0.0003	656	0.0279	<0.0003	77.1	<0.00008	8.32	<0.002	<0.001	110
	9/15/2009	0.0367	0.130	<0.0003	521	0.00936	<0.0003	32.3	<0.00008	15.1	<0.002	<0.001	106
	3/31/2010	0.0061	0.078	<0.0003	648	0.00807	<0.0003	87.1	<0.00008	13.1	<0.002	<0.001	129
	9/14/2010	0.0131	0.060	<0.0003	615	0.00442	<0.0003	69.8	<0.00008	12.1	<0.002	<0.001	107
	3/16/2011	0.0250	0.132	<0.005	716	0.04500	<0.005	72.2	<0.0002	44.0	<0.02	<0.005	190
	10/13/2011	<0.0100	0.062	<0.005	735	<0.0100	<0.005	83.6	<0.0002	17.8	<0.02	<0.005	165
	3/13/2012	0.0057	0.047	<0.0003	628	0.00249	<0.0003	81.9	<0.00008	14.5	<0.002	<0.001	141
	9/28/2012	0.0024	0.043	<0.0003	629	<0.002	0.000300	95.4	<0.00008	14.4	<0.002	<0.001	143
	10/17/2013	<0.002	0.047	<0.0003	626	0.00251	<0.0003	89.8	<0.00008	20.5	<0.002	<0.001	106
MW-02-02	3/27/2007	0.0485	<0.03	<0.003	256	<0.02	<0.003	49,500	<0.0008	1,840	<0.02	<0.01	53,600
	6/19/2007	<0.1	<0.15	<0.015	329	<0.2	<0.015	43,200	<0.00008	1,930	0.10500	<0.05	30,200
	9/18/2007	<0.02	<0.03	<0.003	263	<0.02	<0.006	39,400	<0.00008	1,910	<0.04	<0.01	25,700
	12/11/2007	<0.2	<0.3	<0.03	258	<0.2	<0.03	45,300	<0.00008	1,730	<0.2	<0.1	42,900
	3/11/2008	0.03950	<0.03	<0.003	223	<0.02	<0.003	53,100	<0.0008	1,720	<0.02	<0.01	58,400
	9/17/2008	0.0401	<0.015	0.00210	199	<0.01	<0.0015	45,200	<0.0008	1,500	0.0198	<0.005	50,700
	3/11/2009	0.0444	<0.03	<0.003	198	<0.01	<0.003	44,300	<0.00008	1,480	<0.01	<0.01	41,500
	9/16/2009	0.0505	<0.03	0.00327	208	<0.02	<0.003	47,000	<0.00008	1,530	0.0793	<0.01	49,300
	3/31/2010	0.0708	<0.03	0.00331	259	<0.02	<0.003	47,200	<0.00008	1,580	0.0327	<0.01	53,800
	9/15/2010	0.0502	<0.015	<0.0015	226	<0.01	0.01	53,700	<0.00008	1,610	<0.01	<0.005	60,000
	3/16/2011	0.1080	<0.0100	<0.005	332	<0.005	<0.005	64,400	<0.0002	4,040	<0.02	<0.005	32,500
	10/14/2011	0.0500	0.018	<0.005	420	0.13	<0.005	54,000	<0.0002	1,900	<0.02	<0.005	28,200
	3/14/2012	0.0422	<0.0300	0.00339	233	<0.02	<0.003	49,000	<0.0008	1,720	<0.02	<0.01	55,000
	9/28/2012	0.0610	<0.0300	<0.00300	219	<0.0200	<0.00300	57,000	<0.000800	1,670	0.0596	<0.0100	60,000
	10/16/2013	0.0319	<0.0300	0.00441	290	<0.0200	<0.0030	45,900	<0.000080	2,070	<0.0200	<0.0100	21,800
	5/15/2014	0.0369	<0.0300	0.00845	340	<0.0200	<0.0030	48,700	<0.000080	2,240	<0.0200	<0.0100	29,800
MW-02-03	3/29/2007	0.00369	0.0102	<0.0003	474	0.0484	<0.0003	120	<0.00008	5.02	0.00513	<0.001	55.6
	6/20/2007	0.00283	0.00972	<0.0003	567	0.0467	0.000334	126	<0.00008	4.88	0.00426	<0.001	69.0

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-02-03	9/18/2007	<0.002	0.0081	<0.0003	561	0.0429	<0.0003	117	<0.00008	3.62	0.00758	<0.001	67.9
	12/11/2007	0.00213	0.00951	<0.0003	550	0.0510	<0.0003	115	<0.00008	4.16	0.00430	<0.001	45.7
	3/11/2008	0.00246	0.00995	<0.0003	561	0.0483	<0.0003	129	<0.00008	5.07	0.00363	<0.001	61.8
	9/17/2008	0.00240	0.01040	<0.0003	542	0.04560	<0.0003	127	<0.00008	4.66	0.00369	<0.001	60.4
	3/11/2009	0.00240	0.00943	<0.0003	510	0.0446	<0.0003	116	<0.00008	4.66	0.00335	<0.001	58.9
	9/16/2009	0.00277	0.00965	<0.0003	527	0.0488	<0.0003	122	<0.00008	5.05	0.00461	<0.001	51.7
	3/31/2010	0.00249	0.00999	<0.0003	553	0.0527	<0.0003	119	<0.00008	4.66	0.00376	<0.001	51.2
MW-02-03	9/14/2010	0.00278	0.00967	<0.0003	562	0.0433	<0.0003	124	<0.00008	5.78	0.00555	<0.001	71.0
	3/15/2011	<0.0100	<0.0100	<0.005	551	0.0620	<0.005	126	<0.0002	<10.0	<0.0200	<0.001	54.3
	10/13/2011	<0.00100	0.01200	<0.005	617	<0.0100	<0.005	136	<0.0002	6.26	<0.0200	<0.001	86.5
	3/14/2012	0.00240	0.01030	<0.0003	586	0.0523	<0.0003	124	<0.00008	4.85	0.00473	<0.001	56.4
	7/19/2012	--	--	--	--	0.0542	--	--	--	--	--	--	--
	9/27/2012	<0.002	0.00979	<0.0003	596	0.0255	<0.0003	129.0	<0.00008	6.18	0.00396	<0.001	105
	10/16/2013	0.00221	0.01	<0.00030	546	0.0545	<0.0003	112.0	<0.00008	4.92	0.00519	<0.001	41.1
	5/15/2014	0.00336	0.00965	<0.00030	592	0.0549	<0.0003	123.0	<0.00008	5.64	0.00546	<0.001	50.6
MW-02-04	3/28/2007	0.00339	0.0210	<0.0003	510	<0.002	<0.0003	116	<0.00008	13.2	<0.002	<0.001	69.9
	6/18/2007	<0.002	0.0204	<0.0003	612	<0.002	<0.0003	120	<0.00008	11.7	0.00377	<0.001	78.4
	9/17/2007	0.00393	0.0210	<0.0003	574	<0.002	<0.0003	121	<0.00008	10.4	0.00617	<0.001	75.0
	12/10/2007	<0.002	0.0189	<0.0003	616	<0.002	<0.0003	137	<0.00008	12.1	<0.002	<0.001	89.6
	3/11/2008	<0.002	0.0197	<0.0003	598	<0.002	<0.0003	138	<0.00008	12.9	<0.002	<0.001	80.2
	9/16/2008	<0.002	0.0216	<0.0003	506	<0.002	<0.0003	116	<0.00008	10.9	<0.002	<0.001	76.7
	3/10/2009	<0.002	0.0191	<0.0003	532	<0.002	<0.0003	120	<0.00008	11.4	<0.002	<0.001	69.3
	9/15/2009	<0.002	0.0247	<0.0003	510	<0.002	<0.0003	97.4	<0.00008	8.84	<0.002	<0.001	77.3
	3/31/2010	<0.002	0.0247	<0.0003	524	<0.002	<0.0003	94.9	<0.00008	10.2	<0.002	<0.001	88.2
	9/14/2010	<0.002	0.0214	<0.0003	527	<0.002	<0.0003	101.0	<0.00008	11.0	<0.002	<0.001	81.4
	3/15/2011	<0.01	0.022	<0.005	496	<0.005	<0.005	87.1	<0.0002	17.3	<0.02	<0.005	82
	10/13/2011	<0.01	0.024	<0.005	658	<0.01	<0.005	130.0	<0.0002	15.1	<0.02	<0.005	94.9
	3/13/2012	<0.002	0.0221	<0.0003	548	<0.002	<0.0003	110.0	<0.00008	10.7	<0.002	<0.001	88.7
	9/28/2012	0.00866	0.0198	0.00241	599	<0.002	<0.0003	122.0	<0.00008	12.6	<0.002	<0.001	77.6
	10/16/2013	0.00508	0.0216	<0.00030	577	<0.0020	<0.0003	118.0	<0.000080	12.0	<0.002	<0.001	73.4
	5/15/2014	<0.002	0.0198	<0.00030	549	<0.002	<0.0003	89.5	<0.00008	11.80	<0.002	<0.001	59.1
MW-02-05	3/27/2007	0.0422	<0.03	<0.003	260	<0.02	<0.003	50,800	<0.0008	1,190	<0.02	<0.01	53,200
	6/19/2007	<0.1	<0.15	<0.015	325	<0.2	<0.015	43,600	<0.00008	1,180	<0.1	<0.05	28,900
	9/18/2007	<0.02	<0.03	<0.003	288	<0.02	<0.006	42,800	<0.00008	1,180	<0.002	<0.01	28,500

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-02-05	12/11/2007	<0.2	<0.03	<0.03	295	<0.2	<0.03	49,700	<0.00008	1,280	<0.2	<0.1	42,100
	3/11/2008	0.0358	<0.03	<0.003	248	<0.02	<0.003	53,300	<0.0008	1,160	<0.02	<0.01	59,400
	9/17/2008	0.0350	<0.015	<0.0015	207	<0.01	<0.0015	46,400	<0.0008	955	0.0199	<0.005	53,200
	3/11/2009	0.0366	<0.03	<0.003	211	<0.01	<0.003	44,800	<0.00008	961	<0.01	<0.01	38,700
	9/16/2009	0.0419	<0.03	<0.003	218	<0.02	<0.003	43,700	<0.00008	1,070	0.0666	<0.01	50,500
	3/31/2010	0.0453	<0.03	<0.003	259	<0.02	<0.003	46,600	<0.00008	1,150	0.0284	<0.01	54,100
	9/15/2010	0.0336	<0.015	<0.0015	208	<0.01	<0.0015	48,200	<0.00008	904	<0.01	<0.005	54,700
	3/16/2011	<0.01	<0.01	<0.005	334	<0.005	<0.005	60,100	<0.0002	3,650	<0.02	<0.005	29,900
	10/14/2011	0.117	<0.001	<0.005	296	<0.001	<0.005	50,400	<0.002	2,520	<0.02	<0.005	36,800
	3/14/2012	0.0428	<0.03	0.00444	237	0.0234	0.00509	50,500	<0.0008	1,140	0.0205	<0.01	57,200
	9/28/2012	0.0494	<0.0300	<0.00300	227	<0.0200	<0.00300	56,800	<0.000800	1,040	0.0549	<0.0100	59,800
	10/16/2013	0.0331	<0.0300	0.00522	309	0.0343	0.0034	47,200	<0.00008	1,470	<0.0200	<0.0100	19,200
	5/15/2014	0.0331	<0.03	0.00672	351	<0.02	<0.003	49,700.0	<0.00008	1660.00	<0.02	<0.01	28400
MW-02-06	3/28/2007	0.00783	0.0245	<0.0003	480	<0.002	<0.0003	206	<0.00008	8.52	<0.002	<0.001	58.4
	6/20/2007	0.00289	0.0243	<0.0003	604	<0.002	0.000413	140	<0.00008	8.08	<0.002	<0.001	31.8
	9/18/2007	0.00214	0.0225	<0.0003	596	0.00233	<0.0003	146	<0.00008	7.17	0.00615	<0.001	29.9
	12/11/2007	0.00381	0.0271	<0.0003	580	<0.002	<0.0003	166	<0.00008	8.57	<0.002	<0.001	40.0
	3/11/2008	0.00316	0.0209	<0.0003	548	0.00286	0.00434	203	0.000317	7.49	<0.002	0.00128	52.9
	9/16/2008	0.00261	0.0221	<0.0003	565	<0.002	<0.0003	156	<0.00008	7.48	<0.002	<0.001	35.0
	3/10/2009	0.00368	0.0200	<0.0003	526	<0.002	<0.0003	183	0.000121	7.20	<0.002	<0.001	45.0
	9/15/2009	0.00205	0.0229	<0.0003	517	<0.002	<0.0003	158	<0.00008	6.70	<0.002	<0.001	40.8
MW-02-07	3/28/2007	0.00354	0.0262	<0.0003	522	<0.002	<0.0003	71.8	<0.00008	8.85	<0.002	<0.001	114
	6/19/2007	0.00356	0.0267	<0.0003	545	0.00361	<0.0003	67.7	<0.00008	8.94	<0.002	<0.001	111
	9/18/2007	0.00247	0.0238	<0.0003	579	0.00449	<0.0003	64.2	<0.00008	7.28	0.00568	<0.001	112
	12/10/2007	0.00207	0.0265	<0.0003	587	0.00232	<0.0003	74.4	<0.00008	8.51	<0.002	<0.001	128
	3/11/2008	<0.002	0.0255	<0.0003	574	0.00222	<0.0003	80.0	<0.00008	9.23	<0.002	<0.001	136
	9/16/2008	0.00274	0.0259	<0.0003	603	0.00408	<0.0003	72.6	<0.00008	11.2	0.0494	<0.001	143
	3/10/2009	0.00327	0.0220	<0.0003	543	0.00246	<0.0003	70.3	<0.00008	8.41	<0.002	<0.001	139
	9/15/2009	0.00616	0.0224	<0.0003	565	0.00444	<0.0003	71.8	<0.00008	9.45	0.0269	<0.001	152
	3/31/2010	0.00744	0.0231	<0.0003	618	0.00415	<0.0003	75.5	<0.00008	11.2	<0.002	<0.001	196
	9/14/2010	0.00316	0.0212	<0.0003	636	0.00439	<0.0003	73.1	<0.00008	12.0	0.0523	<0.001	197
	3/17/2011	<0.01	0.0180	<0.005	710	<0.005	<0.005	115	<0.0002	19.0	<0.02	<0.005	314
	10/13/2011	<0.01	0.0270	<0.005	780	<0.01	<0.005	115	<0.0002	15.5	<0.02	<0.005	344
	5/15/2014	0.0118	0.0243	<0.0003	718	0.0232	<0.0003	107.0	<0.00008	18.90	0.208	<0.001	208

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-02-12	9/15/2010	0.00545	0.0134	<0.0003	548	<0.002	0.000855	118	<0.00008	8.91	<0.002	<0.001	261
	3/14/2011	<0.0100	0.0120	<0.005	567	<0.005	<0.005	119	<0.0002	14.10	<0.02	<0.005	266
	10/13/2011	<0.0100	0.0180	<0.005	690	<0.01	<0.005	146	<0.0002	11.40	<0.02	<0.005	310
	3/14/2012	0.00475	0.0168	<0.0003	601	<0.002	<0.0003	120	<0.00008	10.20	<0.002	<0.001	244
	10/16/2013	<0.0020	0.015	<0.0003	558	<0.002	<0.0003	118.0	<0.00008	9.30	<0.002	<0.001	215
	5/14/2014	0.016	0.0144	<0.0003	568	<0.002	<0.0003	110.0	<0.00008	9.78	<0.002	<0.001	212
MW-02-15	3/29/2007	0.0143	0.0188	<0.0003	564	<0.002	<0.0003	68.5	<0.00008	7.15	<0.002	<0.001	150
	6/20/2007	0.0147	0.016	<0.0003	626	<0.002	<0.0003	73.7	<0.00008	6.65	<0.002	<0.001	168
	9/18/2007	0.00978	0.0139	<0.0003	595	<0.002	<0.0003	64.5	<0.00008	5.88	0.00636	<0.001	153
	12/11/2007	0.0111	0.0182	<0.0003	608	<0.002	<0.0003	68.2	<0.00008	6.66	<0.002	<0.001	162
	3/11/2008	0.00948	0.0162	<0.0003	599	<0.002	<0.0003	71.6	<0.00008	7.74	<0.002	<0.001	176
	9/17/2008	0.0155	0.0175	<0.0003	596	<0.002	<0.0003	85.9	<0.00008	7.29	<0.002	<0.001	200
	3/10/2009	0.00963	0.0154	<0.0003	573	<0.002	<0.0003	64.8	<0.00008	6.67	<0.002	<0.001	177
	9/16/2009	0.0113	0.073	<0.0003	607	<0.002	<0.0003	75.6	<0.00008	7.80	<0.002	<0.001	201
	3/31/2010	0.00941	0.0176	<0.0003	700	<0.002	<0.0003	81.7	<0.00008	7.46	<0.002	<0.001	231
	9/14/2010	0.0139	0.0178	<0.0003	643	<0.002	<0.0003	76.4	<0.00008	8.08	0.00295	<0.001	210
	3/17/2011	<0.0100	0.015	<0.005	784	<0.005	<0.005	98.4	<0.0002	16.50	<0.02	<0.005	282
	10/13/2011	<0.0100	0.023	<0.005	795	<0.01	<0.005	93.0	<0.0002	26.10	<0.02	<0.005	279
	9/27/2012	0.0208	0.021	<0.0003	772	0.00502	<0.0003	103.0	<0.00008	10.40	<0.002	<0.001	362
	10/16/2013	0.0563	0.0232	<0.00030	750	0.00446	<0.00030	93.9	<0.00008	20.90	<0.0020	<0.0010	340
	5/14/2014	0.0193	0.0217	<0.00030	800	0.00262	<0.00030	106.0	<0.00008	13.80	<0.0020	<0.0010	417
MW-02-16	3/29/2007	0.014	0.01	<0.0003	490	<0.002	<0.0003	126	<0.00008	5.71	<0.002	<0.001	332
	6/19/2007	0.0089	0.01	<0.0003	584	<0.002	<0.0003	138	<0.00008	7.5	<0.002	<0.001	380
	9/18/2007	<0.002	0.0125	<0.0003	569	<0.002	<0.0003	136	<0.00008	5.02	0.00609	<0.001	345
	12/11/2007	0.00437	0.0136	<0.0003	528	<0.002	<0.0003	124	<0.00008	5.14	<0.002	<0.001	331
	3/11/2008	0.00287	0.0133	<0.0003	560	<0.002	<0.0003	134	<0.00008	6.07	<0.002	<0.001	380
	9/17/2008	0.00358	0.0137	<0.0003	565	<0.002	<0.0003	134	<0.00008	5.72	<0.002	<0.001	357
	3/11/2009	0.00274	0.0121	<0.0003	534	<0.002	<0.0003	128	<0.00008	5.24	<0.002	<0.001	342
	9/15/2009	0.00229	0.0128	<0.0003	515	<0.002	<0.0003	128	<0.00008	5.42	<0.002	<0.001	339
	3/31/2010	0.00367	0.0132	<0.0003	582	<0.002	<0.0003	135	<0.00008	5.81	<0.002	<0.001	393
MW-02-16	9/15/2010	0.0392	0.0130	<0.0003	593	<0.002	<0.0003	144	<0.00008	6.74	<0.002	<0.001	420
	3/14/2011	0.161	0.0320	0.0110	617	0.013	0.0110	97	<0.0002	19.8	<0.002	<0.005	294
	10/13/2011	<0.0100	0.0200	<0.005	720	<0.01	<0.005	153	<0.002	10.4	<0.002	<0.005	500
	3/14/2012	0.0571	0.0235	<0.0003	642	<0.002	<0.0003	93	<0.00008	34.9	<0.002	<0.001	291

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-02-16	9/27/2012	0.0903	0.0204	<0.0003	658	<0.002	<0.0003	92	<0.00008	13.2	<0.002	<0.001	270
	10/16/2013	0.0265	0.0252	<0.00030	622	<0.002	<0.0003	91	<0.00008	19.8	<0.002	<0.001	250
	5/14/2014	0.0319	0.0196	<0.00030	680	<0.002	<0.0003	108	<0.00008	10.7	<0.002	<0.001	353
MW-02-18	3/28/2007	0.00389	0.0182	0.000323	515	<0.002	<0.0003	262	<0.00008	2.76	<0.002	<0.001	115
	6/19/2007	<0.002	0.0193	<0.0003	557	<0.002	<0.0003	260	<0.00008	3.37	<0.002	<0.001	104
	9/18/2007	<0.002	0.0128	<0.0003	535	<0.002	<0.0003	227	<0.00008	2.49	0.00612	<0.001	88.3
	12/11/2007	<0.002	0.0224	<0.0003	610	<0.002	<0.0003	240	<0.00008	2.84	<0.002	<0.001	97.3
	3/11/2008	<0.002	0.0186	<0.0003	572	<0.002	<0.0003	279	<0.00008	3.45	<0.002	<0.001	103
	9/16/2008	0.00292	0.0216	<0.0003	604	<0.002	<0.0003	252	<0.00008	2.89	<0.002	<0.001	99.7
	3/10/2009	<0.002	0.0164	<0.0003	552	<0.002	<0.0003	239	<0.00008	2.70	<0.002	<0.001	96.1
	9/15/2009	<0.002	0.0174	<0.0003	573	<0.002	<0.0003	261	<0.00008	3.16	<0.002	<0.001	103
	3/31/2010	<0.002	0.0171	0.000304	598	<0.002	0.000302	256	<0.00008	2.66	<0.002	<0.001	89.4
	9/14/2010	0.00284	0.0181	0.000304	640	<0.002	<0.0003	254	<0.00008	2.79	<0.002	<0.001	104
	3/16/2011	<0.0100	0.018	<0.005	722	<0.005	<0.005	305	<0.0002	19.00	<0.02	<0.005	161
	10/13/2011	<0.0100	0.023	<0.005	712	<0.01	<0.005	270	<0.0002	4.62	0.251	<0.005	140
	9/27/2012	<0.002	0.018	<0.0003	644	<0.002	<0.0003	193	<0.00008	3.25	<0.002	<0.001	91.3
	10/16/2013	<0.002	0.0177	<0.0003	597	0.00322	0.0003	192	<0.00008	3.05	<0.002	<0.0010	76.4
	5/15/2014	<0.002	0.0161	<0.0003	652	<0.002	0.0003	212	<0.00008	3.82	0.0121	<0.0010	87.6
MW-03-01	3/28/2007	0.0072	0.0247	<0.0003	571	<0.002	<0.0003	60.0	<0.00008	7.95	<0.002	<0.001	143
	6/19/2007	0.00677	0.0224	<0.0003	603	0.00201	<0.0003	68.4	<0.00008	7.75	<0.002	<0.001	156
	9/18/2007	0.00341	0.0199	<0.0003	570	<0.002	<0.0003	59.5	<0.00008	6.27	<0.002	<0.001	148
	12/11/2007	0.0043	0.0216	<0.0003	604	<0.002	<0.0003	65.5	<0.00008	7.30	<0.002	<0.001	166
	3/11/2008	<0.002	0.0209	<0.0003	597	<0.002	<0.0003	67.1	<0.00008	8.32	<0.002	<0.001	175
	10/16/2013	0.00536	0.0266	<0.0003	597	0.00405	<0.0003	85.1	<0.00008	13.2	<0.002	<0.001	139
MW-03-02	3/29/2007	0.00259	0.0229	<0.0003	544	<0.002	<0.0003	104	<0.00008	6.46	<0.002	<0.001	276
	6/19/2007	0.00201	0.0181	<0.0003	539	<0.002	<0.0003	113	<0.00008	5.53	<0.002	<0.001	333
	12/11/2007	<0.002	0.0206	<0.0003	518	<0.002	<0.0003	104	<0.00008	4.98	<0.002	<0.001	304
	3/17/2011	<0.01	0.015	<0.005	679	<0.005	<0.005	152	<0.0002	11	<0.002	<0.005	440
MW-03-03	3/28/2007	0.00512	0.0254	<0.0003	405	<0.002	<0.0003	86.8	<0.00008	9.52	<0.002	<0.001	148
	6/19/2007	0.00328	0.0248	<0.0003	456	<0.002	<0.0003	94.8	<0.00008	8.47	<0.002	<0.001	178
	9/18/2007	0.00276	0.0229	<0.0003	425	<0.002	<0.0003	83.3	<0.00008	7.61	0.00649	<0.001	146
	3/11/2009	0.00419	0.0239	<0.0003	381	<0.002	<0.0003	78.7	<0.00008	7.96	<0.002	<0.001	120

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-03-03	9/16/2009	0.00396	0.0246	<0.0003	407	<0.002	<0.0003	84.5	<0.00008	9.36	<0.002	<0.001	136
	3/16/2011	<0.01	0.022	<0.005	517	<0.005	<0.005	101.0	<0.0002	17.8	<0.02	<0.005	170
	10/14/2011	<0.01	0.029	<0.005	580	<0.01	<0.005	96.9	<0.0002	11.1	0.076	<0.005	169
	3/13/2012	0.00546	0.0243	<0.0003	490	<0.002	<0.0003	80.5	<0.00008	8.84	<0.002	<0.001	136
	10/16/2013	0.00358	0.0244	<0.0003	486	<0.002	<0.0003	81.2	<0.00008	10	<0.002	<0.001	160
	5/15/2014	0.00212	0.0224	<0.0003	627	<0.002	<0.0003	96.6	<0.00008	10.4	0.00611	<0.001	189
MW-05	3/29/2007	0.00233	0.0145	<0.0003	558	<0.002	<0.0003	136	<0.00008	5.69	<0.002	<0.001	199
	6/19/2007	0.00252	0.0124	<0.0003	555	<0.002	<0.0003	130	<0.00008	5.56	<0.002	<0.001	203
	9/18/2007	<0.002	0.0113	<0.0003	542	<0.002	0.00119	127	<0.00008	4.53	0.00418	<0.001	188
	12/11/2007	<0.002	0.0152	<0.0003	544	<0.002	<0.0003	123	<0.00008	5.23	<0.002	<0.001	194
	3/11/2008	<0.002	0.0127	<0.0003	570	<0.002	<0.0003	145	<0.00008	5.88	<0.002	<0.001	233
	9/17/2008	<0.002	0.0151	<0.0003	564	<0.002	<0.0003	134	<0.00008	5.9	<0.002	<0.001	209
	3/10/2009	<0.002	0.0132	<0.0003	527	<0.002	<0.0003	120	<0.00008	5.27	<0.002	<0.001	186
	9/15/2009	<0.002	0.0128	<0.0003	524	<0.002	<0.0003	128	<0.00008	5.57	<0.002	<0.001	196
	3/31/2010	0.00286	0.0140	<0.0003	584	<0.002	<0.0003	134	<0.00008	6.30	<0.002	<0.001	213
	9/14/2010	0.00207	0.0137	<0.0003	591	<0.002	<0.0003	130	<0.00008	7.50	<0.002	<0.001	221
	3/16/2011	<0.01	0.0700	<0.005	564	0.036	<0.005	131	<0.0002	12.30	<0.02	<0.005	232
	10/13/2011	<0.01	0.0180	<0.005	680	<0.01	<0.005	156	<0.0002	9.66	<0.02	<0.005	290
	3/14/2012	<0.002	0.0152	<0.0003	608	<0.002	<0.0003	136	<0.00008	8.46	<0.002	<0.001	230
	9/27/2012	<0.002	0.0138	<0.0003	602	<0.002	<0.0003	136	<0.00008	7.26	<0.002	<0.001	235
	10/16/2013	<0.002	0.0126	<0.0003	558	<0.002	<0.0003	128	<0.00008	7.94	<0.002	<0.001	207
	5/14/2014	0.0035	0.0141	<0.0003	592	<0.002	<0.0003	124	<0.00008	8.56	<0.002	<0.001	214
MW-07	3/28/2007	0.00245	0.016	<0.0003	491	0.0254	<0.0003	128	<0.00008	14.4	<0.002	<0.001	74.2
	6/19/2007	0.00238	0.0258	<0.0003	613	0.0247	<0.0003	33.3	<0.00008	8.94	<0.002	<0.001	74.2
	9/18/2007	<0.002	0.0221	<0.0003	622	0.0374	<0.0003	39.0	<0.00008	7.96	0.00589	<0.001	41.2
	12/10/2007	0.00213	0.0332	<0.0003	630	0.0356	<0.0003	48.8	<0.00008	10.1	<0.002	<0.001	99.1
	3/11/2008	<0.002	0.0187	<0.0003	618	0.0222	0.000721	67.0	<0.00008	13.6	<0.002	<0.001	81.2
	9/17/2008	<0.002	0.0151	<0.0003	564	<0.002	<0.0003	134	<0.00008	5.90	<0.002	<0.001	209
	3/17/2011	0.013	0.052	<0.005	600	0.301	0.034	56	<0.0002	33.00	<0.02	<0.005	103
	10/13/2011	<0.01	0.053	<0.005	620	0.129	<0.005	51	<0.0002	25.60	0.206	<0.005	83.5
	9/28/2012	0.00483	0.0278	0.000508	602	0.167	0.00109	210	<0.00008	27.00	0.0748	<0.0010	73.4
	10/17/2013	0.0111	0.0282	<0.0003	542	0.13	<0.0003	77	<0.00008	19.80	0.00591	<0.001	68.7
	5/15/2014	0.0081	0.0262	<0.0003	609	0.167	<0.0003	176	<0.00008	24.30	0.266	<0.001	68.4

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-08	3/28/2007	0.00726	0.0205	<0.0003	479	<0.002	<0.0003	122	<0.00008	6.85	<0.002	<0.001	286
	6/19/2007	0.00491	0.0189	<0.0003	496	<0.002	<0.0003	136	<0.00008	6.93	<0.002	<0.001	303
	9/18/2007	0.00436	0.0174	<0.0003	490	<0.002	<0.0003	127	<0.00008	5.39	0.00512	<0.001	288
	12/11/2007	0.00463	0.0221	<0.0003	479	<0.002	<0.0003	122	<0.00008	6.16	<0.002	<0.001	288
	3/11/2008	0.00548	0.0199	<0.0003	506	<0.002	<0.0003	135	<0.00008	7.4	<0.002	<0.001	320
	9/17/2008	0.00535	0.0194	<0.0003	486	<0.002	<0.0003	124	<0.00008	6.63	<0.002	<0.001	280
	3/11/2009	0.00583	0.0188	<0.0003	467	<0.002	<0.0003	121	<0.00008	6.55	<0.002	<0.001	280
	9/16/2009	0.00576	0.0188	<0.0003	480	<0.002	<0.0003	127	<0.00008	7.03	<0.002	<0.001	290
	3/31/2010	0.00624	0.0186	<0.0003	537	<0.002	<0.0003	133	<0.00008	6.83	<0.002	<0.001	295
	9/15/2010	0.00559	0.018	<0.0003	521	<0.002	<0.0003	141	<0.00008	6.74	<0.002	<0.001	325
	3/14/2011	<0.01	0.0200	<0.005	510	0.009	<0.005	133	<0.002	15.8	<0.020	<0.005	328
	10/13/2011	<0.01	0.0210	<0.005	578	<0.01	<0.005	143	<0.002	9.13	<0.02	<0.005	362
	9/27/2012	0.00304	0.0162	<0.0003	577	<0.002	<0.0003	138	<0.00008	7.56	<0.002	<0.001	300
	10/16/2013	0.00771	0.0226	<0.000300	431	<0.002	<0.0003	103	<0.00008	8.37	<0.00200	<0.001	246
	5/14/2014	0.00518	0.0170	<0.0003	538	<0.002	<0.0003	120	<0.00008	7.54	<0.002	<0.001	279
MW-12	3/11/2009	<0.002	0.0141	<0.0003	535	<0.002	<0.0003	85.6	<0.00008	5.30	<0.002	<0.001	99.8
	9/15/2009	<0.002	0.0162	<0.0003	576	<0.002	<0.0003	88.2	<0.00008	5.54	<0.002	<0.001	110
	3/31/2010	<0.002	0.0155	<0.0003	606	<0.002	<0.0003	95.6	<0.00008	5.84	<0.002	<0.001	114
	9/14/2010	<0.002	0.0112	<0.0003	565	<0.002	<0.0003	148.0	<0.00008	6.49	<0.002	<0.001	145
	3/16/2011	0.014	<0.0100	<0.005	635	0.121	<0.005	183.0	<0.0002	25.6	<0.02	<0.005	195
	10/13/2011	<0.01	0.018	<0.005	679	<0.01	<0.005	222.0	<0.0002	7.72	<0.02	<0.005	166
	3/13/2012	<0.002	0.0145	<0.0003	572	<0.002	<0.0003	214.0	<0.00008	6.24	<0.002	<0.001	128
	9/28/2012	0.0044	0.0121	<0.0003	531	<0.002	<0.0003	178.0	<0.00008	5.93	<0.002	<0.001	113
	10/16/2013	0.00716	0.018	<0.0003	576	0.00362	0.000617	208.0	<0.00008	5.72	<0.0020	<0.001	88.4
	5/14/2014	0.00338	0.013	<0.0003	562	<0.002	<0.0003	260.0	<0.00008	5.95	<0.002	<0.001	104
MW-13	9/16/2008	0.00853	0.0249	<0.0003	561	<0.002	<0.0003	36.0	<0.00008	5.92	<0.002	<0.001	77.4
	3/10/2009	0.00707	0.0246	<0.0003	546	<0.002	<0.0003	26.4	<0.00008	4.28	<0.002	<0.001	48.5
	9/15/2009	0.00786	0.0362	<0.0003	615	<0.002	<0.0003	40.1	<0.00008	6.82	<0.002	<0.001	100
	3/30/2010	0.099	0.0276	<0.0003	601	<0.002	<0.0003	42.2	<0.00008	5.67	<0.002	<0.001	75.1
	9/14/2010	0.0104	0.0376	<0.0003	640	<0.002	<0.0003	31.0	<0.00008	7.29	<0.002	<0.001	116
	10/12/2011	<0.01	0.037	<0.005	680	<0.01	<0.005	28.1	<0.0002	9.55	0.11	<0.005	174
	3/13/2012	0.011	0.0311	<0.0003	616	<0.002	<0.0003	34.3	<0.00008	6.26	<0.002	<0.001	144
	9/27/2012	0.0556	0.0404	<0.0003	623	<0.002	<0.0003	68.9	<0.00008	7.23	<0.002	<0.001	148
	10/16/2013	0.00186	0.0405	<0.0003	584	<0.002	<0.0003	115.0	<0.00008	15.5	<0.002	<0.001	230

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-14	3/30/2010	<0.002	0.0246	<0.0003	608	<0.002	<0.0003	46.7	<0.00008	3.95	<0.002	<0.001	77.4
	10/12/2011	<0.01	0.022	<0.005	685	<0.01	<0.005	87.9	<0.0002	<1.00	0.06	<0.005	117
	9/28/2012	0.0302	0.0186	<0.0003	620	<0.002	<0.0003	105.0	<0.00008	3.93	<0.002	<0.001	118
	10/15/2013	0.00467	0.0212	<0.00030	598	<0.00200	<0.0003	103.0	<0.00008	4.81	<0.0020	<0.0010	114
MW-15	9/16/2008	0.0174	0.0166	<0.0003	404	<0.002	<0.0003	3,560	<0.00008	116	0.00873	<0.001	4,190
	3/10/2009	0.0110	0.0180	<0.0015	424	<0.01	<0.0015	6,160	<0.00008	222	<0.01	<0.005	7,630
	9/15/2009	0.0082	0.0178	0.00032	467	0.002	<0.0003	6,520	<0.00008	225	0.0178	<0.001	8,060
	3/30/2010	0.0103	0.0128	0.000458	474	<0.002	<0.0003	6,180	<0.00008	215	<0.02	<0.001	7,450
	9/14/2010	0.0178	0.0158	0.000510	558	<0.002	<0.0015	11,500	<0.00008	365	0.0100	<0.001	14,200
	3/15/2011	<0.0100	0.0120	<0.005	432	0.00500	<0.005	12,800	<0.0002	550	<0.02	<0.005	15,400
	10/11/2011	0.0850	0.0140	<0.005	655	0.02700	<0.005	15,900	<0.0002	635	<0.02	<0.005	22,900
	3/13/2012	0.0140	0.0183	0.000459	524	0.00222	<0.0003	9,620	<0.00008	341	0.0074	<0.001	11,600
	9/27/2012	0.0230	0.0142	0.000518	486	<0.002	<0.0003	7,430	<0.00008	234	0.0196	<0.001	9,300
	10/15/2013	0.0057	0.0145	0.000323	451	<0.00200	<0.00030	2,810	<0.00008	104	0.0101	<0.00100	3,490
MW-16	7/15/2009	0.00683	0.0179	0.000498	513	0.00585	<0.0003	1,240	<0.00008	37.1	0.0104	<0.001	1,890
	9/15/2009	0.00895	0.0156	<0.0003	481	0.00724	<0.0003	1,230	<0.00008	42.9	0.00855	<0.001	1,820
	3/30/2010	0.00506	0.0108	<0.0003	515	0.0113	<0.0003	623	<0.00008	26.1	0.00553	<0.001	892
	9/14/2010	<0.002	0.0108	<0.0003	530	0.0161	<0.0003	311	<0.00008	12.2	0.00584	<0.001	381
	3/16/2011	<0.01	0.01	<0.005	531	0.018	<0.005	195	<0.0002	14.7	<0.02	<0.005	195
	10/11/2011	<0.01	0.011	<0.005	651	0.018	<0.005	196	<0.0002	7.03	<0.02	<0.005	168
	3/13/2012	<0.002	0.00932	<0.0003	588	0.0235	<0.0003	201	<0.00008	5.98	0.00429	<0.001	135
	9/27/2012	<0.002	0.00967	<0.0003	594	0.0229	<0.0003	202	<0.00008	7.04	0.00561	<0.001	146
	10/15/213	0.00242	0.0102	0.0003	540	0.0128	0.0003	250	<0.00008	9.90	0.00608	0.001	238
MW-17	7/15/2009	0.00814	0.0304	<0.0003	568	<0.002	<0.0003	111	<0.00008	5.58	<0.002	<0.001	132
	9/15/2009	0.00411	0.0240	<0.0003	589	<0.002	<0.0003	57.4	<0.00008	5.58	<0.002	<0.001	91.5
	3/30/2010	0.00427	0.0245	<0.0003	644	<0.002	<0.0003	48.3	<0.00008	6.98	<0.002	<0.001	87.5
	9/14/2010	0.00666	0.0255	<0.0003	646	<0.002	<0.0003	51.8	<0.00008	8.23	<0.002	<0.001	120
	3/16/2011	<0.01	0.0260	<0.005	690	0.018	<0.005	71.4	<0.0002	17.8	<0.02	<0.005	153
MW-17	10/24/2011	<0.01	0.0270	<0.005	720	0.012	<0.005	56.4	<0.002	10	0.054	<0.005	198
	3/13/2012	<0.002	0.0221	<0.0003	600	<0.002	<0.0003	117.0	<0.00008	6.34	<0.002	<0.001	122
	9/27/2012	0.00425	0.0160	<0.0003	568	<0.002	0.000592	169.0	<0.00008	6.79	<0.002	<0.001	130
	10/15/2013	0.00525	0.0229	0.0003	612	0.002	0.0003	118.0	<0.00008	9.29	0.002	0.001	140

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
MW-18	7/15/2009	0.00284	0.032	<0.0003	623	<0.002	<0.0003	21.1	<0.00008	3.14	<0.002	<0.001	44.4
	9/15/2009	<0.002	0.0285	<0.0003	560	<0.002	<0.0003	18.3	<0.00008	3.60	<0.002	<0.001	45.8
	3/30/2010	<0.002	0.0264	<0.0003	648	<0.002	<0.0003	66.6	<0.00008	3.19	<0.002	<0.001	47.6
	9/13/2010	<0.002	0.0166	<0.0003	663	0.0502	<0.0003	123.0	<0.00008	4.11	<0.002	<0.001	53.8
	3/14/2011	0.013	0.179	<0.005	657	1.33	<0.005	128.0	<0.0002	11.00	<0.0002	<0.005	70.7
	10/11/2011	<0.01	0.015	<0.005	752	0.147	<0.005	144.0	<0.0002	4.99	<0.0002	<0.005	65.4
	3/12/2012	<0.01	0.0149	<0.005	727	0.085	<0.005	141.0	<0.0002	4.43	<0.0002	<0.005	64.9
	7/19/2012	--	--	--	--	0.0787	--	--	--	--	--	--	--
	9/27/2012	<0.002	0.014	<0.0003	738	0.0395	<0.0003	142.0	<0.00008	4.41	0.0023	<0.001	69.8
	10/15/2013	0.002	0.0158	0.0003	724	0.00731	0.0003	136.0	<0.00008	4.73	0.00202	0.001	69.4
	5/13/2014	<0.002	0.0151	<0.0003	763	0.00208	<0.0003	140.0	<0.00008	5.18	<0.002	<0.001	68.6
MW-20	7/15/2009	0.0821	0.0150	<0.0003	576	<0.002	<0.0003	117	<0.00008	8.33	<0.002	<0.001	306
	9/16/2009	0.0594	0.0145	<0.0003	544	<0.002	<0.0003	102	<0.00008	8.70	<0.002	<0.001	246
MW-22	7/15/2009	0.00906	0.0255	<0.0003	664	<0.002	<0.0003	288	<0.00008	3.95	<0.002	<0.001	77.4
	9/15/2009	0.00271	0.0191	<0.0003	598	<0.002	<0.0003	241	<0.00008	3.38	<0.002	<0.001	61.9
	3/31/2010	<0.002	0.0186	<0.0003	617	<0.002	<0.0003	273	<0.00008	4.54	<0.002	<0.001	78.1
	9/14/2010	0.00242	0.0195	<0.0003	704	<0.002	<0.0003	277	<0.00008	3.30	<0.002	<0.001	103
	3/16/2011	<0.0100	0.016	<0.00500	740	0.006	<0.005	298	<0.0002	17.00	<0.0002	<0.005	157
	10/13/2011	<0.0100	0.028	<0.00500	690	<0.01	<0.005	140	<0.0002	6.16	<0.0002	<0.005	95
	9/27/2012	0.00219	0.0228	<0.0003	698	<0.002	<0.0003	190	<0.00008	4.35	<0.002	<0.001	87
	10/16/2013	<0.002	0.0234	<0.0003	652	<0.002	<0.0003	157	<0.00008	4.84	<0.002	<0.001	63.7
	5/15/2014	<0.002	0.0217	<0.0003	692	<0.002	<0.0003	179	<0.00008	5.20	0.0288	<0.001	71
MW-23	7/15/2009	0.00259	0.0228	<0.0003	660	<0.002	<0.0003	145	<0.00008	6.72	<0.002	<0.001	245
	9/15/2010	0.00632	0.0242	<0.0003	695	<0.002	<0.0003	145	<0.00008	8.43	<0.002	<0.001	234
	3/15/2011	<0.01	0.02	<0.005	627	0.008	0.019	143	<0.000200	15.5	<0.0200	<0.005	237
	10/12/2011	<0.01	0.023	<0.005	694	0.01	<0.00500	168	<0.000200	9.82	<0.0200	<0.005	275
	9/28/2012	0.00403	0.0307	<0.0003	656	<0.002	<0.0003	137	<0.00008	6.68	<0.002	<0.001	206
	10/16/2013	0.00408	0.0158	<0.0003	591	<0.002	<0.0003	129	<0.00008	6.36	<0.002	<0.001	169
	5/13/2014	0.00543	0.0184	<0.0003	650	0.00661	<0.0003	138	<0.00008	7.38	<0.002	<0.001	191
MW-24	3/13/2012	<0.002	0.0274	<0.0003	673	<0.002	<0.0003	319	<0.00008	3.46	<0.002	<0.001	83.3
	9/27/2012	<0.002	0.0311	<0.0003	692	<0.002	<0.0003	289	<0.00008	3.02	<0.002	<0.001	89.8

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
EB-01	3/27/2007	0.00298	0.0122	<0.0003	508	<0.002	<0.0003	132	<0.00008	3.56	0.00663	<0.001	22.2
	6/18/2007	0.00232	0.0147	<0.0003	576	<0.002	<0.0003	135	<0.00008	4.39	0.00637	<0.001	94.3
	9/17/2007	0.00308	0.0156	<0.0003	524	<0.002	<0.0003	132	<0.00008	4.13	0.00901	<0.001	131
	12/10/2007	<0.002	0.0118	<0.0003	550	<0.002	<0.0003	124	<0.00008	3.19	0.00388	<0.001	24.9
	3/10/2008	<0.002	0.0119	0.000545	532	<0.002	<0.0003	123	<0.00008	3.50	0.00521	<0.001	22
	9/16/2008	0.00204	0.0105	<0.0003	496	<0.002	<0.0003	112	<0.00008	3.26	0.00507	<0.001	18.7
	3/10/2009	0.00214	0.0118	0.000331	545	<0.002	<0.0003	128	<0.00008	3.67	0.00488	<0.001	21.6
	9/15/2009	<0.002	0.0103	0.000353	509	<0.002	<0.0003	118	<0.00008	3.26	0.00586	<0.001	23.1
	3/30/2010	<0.002	0.0120	0.000492	562	<0.002	<0.0003	127	<0.00008	3.7	0.00527	<0.001	23.9
	9/13/2010	<0.002	0.0111	0.000346	550	<0.002	<0.0003	124	<0.00008	3.74	0.00529	<0.001	26.6
	3/14/2011	<0.01	0.0140	<0.005	597	<0.005	<0.005	164	<0.0002	11.3	<0.02	<0.005	112
EB-02	3/27/2007	<0.002	0.0124	<0.0003	496	<0.002	<0.0003	198	<0.00008	10.1	0.00328	<0.001	152
	6/18/2007	<0.002	0.0156	<0.0003	531	<0.002	<0.0003	305	<0.00008	9.09	0.00485	<0.001	135
EB-02	9/17/2007	<0.002	0.0123	<0.0003	524	<0.002	<0.0003	228	<0.00008	8.77	0.00631	<0.001	152
	12/10/2007	<0.002	0.012	<0.0003	666	<0.002	<0.0003	192	<0.00008	9.13	<0.002	<0.001	164
	3/10/2008	<0.002	0.0107	<0.0003	514	<0.002	<0.0003	194	<0.00008	9.51	0.00203	<0.001	146
	9/16/2008	<0.002	0.0140	<0.0003	519	<0.002	<0.0003	165	<0.00008	9.50	<0.002	<0.001	149
	3/10/2009	<0.002	0.0128	<0.0003	512	<0.002	<0.0003	186	<0.00008	9.56	<0.002	<0.001	141
	9/15/2009	<0.002	0.0105	<0.0003	527	<0.002	<0.0003	212	<0.00008	9.28	0.00254	<0.001	146
	3/30/2010	<0.002	0.0111	<0.0003	555	<0.002	<0.0003	223	<0.00008	9.38	0.00233	<0.001	153
	9/13/2010	<0.002	0.0125	<0.0003	571	<0.002	<0.0003	188	<0.00008	9.46	<0.002	<0.001	149
	3/15/2011	<0.01	<0.0100	<0.005	619	<0.005	<0.005	283	<0.0002	16.2	<0.02	<0.005	183
	10/12/2011	<0.01	0.013	<0.005	627	<0.01	<0.005	297	<0.0002	12.9	<0.0200	<0.005	213
	3/12/2012	<0.01	0.0106	<0.005	586	<0.01	<0.005	264	<0.0002	9.86	<0.0200	<0.005	168
	9/27/2012	<0.002	0.0125	<0.0003	538	<0.002	<0.0003	347	<0.00008	9.03	0.00693	<0.001	145
	10/15/2013	0.002	0.0108	0.0003	550	0.0002	<0.0003	263	<0.00008	10.3	0.00372	<0.001	151
	5/13/2014	<0.002	0.0114	<0.0003	582	<0.002	<0.0003	262	<0.00008	12	0.00322	<0.001	159
EB-03	3/27/2007	<0.002	0.0202	<0.0003	545	<0.002	<0.0003	30	<0.00008	3.93	<0.002	<0.001	56.5
	10/15/2013	0.002	0.0269	0.0003	631	0.00208	0.0003	99	<0.00008	4.31	0.002	0.001	110
EB-04	3/27/2007	0.00342	0.0163	<0.0003	591	0.0615	<0.0003	126	<0.00008	6.30	0.00242	<0.001	208
	6/18/2007	0.00277	0.0165	<0.0003	680	0.0718	<0.0003	138	<0.00008	6.07	<0.002	<0.001	232
	9/17/2007	0.00288	0.0164	<0.0003	636	0.0518	<0.0003	126	<0.00008	5.44	0.00606	<0.001	214
	12/10/2007	<0.002	0.0169	<0.0003	683	0.0515	<0.0003	135	<0.00008	5.60	<0.002	<0.001	235

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
EB-04	3/10/2008	0.00214	0.0165	<0.0003	689	0.0542	<0.0003	135	<0.00008	5.84	<0.002	<0.001	232
	9/16/2008	0.00245	0.174	<0.0003	625	0.0565	<0.0003	122	<0.00008	5.90	<0.002	<0.001	207
	3/10/2009	0.002	0.0165	<0.0003	609	0.0364	<0.0003	118	<0.00008	6.01	<0.002	<0.001	204
	9/15/2009	0.002	0.0154	<0.0003	619	0.0477	<0.0003	125	<0.00008	5.81	<0.002	<0.001	207
	3/30/2010	<0.002	0.0159	<0.0003	616	<0.002	<0.0003	31.5	<0.00008	3.90	<0.002	<0.001	48.9
	9/14/2010	0.00211	0.0239	<0.0003	605	0.0105	<0.0003	65.8	<0.00008	5.03	<0.002	<0.001	81.1
	3/14/2011	<0.01	0.148	<0.005	619	0.155	<0.005	116	<0.0002	<10.0	<0.020	<0.005	165
	10/12/2011	<0.01	0.077	<0.005	685	0.014	<0.005	191	<0.0002	10.40	0.818	<0.005	124
	3/12/2012	<0.01	0.0252	<0.005	692	0.0538	<0.005	142	<0.0002	6.00	<0.020	<0.005	216
	7/19/2012	--	--	--	--	0.144	--	--	--	--	--	--	--
	9/28/2012	0.00233	0.0217	<0.0003	680	0.0644	<0.0003	146.0	<0.00008	5.82	<0.002	<0.001	208
	10/15/2013	0.00322	0.0197	0.0003	607	0.0577	0.0003	138.0	<0.00008	6.05	0.002333	0.001	143
EB-05	3/26/2007	<0.002	0.0290	<0.0003	682	<0.002	<0.0003	12.4	<0.00008	3.16	3.16	<0.001	39.7
	6/18/2007	<0.002	0.0281	<0.0003	623	<0.002	<0.0003	14.3	<0.00008	3.27	3.27	<0.001	46.3
	9/17/2007	<0.002	0.0258	<0.0003	602	<0.002	<0.0003	18.8	<0.00008	3.33	3.33	<0.001	48.4
	12/10/2007	<0.002	0.0235	<0.0003	586	<0.002	<0.0003	13.5	<0.00008	2.51	2.51	<0.001	38.7
	3/10/2008	<0.002	0.0304	<0.0003	602	<0.002	<0.0003	11.2	<0.00008	2.73	<0.002	<0.001	32.1
	9/16/2008	<0.002	0.0403	<0.0003	556	<0.002	<0.0003	11.5	<0.00008	3.06	<0.002	<0.001	37.0
	3/10/2009	<0.002	0.0320	<0.0003	553	<0.002	<0.0003	11.0	<0.00008	3.05	<0.002	<0.001	35.3
	9/15/2009	0.00237	0.0343	<0.0003	554	<0.002	<0.0003	13.4	<0.00008	3.60	<0.002	<0.001	43.0
	3/30/2010	<0.002	0.0348	<0.0003	603	<0.002	<0.0003	13.9	<0.00008	3.18	<0.002	<0.001	38.8
	9/13/2010	<0.002	0.0291	<0.0003	634	<0.002	<0.0003	20.3	<0.00008	3.44	<0.002	<0.001	45.6
	3/14/2011	0.021	0.0930	<0.005	697	1.37	<0.005	20.0	<0.0002	<10.0	<0.020	<0.005	65.9
	10/12/2011	<0.01	0.0290	<0.005		<0.0100	<0.005	43.6	<0.0002	5.05	<0.020	<0.005	80.3
	3/12/2012	<0.01	0.0276	<0.005	696	<0.0100	<0.005	44.4	<0.0002	3.74	<0.020	<0.005	54.0
	9/27/2012	0.00224	0.0225	<0.0003	645	<0.002	<0.0003	62.9	<0.00008	3.52	<0.002	<0.001	51.4
	10/15/2013	0.0119	0.0239	<0.0003	635	<0.002	<0.0003	53.8	<0.00008	5.48	<0.002	<0.001	66.5
EB-06	3/26/2007	0.00375	0.0155	0.000301	684	<0.002	<0.0003	142	<0.00008	4.74	0.00411	<0.001	41.6
	6/18/2007	<0.002	0.0174	<0.0003	600	<0.002	0.00474	127	<0.00008	4.85	0.00325	<0.001	39.8
	9/17/2007	<0.002	0.0151	0.000394	573	<0.002	0.00197	118	<0.00008	3.68	0.00676	<0.001	33.8
EB-06	12/10/2007	<0.002	0.0148	<0.0003	570	<0.002	<0.0003	117	<0.00008	3.73	0.0031	<0.001	40.1
	3/10/2008	<0.002	0.0158	0.000561	572	<0.002	<0.0003	122	<0.00008	3.86	0.00348	<0.001	47.5
	9/16/2008	<0.002	0.0155	0.000352	556	0.00217	<0.0003	117	<0.00008	4.27	0.00379	<0.001	34.4
	3/10/2009	<0.002	0.0142	0.000419	544	0.00607	<0.0003	112	<0.00008	4.33	0.00280	<0.001	33.9

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
EB-06	9/15/2009	<0.002	0.0135	0.000759	554	0.0183	0.000381	120	<0.00008	4.00	0.00324	<0.001	35.9
	3/30/2010	<0.002	0.0142	0.00209	595	0.0263	0.000350	128	<0.00008	4.69	0.00325	<0.001	40.9
	9/13/2010	<0.002	0.0149	0.00149	585	0.0322	<0.0003	129	<0.00008	4.62	0.00293	<0.001	45.2
	3/14/2011	<0.01	0.401	<0.005	567	0.501	<0.005	134	<0.0004	<10.0	<0.02	<0.005	67.0
	10/11/2011	<0.01	0.016	<0.005	663	0.094	<0.005	150	<0.0002	5.27	<0.02	<0.005	70.7
	3/12/2012	<0.01	0.0143	<0.005	606	0.126	<0.005	138	<0.0002	4.44	<0.02	<0.005	83.9
	7/19/2012	--	--	--	--	0.102	--	--	--	--	--	--	--
	9/28/2012	0.00217	0.0134	0.0017	576	0.0556	0.000368	136.0	<0.00008	4.35	0.00318	<0.001	63.4
	5/14/2014	0.00215	0.013	0.001	615	0.0372	<0.0003	134.0	<0.00008	5.30	0.00287	<0.001	51.8
EB-07	3/27/2007	0.02580	0.0158	<0.0003	562	<0.002	<0.0003	97.2	<0.00008	2.68	<0.002	<0.001	108
	6/18/2007	0.02730	0.0163	<0.0003	643	<0.002	<0.0003	107	<0.00008	2.98	<0.002	<0.001	117
	9/17/2007	0.0211	0.0164	0.000320	612	<0.002	<0.0003	99.6	<0.00008	2.65	<0.002	<0.001	109
	12/10/2007	0.0232	0.0152	<0.0003	614	<0.002	<0.0003	99.6	<0.00008	2.59	<0.002	<0.001	119
	3/10/2008	0.0301	0.0158	<0.0003	594	<0.002	<0.0003	91.4	<0.00008	2.94	<0.002	<0.001	106
	9/16/2008	0.0379	0.0173	<0.0003	589	<0.002	<0.0003	94.8	<0.00008	3.16	<0.002	<0.001	111
	3/10/2009	0.0416	0.0155	<0.0003	572	<0.002	<0.0003	86.6	<0.00008	3.48	<0.002	<0.001	102
	9/15/2009	0.0463	0.0105	<0.0003	598	<0.002	<0.0003	95.4	<0.00008	3.56	<0.002	<0.001	111
	3/31/2010	0.0500	0.0162	<0.0003	627	<0.002	<0.0003	99.4	<0.00008	3.96	<0.002	<0.001	110
	9/14/2010	0.0628	0.0145	<0.0003	615	<0.002	0.00572	93.2	<0.00008	4.00	<0.002	<0.001	112
	3/14/2011	0.0550	0.0210	<0.005	624	0.0230	<0.005	07	<0.0002	<10.0	<0.02	<0.005	120
	10/12/2011	<0.01	0.0210	<0.005	669	<0.01	<0.005	168	<0.0002	5.48	<0.02	<0.005	131
	3/12/2012	<0.01	0.0192	<0.005	618	<0.01	<0.005	142	<0.0002	3.99	<0.02	<0.005	96.7
	9/27/2012	0.0032	0.0160	<0.0003	574	<0.002	<0.0003	168.0	<0.00008	3.73	0.00521	<0.001	88.9
EB-08	3/27/2007	0.00543	0.0259	<0.0003	646	<0.002	<0.0003	123	<0.00008	6.78	<0.002	<0.001	238
	6/18/2007	0.0036	0.0239	<0.0003	757	<0.002	<0.0003	130	<0.00008	7.04	0.0856	<0.001	262
	9/17/2007	0.00454	0.0209	<0.0003	689	<0.002	<0.0003	128	0.000354	5.61	0.00687	<0.001	223
	12/10/2007	<0.002	0.0198	<0.0003	676	<0.002	<0.0003	139	0.000354	5.19	<0.002	<0.001	177
	3/10/2008	0.00206	0.0209	<0.0003	723	<0.002	<0.0003	133	<0.00008	5.84	0.0799	<0.001	203
	9/16/2008	0.0048	0.0236	<0.0003	702	<0.002	<0.0003	120	<0.00008	6.47	<0.002	<0.001	215
	3/10/2009	0.00544	0.0232	<0.0003	704	0.00204	<0.0003	120	<0.00008	6.10	<0.002	<0.001	198
	9/15/2009	0.00335	0.0195	<0.0003	656	0.00254	<0.0003	121	<0.00008	5.48	0.0552	<0.001	185
	3/30/2010	0.00316	0.0237	<0.0003	712	<0.002	<0.0003	131	<0.00008	6.19	<0.002	<0.001	189
	9/14/2010	0.0021	0.0188	<0.0003	659	<0.002	<0.0003	138	<0.00008	5.32	<0.002	<0.001	132
	3/16/2011	<0.01	0.021	<0.005	713	0.058	<0.005	172	<0.0002	13.90	<0.02	<0.005	137

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
P-01	3/26/2007	0.00327	0.0262	<0.0003	692	<0.002	<0.0003	17.9	<0.00008	3.20	<0.002	<0.001	42.6
	6/18/2007	0.00355	0.0246	<0.0003	610	<0.002	<0.0003	17.9	<0.00008	3.25	<0.002	<0.001	45.7
	9/17/2007	<0.002	0.0259	0.000644	604	<0.002	<0.0003	23.1	0.000172	3.21	<0.002	<0.001	56.5
	12/10/2007	<0.002	0.0270	<0.0003	584	<0.002	<0.0003	18.8	<0.00008	2.71	<0.002	<0.001	44.8
	3/10/2008	0.00505	0.022	<0.0003	608	<0.002	<0.0003	17.0	<0.00008	2.77	<0.002	<0.001	34.7
	9/16/2008	<0.002	0.051	<0.0003	583	<0.002	<0.0003	20.3	<0.00008	3.50	<0.002	<0.001	42.1
	3/10/2009	<0.002	0.0188	<0.0003	520	<0.002	<0.0003	34.9	<0.00008	3.25	<0.002	<0.001	58.3
	9/15/2009	<0.002	0.0207	<0.0003	560	<0.002	<0.0003	51.6	<0.00008	3.50	<0.002	<0.001	103
	3/30/2010	<0.002	0.0218	<0.0003	607	<0.002	<0.0003	133	<0.00008	4.21	<0.002	<0.001	194
	9/13/2010	<0.002	0.021	<0.0003	617	<0.002	<0.0003	154	<0.00008	3.75	<0.002	<0.001	151
	3/15/2011	0.038	0.091	<0.005	571	0.099	<0.005	180	<0.0002	10.10	<0.02	<0.005	166
	10/17/2011	<0.01	0.021	<0.005	669	<0.01	<0.005	168	<0.0002	5.48	<0.02	<0.005	70.5
	3/12/2012	<0.01	0.0233	<0.005	649	<0.01	<0.005	187	<0.0002	3.92	<0.02	<0.005	151
	9/27/2012	<0.002	0.0163	<0.0003	550	<0.002	<0.0003	389	<0.00008	4.11	<0.002	<0.001	87.7
	10/15/2013	<0.002	0.0183	<0.0003	584	<0.002	<0.0003	319	<0.00008	4.67	<0.003	<0.001	102
	5/13/2014	<0.002	0.0158	<0.0003	564	<0.002	<0.0003	448	<0.00008	5.58	<0.002	<0.001	76.2
P-02	3/27/2007	0.00256	0.0154	<0.0003	512	<0.002	<0.0003	201	<0.00008	4.14	<0.002	<0.001	48.5
	6/19/2007	0.00405	0.0167	<0.0003	564	<0.002	<0.0003	179	<0.00008	4.25	<0.002	<0.001	39.1
	9/17/2007	0.00206	0.0166	<0.0003	553	<0.002	<0.0003	175	<0.00008	3.59	<0.002	<0.001	37.9
	12/10/2007	<0.002	0.0162	<0.0003	601	<0.002	<0.0003	186	<0.00008	3.82	<0.002	<0.001	44.6
	3/10/2008	<0.002	0.0154	<0.0003	546	<0.002	<0.0003	177	<0.00008	3.84	0.00738	<0.001	43.7
	9/16/2008	<0.002	0.0163	<0.0003	529	<0.002	<0.0003	186	<0.00008	3.81	<0.002	<0.001	47.8
	3/10/2009	<0.002	0.0147	<0.0003	545	<0.002	<0.0003	200	<0.00008	3.84	<0.002	<0.001	44.2
	9/15/2009	<0.002	0.0145	<0.0003	564	<0.002	<0.0003	179	<0.00008	3.74	<0.002	<0.001	40.1
	3/31/2010	<0.002	0.0150	<0.0003	567	<0.002	<0.0003	206	<0.00008	4.30	<0.002	<0.001	45.7
	9/14/2010	<0.002	0.0163	<0.0003	600	<0.002	<0.0003	187	<0.00008	4.40	<0.002	<0.001	42.3
	3/16/2011	<0.01	0.0490	<0.005	648	0.008	<0.005	246	<0.0002	12.50	<0.02	<0.005	63
	10/12/2011	<0.01	0.0140	<0.005	572	<0.01	<0.005	194	<0.0002	5.17	<0.02	<0.005	70.5
	3/13/2012	<0.002	0.0161	<0.0003	612	<0.002	<0.0003	223	<0.00008	4.62	<0.002	<0.001	55
	10/16/2013	0.00318	0.0172	<0.00030	584	<0.002	<0.0003	202	<0.00008	5.22	<0.002	<0.00100	43.8
	5/15/2014	0.00206	0.0162	<0.0003	628	<0.002	<0.0003	235	<0.00008	4.41	0.0214	<0.001	50.3
P-03	3/27/2007	0.0326	0.0254	<0.0003	549	<0.002	<0.0003	238	<0.00008	4.77	<0.002	<0.001	106
	6/18/2007	0.0280	0.0246	<0.0003	664	<0.002	<0.0003	269	<0.00008	5.32	<0.002	<0.001	151
	9/17/2007	0.0248	0.0230	<0.0003	628	<0.002	<0.0003	256	<0.00008	4.50	0.00521	<0.001	162

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
P-03	12/10/2007	0.0270	0.0226	<0.0003	623	<0.002	<0.0003	260	<0.00008	4.53	<0.002	<0.001	164
	3/10/2008	0.0319	0.022	<0.0003	603	<0.002	<0.0003	233	<0.00008	4.79	<0.002	<0.001	166
	9/16/2008	0.0390	0.0255	<0.0003	636	<0.002	<0.0003	251	<0.00008	5.13	<0.002	<0.001	207
	3/10/2009	0.0392	0.0233	<0.0003	608	<0.002	<0.0003	236	<0.00008	5.02	<0.002	<0.001	206
P-03	9/15/2009	0.0330	0.0208	<0.0003	654	<0.002	<0.0003	258	<0.00008	4.96	<0.002	<0.001	230
	3/31/2010	0.0381	0.0218	<0.0003	693	<0.002	<0.0003	261	<0.00008	5.22	<0.002	<0.001	248
	9/14/2010	0.0126	0.0244	<0.0003	662	<0.002	<0.0003	267	<0.00008	5.06	<0.002	<0.001	373
	3/15/2011	<0.0100	0.03	<0.005	697	0.009	0.019	335	<0.0002	12.1	<0.02	<0.005	284
	10/12/2011	<0.0100	0.031	<0.005	670	<0.01	<0.005	328	<0.0002	6.55	<0.02	<0.005	175
	3/13/2012	0.0092	0.0214	<0.001	586	<0.006	<0.001	291	<0.0002	4.93	<0.006	<0.002	248
	9/28/2012	<0.002	0.018	<0.0003	560	<0.002	<0.0003	312	<0.00008	5.05	<0.002	<0.001	233
P-04	3/27/2007	0.0694	0.0243	<0.0003	592	<0.002	<0.0003	218	<0.00008	7.68	<0.002	<0.001	217
	6/18/2007	0.0496	0.0219	<0.0003	682	<0.002	<0.0003	212	<0.00008	7.84	<0.002	<0.001	225
	9/17/2007	0.0280	0.0198	<0.0003	611	<0.002	<0.0003	178	<0.00008	6.60	<0.002	<0.001	204
	12/10/2007	0.0306	0.0197	<0.0003	629	<0.002	<0.0003	187	<0.00008	6.40	<0.002	<0.001	219
	3/10/2008	0.0267	0.0188	<0.0003	674	<0.002	<0.0003	182	<0.00008	7.13	<0.002	<0.001	219
	9/16/2008	0.0591	0.0216	<0.0003	611	<0.002	<0.0003	206	<0.00008	6.94	<0.002	<0.001	210
	3/10/2009	0.0322	0.0199	<0.0003	592	<0.002	<0.0003	183	<0.00008	7.55	<0.002	<0.001	217
	9/15/2009	0.0416	0.0194	<0.0003	622	<0.002	<0.0003	198	<0.00008	7.26	<0.002	<0.001	230
	3/31/2010	0.0662	0.0224	<0.0003	665	<0.01	<0.0003	245	<0.00008	7.88	<0.01	<0.001	267
	9/14/2010	0.0358	0.0188	<0.0003	619	<0.01	<0.0003	205	<0.00008	7.55	<0.002	<0.001	240
	3/15/2011	0.064	0.157	<0.005	639	0.061	0.005	249	<0.0002	18.1	<0.02	<0.005	295
P-05	3/27/2007	0.00579	0.0164	<0.0003	558	<0.002	<0.0003	52.0	<0.00008	3.52	<0.002	<0.001	73.7
	6/18/2007	0.00225	0.0134	<0.0003	603	<0.002	<0.0003	60.4	<0.00008	3.02	<0.002	<0.001	84.9
	9/17/2007	0.00241	0.0148	<0.0003	594	<0.002	<0.0003	51.0	<0.00008	2.83	<0.002	<0.001	71.2
	12/10/2007	<0.002	0.0161	<0.0003	623	<0.002	<0.0003	52.1	<0.00008	2.95	<0.002	<0.001	87.4
	3/10/2008	<0.002	0.0156	<0.0003	595	<0.002	<0.0003	50.7	<0.00008	3.20	<0.002	<0.001	81.3
	9/16/2008	<0.002	0.0161	<0.0003	573	<0.002	<0.0003	44.3	<0.00008	3.53	<0.002	<0.001	58.0
	3/10/2009	<0.002	0.0167	<0.0003	594	<0.002	<0.0003	40.9	<0.00008	3.58	<0.002	<0.001	55.3
	9/15/2009	<0.002	0.0152	<0.0003	573	<0.002	<0.0003	38.2	<0.00008	3.11	<0.002	<0.001	53.6
	3/30/2010	0.00275	0.016	<0.0003	613	<0.002	<0.0003	46.4	<0.00008	3.49	<0.002	<0.001	63.4
	9/14/2010	0.00529	0.0217	<0.0003	640	<0.002	0.00214	55.4	<0.00008	4.33	<0.002	<0.001	111

Table 3
Groundwater Metals Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--

Notes

Metals analyzed via EPA SW846 Method 6020 by DHL Analytical Inc., Round Rock, Texas

Mercury analyzed via EPA SW846 Method 7470A by DHL Analytical Inc., Round Rock, Texas

All values reported in Milligrams per liter (mg/L, parts per million).

< values - Indicate the value is less than Method Detection Limit MDL.

Blue and bold indicates analyte concentration above NMWQCC standard

Table 3a
Groundwater Metals Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
Duplicate-01 (P-02)	3/10/2008	<0.002	0.0154	<0.0003	556	<0.002	<0.0003	194	<0.00008	3.63	0.00417	<0.001	49.8
Duplicate-01 (MW-13)	9/16/2008	0.00809	0.0227	<0.0003	560	<0.002	<0.0003	37.2	<0.00008	5.67	<0.002	<0.001	78.4
Duplicate-01 (MW-13)	3/10/2009	0.00752	0.0260	<0.0003	537	<0.002	<0.0003	27.2	<0.00008	4.38	<0.002	<0.001	50.0
Duplicate-01 (MW-16)	7/15/2009	0.00594	0.0176	<0.0003	542	0.005480	<0.0003	1,260	<0.00008	36.2	0.00884	<0.001	1,950
Duplicate-01 (EB-05)	9/15/2009	<0.002	0.0339	<0.0003	512	<0.002	<0.0003	12.7	<0.00008	3.33	<0.002	<0.001	40.6
Duplicate-01 (MW-14)	3/30/2010	<0.002	0.0253	<0.0003	621	<0.002	<0.0003	39.3	<0.00008	4.08	<0.002	<0.001	71.8
Duplicate-01 (MW-17)	9/14/2010	0.00657	0.0240	<0.0003	628	<0.002	<0.0003	50.5	<0.00008	8.11	<0.002	<0.001	115
Duplicate-01	3/15/2011	<0.0100	0.0220	<0.00500	511	<0.00500	<0.00500	89.1	<0.000200	15.80	<0.0200	<0.00500	81
Duplicate-01	10/11/2011	0.08300	0.0120	<0.00500	567	0.039000	<0.00500	13,700.0	<0.000200	544.00	<0.0200	<0.00500	19,600
	3/13/2012	<0.00200	0.0229	<0.000300	600	<0.00200	<0.000300	116.0	<0.0000800	6.91	<0.00200	<0.00100	126
	9/27/2012	<0.002	0.0229	<0.0003	598	<0.002	<0.0003	85.6	<0.00008	4.84	<0.002	<0.001	54
Duplicate-02 (MW-02-16)	3/11/2008	0.00260	0.0125	<0.0003	565	<0.002	<0.0003	135	<0.00008	6.21	<0.002	<0.001	377
Duplicate-02 (MW-02-07)	9/17/2008	0.00578	0.0281	<0.0003	594	0.00416	<0.0003	72.2	<0.00008	11.3	<0.002	<0.001	141
Duplicate-02 (MW-12)	3/11/2009	<0.002	0.0148	<0.0003	539	<0.002	<0.0003	87.4	<0.00008	5.42	<0.002	<0.001	103

Table 3a
Groundwater Metals Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
Duplicate-02 (MW-02-15)	9/16/2009	0.0114	0.0173	<0.0003	590	<0.002	<0.0003	73.9	<0.00008	8.11	<0.002	<0.001	192
Duplicate-02 (MW-12)	3/31/2010	<0.002	0.0157	<0.0003	613	<0.002	<0.0003	99.1	<0.00008	5.62	<0.002	<0.001	117
Duplicate-02 (MW-02-12)	9/15/2010	0.0061	0.0143	<0.0003	582	<0.002	<0.0003	123	<0.00008	9.40	<0.002	<0.001	272
Duplicate-02	10/12/2011	<0.0100	0.0160	<0.00500	618	<0.0100	<0.00500	214	<0.000200	5.35	<0.0200	<0.00500	62.8
	3/14/2012	0.0144	0.0173	<0.000300	614	<0.00200	<0.000300	126	<0.0000800	7.54	<0.00200	<0.000300	383
	9/28/2012	0.0034	0.0430	<0.0003	666	0.00218	<0.0003	92	<0.00008	13.20	<0.002	<0.003	143
Equipment Rinse	3/11/2008	<0.002	<0.003	<0.0003	0.396	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	0.113
	3/10/2009	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	3/11/2009	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	9/15/2009	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	3/30/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	9/14/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	0.268
	3/15/2011	<0.0100	<0.0100	<0.00500	1.41	<0.00500	<0.00500	2.18	<0.000200	3.53	<0.0200	<0.00500	1.77
	10/12/2011	<0.0100	<0.0100	<0.00500	<1.00	<0.0100	<0.00500	<1.00	<0.000200	<1.00	<0.0200	<0.00500	7.97

Table 3a
Groundwater Metals Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
	3/12/2012	<0.0100	<0.0100	<0.00500	<1.00	<0.0100	<0.00500	<1.00	<0.000200	<1.00	<0.0200	<0.00500	<0.1
	9/27/2012	<0.002	<0.003	<0.0003	0.157	<0.002	<0.0003	<0.100	<0.00008	<0.100	<0.002	<0.001	0.687
Equipment Rinse-02	9/16/2009	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	3/31/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	0.101
	9/15/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	0.155
	3/17/2011	<0.0100	<0.0100	<0.00500	<1.00	<0.00500	<0.00500	<1.00	<0.000200	7.75	<0.0200	<0.00500	1.04
	10/13/2011	<0.0100	<0.0100	<0.00500	<1.00	<0.0100	<0.00500	<1.00	<0.000200	<1.00	<0.0200	<0.00500	3.65
	3/13/2012	<0.00200	<0.00300	<0.000300	<0.100	<0.00200	<0.000300	<0.100	<0.0000800	<0.100	<0.00200	<0.00100	<0.100
	9/28/2012												
Equipment Rinse-03	3/14/2012	<0.00200	<0.00300	<0.000300	0.122	<0.00200	<0.000300	<0.100	<0.0000800	<0.100	<0.00200	<0.000300	0.134

Table 3a
Groundwater Metals Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Dissolved Metals	Collection Date	Arsenic	Barium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Potassium	Selenium	Silver	Sodium
NMWQCC Standard (mg/L)		0.1	1	0.01	--	0.05	0.05	--	0.002	--	0.05	0.05	--
Field Blank-01	3/10/2008	<0.002	<0.003	<0.0003	0.487	<0.002	<0.0003	0.223	<0.00008	<0.1	0.00245	<0.001	<0.1
	9/17/2008	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	3/10/2009	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	9/15/2009	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	3/30/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	9/14/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
Field Blank-02	9/16/2009	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	3/31/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1
	9/15/2010	<0.002	<0.003	<0.0003	<0.1	<0.002	<0.0003	<0.1	<0.00008	<0.1	<0.002	<0.001	<0.1

Notes

Metals analyzed via EPA SW846 Method 6020 by DHL Analytical Inc., Round Rock, Texas
Mercury analyzed via EPA SW846 Method 7470A by DHL Analytical Inc., Round Rock, Texas
All values reported in Milligrams per liter (mg/L, parts per million).
< values - Indicate the value is less than Method Detection Limit MDL.

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-02	3/27/2007	163	<10	<10	163	151	7.19	1,650	3,030
	6/18/2007	298	<10	<10	298	139	3.42	1,750	3,170
	9/17/2007	218	<10	<10	218	61.2	3.31	1,350	2,500
	12/10/2007	272	<10	<10	272	131	0.408	1,890	3,080
	3/11/2008	186	<10	<10	186	72.5	2.85	1,720	2,650
	9/16/2008	490	<10	<10	490	95.0	<0.1	1,560	3,020
	3/10/2009	853	<10	<10	853	148	<0.1	1,470	3,340
	9/15/2009	329	<10	<10	329	126	<0.1	1,220	2,550
	3/31/2010	396	<10	<10	396	144	0.337	1,540	3,160
	9/14/2010	353	<10	<10	353	134	0.190	1,660	2,990
	3/16/2011	308	30.00	<1.00	338	86.1	<2.50	1,530	2,900
	10/13/2011	289	<1.00	<1.00	289	132.0	<2.50	1,620	2,900
	3/13/2012	287	<10.0	<10.0	287	167.0	0.196	1,830	3,160
	9/28/2012	284	<10.0	<10.0	284	161.0	<0.100	1,770	3,170
	5/22/2013	--	--	--	--	124	--	1,670	2,900
	10/17/2013	289	<25.0	<25.0	289	150	--	1,860	2,910
MW-02-02	3/27/2007	5,350	736	<10	6,090	9,350	<10	392,000	554,000
	6/19/2007	9,390	<10	<10	9,390	16,300	<10	221,000	388,000
	9/18/2007	1,710	3,580	<10	5,280	11,500	<10	299,000	531,000
	12/11/2007	2,940	3,940	<10	6,880	13,300	<10	224,000	445,000
	3/11/2008	5,310	1,590	<10	6,900	11,600	<10	340,000	500,000
	9/17/2008	6,890	<10	<10	6,890	11,400	10.7	352,000	511,000
	3/11/2009	4,340	2,820	<10	7,170	9,460	12.8	294,000	510,000
	9/16/2009	6,860	<10	<10	6,860	10,200	<10	310,000	497,000
	3/31/2010	6,400	940	<10	7,340	8,650	<10	308,000	527,000
	9/15/2010	6,080	668	<10	6,740	13,500	<10	353,000	533,000
	3/16/2011	11,800	<1.00	<1.00	11,800	13,600	<25.0	242,000	488,000
	10/14/2011	<4.00	4,100	4,700	8,800	5,740	<25.0	326,000	465,000
	3/14/2012	6,690	<10.0	<10.0	6,690	13,400	<10.0	320,000	507,000
	9/28/2012	5,690	1,090	<10.0	6,770	13,300	<10.0	327,000	471,000
	5/23/2013	--	--	--	--	10,800	--	344,000	507,000
	10/16/2013	103000	<250	<250	10300	16,400	--	223,000	440,000
	5/15/2014	8630	1270	<200	9900	14,700	--	263,000	301,000

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-02-03	3/29/2007	137	<10	<10	137	51.7	5.56	1,960	2,990
	6/20/2007	158	<10	<10	158	60.1	4.39	1,840	3,100
	9/18/2007	154	<10	<10	154	57.4	5.38	1,870	3,040
	12/11/2007	120	<10	<10	120	50.3	5.97	1,840	2,960
	3/11/2008	145	<10	<10	145	58.7	4.65	1,930	3,030
	9/17/2008	305	<10	<10	305	52.2	5.73	1,970	3,030
	3/11/2009	151	<10	<10	151	52.2	4.86	1,820	3,120
	9/16/2009	116	<10	<10	116	48.3	5.75	1,760	3,010
	3/31/2010	127	<10	<10	127	49.9	5.77	1,650	3,010
	9/14/2010	145	<10	<10	145	59.9	5.58	1,930	3,050
	3/15/2011	123	<1.00	<1.00	123	38.7	6.27	1,740	2,850
	10/13/2011	103	<1.00	<1.00	103	40.1	6.56	1,840	2,840
	3/14/2012	127	<10.0	<10.0	127	47.9	6.37	1,760	2,920
	9/27/2012	199	<10.0	<10.0	199	75.2	5.51	1,780	3,020
	5/23/2013	--	--	--	--	68.2	--	1,930	3,120
	10/16/2013	102	<12.5	<12.5	102	46	--	1,670	2,810
	5/15/2014	113	<10.0	<10.0	113	37.3	--	2,040	1,720
MW-02-04	3/28/2007	279	<10	<10	279	82.3	0.129	1,750	3,150
	6/18/2007	294	<10	<10	294	96.0	<0.1	1,840	3,130
	9/18/2007	288	<10	<10	288	103	<0.1	1,800	3,250
	12/10/2007	292	<10	<10	292	105	<0.1	2,000	3,270
	3/11/2008	283	<10	<10	283	104	<0.1	1,910	3,260
	9/16/2008	360	<10	<10	360	99.2	<0.1	1,550	3,050
	3/10/2009	338	<10	<10	338	96.4	<0.1	1,750	3,150
	9/15/2009	456	<10	<10	456	83.8	<0.1	1,120	2,740
	3/31/2010	397	<10	<10	397	106	<0.1	1,320	2,750
	9/14/2010	390	<10	<10	390	118	<0.1	1,490	2,830
	3/15/2011	363	<1.00	<1.00	363	79.3	<2.50	1,250	2,380
	10/13/2011	394	<1.00	<1.00	394	84.1	<2.50	1,550	2,790
	3/13/2012	384	<10.0	<10.0	384	110	<0.100	1,430	2,700
	9/28/2012	345	<10.0	<10.0	345	84.8	<0.100	1,840	2,890
	5/23/2013	--	--	--	--	81.2	--	1,690	2,920
	10/16/2013	324	<12.5	<12.5	324	93.4	--	1,590	2,540
	5/15/2014	270	<10.0	<10.0	270	58.3	--	1,590	1,540

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-02-05	3/27/2007	4,720	2,320	<10	7,040	4,620	<10	394,000	569,000
	6/19/2007	8,900	3,720	<10	126,000	7,880	<10	244,000	387,000
	9/18/2007	1,320	4,510	<10	5,830	4,910	<10	317,000	553,000
	12/11/2007	2,350	5,220	<10	7,570	4,840	<10	216,000	435,000
	3/11/2008	4,690	2,970	<10	7,660	6,260	<10	352,000	506,000
	9/16/2008	7,750	<10	<10	7,750	5,490	<10	366,000	517,000
	3/11/2009	4,270	4,650	<10	8,920	5,440	14.7	297,000	498,000
	9/16/2009	6,050	1,720	<10	7,770	5,850	<10	319,000	498,000
	3/31/2010	6,250	1,640	<10	7,890	6,420	<10	312,000	534,000
	9/15/2010	5,550	2,070	<10	7,620	6,520	<10	369,000	529,000
	3/16/2011	13,800	<1.00	<1.00	13,800	6,700	<25.0	254,000	473,000
	10/14/2011	<4.00	6,400	1800	8,200	11,700	<25.0	315,000	441,000
	3/14/2012	5,580	1,920	<10.0	7,490	6,030	<10.0	319,000	512,000
	9/28/2012	5,310	2,490	<10.0	7,790	6,820	<10.0	325,000	458,000
	5/23/2013	--	--	--	--	5,840	--	355,000	533,000
	10/16/2013	8990	1550	<250	10500	10,400	--	237,000	458,000
	5/15/2014	5460	2620	<200	8090	7800	--	307,000	172,000
MW-02-06	3/28/2007	687	<10	<10	687	30.3	0.177	1,730	3,560
	6/20/2007	480	<10	<10	480	23.3	0.289	1,690	3,230
	9/18/2007	547	<10	<10	547	25.4	0.111	1,790	3,270
	12/11/2007	598	<10	<10	598	26.8	<0.1	1,820	3,300
	3/11/2008	563	<10	<10	563	25.8	<0.1	2,060	3,410
	9/16/2008	556	<10	<10	556	28.3	2.90	1,800	3,320
	3/10/2009	700	<10	<10	700	30.2	0.238	1,540	3,370
	9/15/2009	622	<10	<10	622	22.5	<0.1	1,590	3,220
MW-02-07	3/28/2007	631	<10	<10	631	109	<0.1	1,190	2,650
	6/19/2007	664	<10	<10	664	110	<0.1	1,280	2,740
	9/18/2007	643	<10	<10	643	126	<0.1	1,330	2,770
	12/10/2007	670	<10	<10	670	112	<0.1	1,320	2,810
	3/11/2008	640	<10	<10	640	130	<0.1	1,370	2,970
	9/17/2008	672	<10	<10	672	103	<0.1	1,420	3,010

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-02-07	3/10/2009	656	<10	<10	656	163	<0.1	1,340	3,170
	9/15/2009	718	<10	<10	718	107	<0.1	1,370	3,150
	3/31/2010	763	<10	<10	763	145	<0.1	1,460	3,270
	9/14/2010	790	<10	<10	790	155	<0.1	1,590	3,310
	3/17/2011	762	<1.00	<1.00	762	112	<2.50	1,610	3,330
	10/13/2011	841	<1.00	<1.00	841	142	<2.50	1,750	3,500
	5/22/2013	--	--	--	--	158	--	1,950	3,780
	5/15/2014	1020	<10.0	<10.0	1020	182	--	2,170	2,580
MW-02-12	9/15/2010	528	<10	<10	528	133	<0.1	1,890	3,480
	3/14/2011	535	<1.00	<1.00	535	106	<2.50	1,760	3,280
	10/13/2011	505	<1.00	<1.00	505	120	<2.50	1,900	2,990
	3/14/2012	513	<10.0	<10.0	513	119	<0.100	1,800	3,360
	5/23/2013	--	--	--	--	117	--	1,850	3,370
	10/16/2013	508	<12.5	<12.5	508	124	--	1,700	3,150
	5/14/2014	517	<10.0	<10.0	517	103	--	1,790	2,240
MW-02-15	3/29/2007	336	<10	<10	336	168	<0.1	1,800	3,090
	6/20/2007	346	<10	<10	346	167	<0.1	1,660	3,240
	9/18/2007	366	<10	<10	366	169	<0.1	1,670	3,180
	12/11/2007	366	<10	<10	366	185	<0.1	1,740	3,140
	3/11/2008	347	<10	<10	347	205	<0.1	1,700	3,200
	9/17/2008	359	<10	<10	359	244	<0.1	1,730	3,330
	3/10/2009	363	<10	<10	363	280	<0.1	1,520	3,430
	9/16/2009	358	<10	<10	358	282	<0.1	1,560	3,340
	3/31/2010	359	<10	<10	359	323	<0.1	1,590	3,350
	9/14/2010	449	<10	<10	449	314	<0.1	1,730	3,470
	3/17/2011	526	<1.00	<1.00	526	310	<2.50	1,690	3,440
	10/13/2011	433	<1.00	<1.00	433	307	<2.50	1,600	3,460
	9/27/2012	577	<10.0	<10.0	577	661	<0.100	1,520	3,760
	5/22/2013	--	--	--	--	835	--	1,620	4,260
	10/16/2013	464	<12.5	<12.5	464	738	--	1,630	3,900
	5/14/2014	629	<10.0	<10.0	629	773	--	1,650	3,620

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-02-16	3/29/2007	818	<10	<10	818	181	<0.1	1,940	3,800
	6/19/2007	756	<10	<10	756	206	<0.1	1,810	3,900
	9/18/2007	802	<10	<10	802	175	<0.1	1,860	3,870
	12/11/2007	809	<10	<10	809	169	<0.1	1,850	3,790
	3/11/2008	780	<10	<10	780	193	<0.1	1,830	3,860
	9/17/2008	404	<10	<10	404	181	0.140	1,850	3,840
	3/11/2009	814	<10	<10	814	168	<0.1	1,730	3,840
	9/15/2009	791	<10	<10	791	172	<0.1	1,690	3,820
	3/31/2010	780	<10	<10	780	185	<0.1	1,780	3,870
	9/15/2010	748	<10	<10	748	210	<0.1	2,000	3,960
	3/14/2011	623	<1.00	<1.00	623	119	<2.50	1,830	3,700
	10/13/2011	676	<1.00	<1.00	676	185	<2.50	2,070	3,540
	3/14/2012	585	<10.0	<10.0	585	130	0.149	1,870	3,490
	9/27/2012	650	<10.0	<10.0	650	160	<0.100	1,720	3,510
	5/22/2013	--	--	--	--	202	--	1,970	3,850
	10/16/2013	557	<12.5	<12.5	557	163	--	1,670	3,230
	5/14/2014	731	<10.0	<10.0	731	233	--	1,880	2,730
MW-02-18	3/28/2007	747	<10	<10	747	148	<0.1	2,050	4,190
	6/19/2007	641	<10	<10	641	121	<0.1	1,970	3,820
	9/18/2007	675	<10	<10	675	121	<0.1	1,980	4,080
	12/11/2007	830	<10	<10	830	109	0.106	2,010	3,930
	3/11/2008	785	<10	<10	785	127	0.34	2,030	3,900
	9/16/2008	839	<10	<10	839	114	3.2	1,970	4,100
	3/10/2009	920	<10	<10	920	119	0.151	1,880	4,010
	9/15/2009	792	<10	<10	792	98.2	<0.1	1,780	3,950
	3/31/2010	784	<10	<10	784	88.1	<0.1	1,800	3,870
	9/14/2010	873	<10	<10	873	112	<0.1	1,970	4,000
	3/16/2011	839	<1.00	<1.00	839	95.7	<2.50	1,990	3,900
	10/13/2011	707	<1.00	<1.00	707	91.2	<2.50	2,090	3,340
	9/27/2012	614	<10.0	<10.0	614	84.6	<0.100	1,840	3,450
	5/23/2013	--	--	--	--	85.1	--	1,880	3,630
	10/16/2013	679	<12.5	<12.5	679	78.2	--	1,970	3,210
	5/15/2014	550	<10.0	<10.0	550	61.4	--	2,040	2,050

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-03	5/23/2013	--	--	--	--	140	--	1,680	3,190
	10/16/2013	605	<50.0	<50.0	605	175	--	1,340	2,830
MW-03-01	3/28/2007	463	<10	<10	463	170	<0.1	1,420	3,000
	6/19/2007	455	<10	<10	455	192	<0.1	1,510	3,090
	9/18/2007	410	<10	<10	410	192	<0.1	1,440	2,870
	12/11/2007	361	<10	<10	361	200	<0.1	1,460	3,110
	3/11/2008	427	<10	<10	427	240	<0.1	1,570	3,240
	5/22/2013	--	--	--	--	2720	--	2,900	5,550
MW-03-02	3/29/2007	637	<10	<10	637	204	<0.1	1,840	3,560
	6/19/2007	685	<10	<10	685	174	<0.1	1,600	3,420
	12/11/2007	656	<10	<10	656	178	<0.1	1,750	3,590
	3/17/2011	766	<1.00	<1.00	766	178	<2.50	1,860	3,760
MW-03-03	3/28/2007	665	<10	<10	665	201	<0.1	964	2,420
	6/17/2007	660	<10	<10	660	231	<0.1	954	2,520
	9/18/2007	635	<10	<10	635	228	<0.1	963	2,480
	3/11/2009	684	<10	<10	684	147	<0.1	899	2,310
	9/16/2009	641	<10	<10	641	169	<0.1	925	2,340
	3/16/2011	676	<1.00	<1.00	676	148	<2.50	962	2,420
	10/14/2011	611	<1.00	<1.00	611	134	<2.50	959	2,380
	3/13/2012	646	<10.0	<10.0	646	130	<0.100	1,020	2,430
	5/23/2013	--	--	--	--	212	--	1,110	2,640
	10/16/2013	676	50	50	676	197	--	1,020	2,540
	5/15/2014	587	<10.0	<10.0	587	171	--	1,410	2,210
MW-05	3/29/2007	540	<10	<10	540	159	<0.1	1,910	3,440
	6/19/2007	514	<10	<10	514	146	<0.1	1,740	3,540
	9/18/2007	530	<10	<10	530	156	<0.1	1,810	3,450
	12/11/2007	535	<10	<10	535	160	<0.1	1,840	3,430
	3/11/2008	524	<10	<10	524	197	<0.1	1,840	3,400
	9/17/2008	1,080	<10	<10	1,080	172	<0.1	1,800	3,440

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-05	3/10/2009	555	<10	<10	555	161	<0.1	1,650	3,460
	9/15/2009	540	<10	<10	540	161	<0.1	1,590	3,410
	3/31/2010	531	<10	<10	531	167	<0.1	1,720	3,470
	9/14/2010	529	<10	<10	529	186	<0.1	1,840	3,440
	3/6/2011	497	<1.00	<1.00	497	155	<2.50	1,750	3,420
	10/13/2011	519	<1.00	<1.00	519	177	<2.50	1,770	3,390
	3/14/2012	529	<10.0	<10.0	529	171	<0.100	1,730	3,370
	9/27/2012	503	<10.0	<10.0	503	163	<0.100	1,650	3,390
	5/22/2013	--	--	--	--	153	--	1,840	3,440
	10/16/2013	421	<25.0	<25.0	421	160	--	1,600	3,170
	5/14/2014	464	<10.0	<10.0	464	142	--	1,850	2,150
MW-07	3/28/2007	435	<10	<10	435	31.1	<0.1	1,950	3,280
	6/19/2007	559	<10	<10	559	31.4	<0.1	1,580	2,880
	9/18/2007	651	<10	<10	651	23.7	<0.1	1,490	2,890
	12/10/2007	617	<10	<10	617	30.8	<0.1	1,660	2,980
	3/11/2008	531	<10	<10	531	46.2	<0.2	1,640	3,120
	3/17/2011	2530	<1.00	<1.00	2530	55.2	<2.50	1,370	2,650
	10/13/2011	1830	<1.00	<1.00	1830	40.4	<2.50	2,110	2,820
	9/28/2012	1670	<10.0	<10.0	2370	48.5	<0.100	2,370	4,070
	5/22/2013	--	--	--	--	66.9	--	2,100	3,770
	10/17/2013	1530	25	25	1530	64.1	--	2,170	3,450
	5/15/2014	1580	<10.0	<10.0	1580	53	--	2,720	3,240
MW-08	3/28/2007	485	<10	<10	485	320	<0.1	1,650	3,500
	6/19/2007	464	<10	<10	464	344	<0.1	1,640	3,400
	9/18/2007	468	<10	<10	468	317	<0.1	1,550	3,420
	12/11/2007	472	<10	<10	472	302	<0.1	1,690	3,400
	3/11/2008	458	<10	<10	458	318	<0.1	1,730	3,470
	9/17/2008	444	<10	<10	444	333	<0.1	1,700	3,480
	3/11/2009	468	<10	<10	468	290	0.118	1,500	3,460
	9/16/2009	442	<10	<10	442	316	0.113	1,630	3,410
	3/31/2010	434	<10	<10	434	337	<0.1	1,560	3,520

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-08	9/15/2010	450	<10	<10	450	357	<0.1	1,700	3,470
	3/14/2011	439	<1.00	<1.00	439	288	<2.50	1,690	3,190
	10/13/2011	676	<1.00	<1.00	676	579	<2.50	1,860	3,160
	9/27/2012	416	<10.0	<10.0	416	322	<0.100	1,730	3,390
	5/22/2013	--	--	--	--	278	--	1,610	3,180
	10/16/2013	479	<12.5	<12.5	479	235	--	1,240	2,460
	5/14/2014	451	<10.0	<10.0	451	261	--	1,630	2,490
MW-09	5/22/2013	--	--	--	--	318	--	1,270	3,120
MW-12	3/11/2009	358	<10	<10	358	105	<0.1	1,540	3,100
	9/15/2009	381	<10	<10	381	103	<0.1	1,480	3,150
	3/31/2010	350	<10	<10	350	110	<0.1	1,600	3,100
	9/14/2010	313	<10	<10	313	131	<0.1	1,990	3,400
	3/16/2011	304	<1.00	<1.00	304	95.4	<2.50	1,790	3,240
	10/13/2011	331	<1.00	<1.00	331	105	<2.50	1,940	3,370
	3/13/2012	311	<10.0	<10.0	311	105	<0.100	2,010	3,570
	9/28/2012	289	<10.0	<10.0	289	103	<0.100	1,970	3,320
	5/22/2013	--	--	--	--	109	--	2,230	3,770
	10/16/2013	373	<12.5	<12.5	373	106	--	1,950	3,290
	5/14/2014	309	<10.0	<10.0	309	86	--	2,340	2,470
MW-13	9/16/2008	222	<10	<10	222	76.3	<0.1	1,650	2,840
	3/10/2009	170	<10	<10	170	52.1	<0.1	1,560	2,560
	9/15/2009	348	<10	<10	348	107	<0.1	1,310	2,900
	3/30/2010	191	<10	<10	191	64.9	<0.1	1,410	2,740
	9/14/2010	315	<10	<10	315	85.6	<0.1	1,600	2,870
	10/12/2011	309	<10	<10	309	88.4	<2.50	1,490	2,610
	3/13/2012	220	<10.0	<10.0	220	102	<0.100	1,560	2,770
	9/27/2012	266	<10.0	<10.0	266	84.8	<0.100	1,670	2,930
	5/21/2013	--	--	--	--	138	--	1,440	2,910
	10/16/2013	337	<12.5	<12.5	337	192	--	1,950	3,200

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-14	3/30/2010	327	<10	<10	327	85.5	<0.1	1,430	2,850
	10/12/2011	462	<1.00	<1.00	462	88.1	<2.5	1,560	2,860
	9/28/2012	522	<10.0	<10.0	522	107	<0.100	1,790	3,120
	10/15/2013	505	<25.0	<25.0	505	105	--	1,690	2,710
MW-15	9/16/2008	503	<10	<10	503	1,430	5.30	23,500	37,200
	3/10/2009	1,070	<10	<10	1,070	3,170	7.33	47,900	73,200
	9/15/2009	987	<10	<10	987	2,680	7.57	40,000	68,600
	3/30/2010	849	<10	<10	849	2,500	10.50	37,500	64,400
	9/14/2010	1490	<10	<10	1490	4,820	14.40	76,000	118,000
	3/15/2011	2160	<1.00	<1.00	2160	5,280	<25.0	97,600	127,000
	10/11/2011	1930	<1.00	<1.00	1930	5,520	<25.0	80,400	114,000
	3/13/2012	1260	<10.0	<10.0	1260	3,990	11.50	71,700	97,900
	9/27/2012	845	<10.0	<10.0	845	4,260	12.80	43,500	71,500
	5/21/2013	--	--	--	--	6,360	--	95,600	141,000
	10/15/2013	423	<25.0	<25.0	423	1,320	--	16,400	28,500
MW-16	7/15/2009	232	<10	<10	232	1,500	4.95	7,560	13,900
	9/15/2009	209	<10	<10	209	1,560	4.73	7,990	15,800
	3/30/2010	148	<10	<10	148	881	4.62	4,540	8,360
	9/14/2010	114	<10	<10	114	568	5.98	2,900	5,190
	3/16/2011	115	<1.00	<1.00	115	434	4.77	2,070	3,350
	10/11/2011	129	<1.00	<1.00	129	382	4.62	2,190	3,280
	3/13/2012	104	<10.0	<10.0	104	252	4.65	2,000	3,620
	9/27/2012	102	<10.0	<10.0	102	256	5.11	1,970	3,530
	5/21/2013	--	--	--	--	353	--	2,260	4,130
	10/15/2013	77.5	<12.5	<12.5	77.5	381	--	2,230	3,820
MW-17	7/15/2009	197	<10	<10	197	96.6	<0.1	1,860	3,190
	9/15/2009	293	<10	<10	293	79.4	<0.1	1,480	2,910
	3/30/2010	291	<10	<10	291	80.6	<0.1	1,470	2,870
	9/14/2010	375	<10	<10	375	103	<0.1	1,670	3,010
	3/16/2011	379	<1.00	<1.00	379	94.3	<2.50	1,630	3,060

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-17	10/24/2011	345	<1.00	<1.00	345	97.9	<2.50	1,620	2,740
	3/13/2012	278	<10.0	<10.0	278	108	<0.100	1,740	3,120
	9/27/2012	312	<10.0	<10.0	312	110	<0.100	1,850	3,250
	5/21/2013	--	--	--	--	158	--	1,810	3,290
	10/15/2013	334	<12.5	<12.5	334	170	--	1,590	2,910
MW-18	7/15/2009	203	<10	<10	203	46.9	<0.1	1,400	2,570
	9/15/2009	150	<10	<10	150	55.2	<0.1	1,350	2,560
	3/30/2010	140	<10	<10	140	207	1.01	1,460	2,910
	9/13/2010	114	<10	<10	114	510	3.52	1,650	3,260
	3/14/2011	130	<1.00	<1.00	130	488	<2.50	1,610	3,200
	10/11/2011	113	<1.00	<1.00	113	607	3.26	1,780	3,100
	3/12/2012	109	<1.00	<1.00	109	467	3.11	1,620	3,410
	9/27/2012	131	<10.0	<10.0	131	719	2.11	1,640	3,520
	5/20/2013	--	--	--	--	734	--	1,610	3,660
	10/15/2013	121	<12.5	<12.5	121	606	--	1,470	3,130
	5/13/2014	155	<10.0	<10.0	155	585	--	1,580	2,490
MW-20	7/15/2009	481	<10	<10	481	135	<0.1	1,910	3,620
	9/16/2009	447	<10	<10	447	121	<0.1	1,790	3,400
MW-22	7/15/2009	632	<10	<10	632	77.1	0.113	1,900	3,920
	9/15/2009	670	<10	<10	670	72.0	<0.1	1,770	3,850
	3/31/2010	690	<10	<10	690	74.6	<0.1	1,930	3,910
	9/14/2010	416	<10	<10	416	114.0	<0.1	2,030	4,020
	3/16/2011	840	<1.00	<1.00	840	97.6	<2.50	1,950	3,740
	10/13/2011	281	<1.00	<1.00	281	57.1	<2.50	1,760	2,640
	9/27/2012	273	<10.0	<10.0	273	53.4	<0.100	1,700	2,870
	5/23/2013	--	--	--	--	76.3	--	1,790	3,450
	10/16/2013	578	<12.5	<12.5	578	72.9	--	1,630	3,120
	5/15/2014	637	<10.0	<10.0	637	54.6	--	1,870	2,060
MW-23	7/15/2009	493	<10	<10	493	265	<0.1	1,710	3,730
	9/15/2010	452	<10	<10	452	375	<0.1	2,030	3,760
	3/15/2011	420	<1.00	<1.00	420	385	<2.50	1,760	3,660

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
MW-23	10/12/2011	407	<1.00	<1.00	407	469	<2.5	1,910	3,660
	9/28/2012	490	<10.0	<10.0	490	301	<0.100	1,800	3,620
	5/21/2013	--	--	--	--	326	--	1,750	3,700
	10/16/2013	548	<50.0	<50.0	548	333	--	1,630	3,070
	5/13/2014	454	<10.0	<10.0	545	262	--	1,780	2,520
MW-24	3/13/2012	1070	<10.0	<10.0	1070	84.4	<0.100	1,070	4,070
	9/27/2012	1080	<10.0	<10.0	1080	81.4	<0.100	1,800	3,780
EB-01	3/27/2007	101	<10	<10	101	30	7.37	1,790	2,890
	6/18/2007	118	<10	<10	118	130	7.05	2,000	3,250
	9/17/2007	112	<10	<10	112	122	7.64	1,870	3,250
	12/10/2007	103	<10	<10	103	32.0	6.72	1,990	2,910
	3/10/2008	103	<10	<10	103	32.4	7.72	1,870	2,990
	9/16/2008	102	<10	<10	102	29.9	7.11	1,750	3,010
	3/10/2009	103	<10	<10	103	33.2	7.75	1,880	2,940
	9/15/2009	103	<10	<10	103	30.0	7.04	1,690	2,950
	3/30/2010	99.7	<10	<10	99.7	30.3	7.09	1,720	2,950
	9/13/2010	103	<10	<10	103	49.0	7.96	1,850	2,980
	3/14/2011	106	<1.00	<1.00	106	370.0	6.57	1,840	3,140
EB-02	3/27/2007	318	<10	<10	318	106	3.91	2,260	3,730
	6/18/2007	339	<10	<10	339	111	2.93	2,090	3,610
	9/17/2007	307	<10	<10	307	110	4.05	2,360	3,740
	12/10/2007	330	<10	<10	330	111	3.11	2,190	3,630
	3/10/2008	319	<10	<10	319	118	3.79	2,210	3,820
	9/16/2008	365	<10	<10	365	113	2.41	2,150	3,640
	3/10/2009	350	<10	<10	350	112	2.49	2,220	3,720
	9/15/2009	335	<10	<10	335	95.5	3.04	2,010	3,750
	3/30/2010	337	<10	<10	337	102	2.55	2,070	3,780
EB-02	9/13/2010	340	<10	<10	340	121	3.10	2,180	3,790
	3/15/2011	338	<1.00	<1.00	338	88.7	2.91	2,010	3,660
	10/12/2011	356	<1.00	<1.00	356	104	2.86	2,250	3,720

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
EB-02	3/12/2012	328	<1.00	<1.00	328	109	2.76	2,250	3,860
	9/27/2012	261	<10.0	<10.0	261	107	2.76	2,120	3,710
	5/20/2013	--	--	--	--	124	--	2,140	3,680
	10/15/2013	336	<12.5	<12.5	336	108	--	2,200	3,340
	5/13/2014	344	<10.0	<10.0	344	105	--	2,400	2,600
EB-03	3/27/2007	293	<10	<10	293	65.1	<0.1	1,430	2,610
	10/15/2013	700	<12.5	<12.5	700	110	--	1,420	2,790
EB-04	3/27/2007	254	<10	<10	254	645	2.51	1,710	3,770
	6/18/2007	250	<10	<10	250	662	2.90	1,700	3,800
	9/17/2007	244	<10	<10	244	664	3.23	1,660	3,880
	12/10/2007	252	<10	<10	252	685	2.13	1,900	3,790
	3/10/2008	247	<10	<10	247	637	3.29	1,720	3,830
	9/16/2008	245	<10	<10	245	598	2.39	1,800	3,910
	3/10/2009	247	<10	<10	247	602	2.35	1,790	3,730
	9/14/2009	241	<10	<10	241	483	2.22	1,540	3,690
	3/30/2010	155	<10	<10	155	60.1	1.05	1,410	2,580
	9/14/2010	354	<10	<10	354	169	1.6	1,550	2,930
	3/14/2011	206	<1.00	<1.00	206	395	<2.50	1,750	3,380
	3/12/2012	216	<1.00	<1.00	216	561	2.53	1,660	3,850
	9/28/2012	196	<10.0	<10.0	196	505	4.39	1,730	3,640
	5/20/2013	--	--	--	--	481	--	1,750	3,600
	10/15/2013	176	<12.5	<12.5	176	387	--	1,750	3,180
EB-05	3/26/2007	167	<10	<10	167	41.0	<0.1	1,400	2,420
	6/18/2007	183	<10	<10	183	52.5	<0.1	1,450	2,430
	9/17/2007	228	<10	<10	228	79.0	<0.1	1,560	2,550
	12/10/2007	173	<10	<10	173	43.7	<0.1	1,740	2,480
	3/10/2008	162	<10	<10	162	45.4	<0.1	1,420	2,470
	9/16/2008	172	<10	<10	172	47.0	<0.1	1,400	2,460
	3/10/2009	156	<10	<10	156	43.5	0.568	1,440	2,400
	9/15/2009	174	<10	<10	174	53.0	<0.1	1,340	2,500

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
EB-05	3/30/2010	151	<10	<10	151	41.5	<0.1	1,330	2,390
	9/13/2010	146	<10	<10	146	108	<0.1	1,550	2,650
	3/14/2011	148	<1.00	<1.00	148	174	<2.50	1,550	2,660
	10/12/2011	180	<1.00	<1.00	180	230	<2.50	1,560	2,730
	3/12/2012	142	<1.00	<1.00	142	213	<2.50	1,530	2,920
	9/27/2012	143	<10.0	<10.0	143	216	<0.100	1,560	2,930
	5/20/2013	--	--	--	--	208	--	1,630	2,970
	10/15/2013	337	<12.5	<12.5	337	161	--	1,440	2,550
EB-06	3/26/2007	108	<10	<10	108	160	4.61	1,740	3,020
	6/18/2007	107	<10	<10	107	167	4.74	1,790	2,990
	9/17/2007	96.8	<10	<10	96.8	162	5.25	1,730	3,050
	12/10/2007	79.6	<10	<10	79.6	159	3.99	1,780	2,960
	3/10/2008	94.8	<10	<10	94.8	177	5.10	1,750	3,040
	9/16/2008	95.4	<10	<10	95.4	161	4.68	1,830	3,210
	3/10/2009	101	<10	<10	101	165	4.88	1,810	3,030
	9/15/2009	97.0	<10	<10	97.0	142	4.70	1,620	3,030
EB-06	3/30/2010	101	<10	<10	101	151	5.02	1,670	3,120
	9/13/2010	101	<10	<10	101	184	5.61	1,780	3,090
	3/14/2011	109	<1.00	<1.00	109	165	3.87	1,790	3,060
	10/11/2011	103	<1.00	<1.00	103	233	5.11	2,600	3,340
	3/12/2012	106	<1.00	<1.00	106	214	4.06	1,810	3,150
	9/28/2012	103	<10.0	<10.0	103	188	4.76	1,690	3,100
	5/20/2013	--	--	--	--	193	--	1,760	3,150
EB-07	5/14/2014	106	<10.0	<10.0	106	164	--	1,810	2,040
	3/27/2007	415	<10	<10	415	174	<0.1	1,610	3,230
	6/18/2007	414	<10	<10	414	187	<0.1	1,680	3,180
	9/17/2007	400	<10	<10	400	182	<0.1	1,800	3,200
	12/10/2007	422	<10	<10	422	171	<0.1	1,830	3,180
	3/10/2008	428	<10	<10	428	193	<0.1	1,670	3,300
	9/16/2008	438	<10	<10	438	158	<0.1	1,620	3,280
EB-07	3/10/2009	441	<10	<10	441	171	<0.1	1,910	3,190

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
EB-07	9/15/2009	423	<10	<10	423	144	<0.1	1,520	3,200
	3/31/2010	415	<10	<10	415	147	<0.1	1,580	3,160
	9/14/2010	418	<10	<10	418	181	<0.1	1,700	3,190
	3/14/2011	381	<1.00	<1.00	381	137	<2.50	1,720	3,000
	10/12/2011	431	<1.00	<1.00	431	140	<2.50	1,780	3,600
	3/12/2012	333	<1.00	<1.00	333	147	<2.50	1,740	3,250
	9/27/2012	366	<10.0	<10.0	366	143	1.04	1,810	3,370
	5/20/2013	--	--	--	--	140	--	1,910	3,510
EB-08	3/27/2007	947	<10	<10	947	504	<0.1	1,720	4,200
	6/18/2007	966	<10	<10	966	487	<0.1	1,610	4,130
	9/17/2007	764	<10	<10	764	418	<0.1	1,840	3,940
	12/10/2007	630	<10	<10	630	238	<0.1	1,770	3,650
	3/10/2008	717	<10	<10	717	381	0.599	1,750	3,900
	9/16/2008	898	<10	<10	898	374	<0.1	1,620	4,020
	3/10/2009	902	<10	<10	902	358	<0.1	1,640	3,930
	9/15/2009	825	<10	<10	825	296	<0.1	1,530	3,850
	3/30/2010	780	<10	<10	780	302	<0.1	1,520	3,790
	9/14/2010	546	<10	<10	546	222	<0.1	1,740	3,470
	3/16/2011	431	<1.00	<1.00	431	169	<2.50	1,810	3,410
	10/12/2011	939	<1.00	<1.00	939	116	<2.50	1,800	3,490
P-01	3/26/2007	215	<10	<10	215	40.5	0.153	1,330	2,410
	6/18/2007	221	<10	<10	221	51.3	0.304	1,430	2,440
	9/17/2007	272	<10	<10	272	86.5	0.234	1,540	2,600
	12/10/2007	233	<10	<10	233	50.7	0.215	1,410	2,410
	3/10/2008	238	<10	<10	238	47.6	0.954	1,350	2,480
	9/16/2008	266	<10	<10	266	51.0	0.146	1,410	2,600
	3/10/2009	234	<10	<10	234	71.9	0.232	1,430	2,630
	9/15/2009	232	<10	<10	232	123	0.173	1,410	2,870
	3/30/2010	303	<10	<10	303	255	<0.1	1,740	3,620
	9/13/2010	351	<10	<10	351	299	<0.1	1,900	3,630
	3/15/2011	374	<1.00	<1.00	374	408	<2.50	1,960	3,470

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
P-01	10/12/2011	385	<1.00	<1.00	385	293	<2.50	2,010	3,720
	3/12/2012	377	<1.00	<1.00	377	300	<2.50	1,830	3,720
	9/27/2012	412	<10.0	<10.0	412	169	<0.100	2,420	3,860
	5/20/2013	--	--	--	--	158	--	2,790	4,530
	10/15/2013	378	<12.5	<12.5	378	251	--	2,180	3,630
	5/13/2014	302	<10.0	<10.0	302	146	--	2,960	3,120
P-02	3/27/2007	333	<10	<10	333	63.1	<0.1	2,000	3,520
	6/19/2007	441	<10	<10	441	55.8	<0.1	1,770	3,380
	9/17/2007	398	<10	<10	398	55.8	<0.1	1,840	3,370
	12/10/2007	391	<10	<10	391	52.0	<0.1	1,930	3,370
	3/10/2008	358	<10	<10	358	66.5	<0.1	1,990	3,530
	9/16/2008	362	<10	<10	362	58.2	<0.1	1,980	3,520
	3/10/2009	351	<10	<10	351	61.6	<0.1	2,020	3,500
	9/15/2009	386	<10	<10	386	49.8	<0.1	1,770	3,400
	3/31/2010	348	<10	<10	348	58.2	<0.1	1,920	3,510
	9/14/2010	448	<10	<10	448	62.7	<0.1	1,940	3,460
	3/16/2011	351	<1.00	<1.00	351	49.3	<2.50	1,930	3,360
	10/12/2011	199	<1.00	<1.00	199	57.6	11.5	1,910	2,990
	3/13/2012	320	<10.0	<10.0	320	63.6	<0.100	2,000	3,520
	5/21/2013	--	--	--	--	75.4	--	2,020	3,540
	10/16/2013	429	<12.5	<12.5	429	60.4	--	1,750	2,880
	5/15/2014	585	<10.0	<10.0	585	109	--	1,890	2,300
P-03	3/27/2007	475	<10	<10	475	324	<0.1	1,990	4,020
	6/18/2007	479	<10	<10	479	445	<0.1	2,030	4,120
	9/17/2007	460	<10	<10	460	514	<0.1	2,180	4,150
	12/10/2007	462	<10	<10	462	489	<0.1	2,120	4,090
	3/10/2008	303	<10	<10	303	529	3.65	1,410	3,360
	9/16/2008	467	<10	<10	467	659	<0.1	2,030	4,840
	3/10/2009	469	<10	<10	469	702	<0.1	2,090	4,540
	9/15/2009	473	<10	<10	473	623	0.140	1,810	4,300
	3/30/2010	467	<10	<10	467	659	<0.1	1,850	4,690

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
P-03	9/14/2010	535	<10	<10	535	749	<0.1	2,200	5,060
	3/15/2011	496	<1.00	<1.00	496	459	<2.50	2,190	4,000
	10/12/2011	519	<1.00	<1.00	519	207	<2.5	2,170	3,930
	3/13/2012	380	<10.0	<10.0	380	317	<0.100	2,430	4,570
	9/28/2012	281	<10.0	<10.0	281	297	<0.100	2,580	4,220
	5/21/2013	--	--	--	--	216	--	2,850	4,740
P-04	3/27/2007	553	<10	<10	553	618	<0.1	1,860	4,450
	6/18/2007	493	<10	<10	493	570	<0.1	1,900	4,150
	9/17/2007	408	<10	<10	408	516	<0.1	1,810	3,980
	12/10/2007	435	<10	<10	435	514	<0.1	2,060	3,960
	3/10/2008	414	<10	<10	414	452	0.215	1,840	3,880
	9/16/2008	521	<10	<10	521	508	0.144	1,920	4,530
	3/10/2009	461	<10	<10	461	575	0.538	2,000	4,110
	9/15/2009	420	<10	<10	420	446	0.446	1,730	4,130
	3/31/2010	532	<10	<10	532	614	<0.1	1,810	4,440
	9/14/2010	471	<10	<10	471	584	0.333	1,980	4,250
	3/15/2011	567	<1.00	<1.00	567	608	<2.50	2,140	4,120
P-05	3/27/2007	290	<10	<10	290	87.3	<0.1	1,520	2,840
	6/18/2007	270	<10	<10	270	103	<0.1	1,600	2,800
	9/17/2007	298	<10	<10	298	97.1	<0.1	1,520	2,800
	12/10/2007	304	<10	<10	304	104	<0.1	1,700	2,860
	3/10/2008	287	<10	<10	287	103	<0.1	1,580	2,870
	9/16/2008	294	<10	<10	294	73.9	<0.1	1,550	2,800
	3/10/2009	272	<10	<10	272	70.0	<0.1	1,510	2,740
	9/15/2009	236	<10	<10	236	60.7	<0.1	1,380	2,690
	3/31/2010	235	<10	<10	235	66.1	<0.1	1,480	2,740
	9/14/2010	356	<10	<10	356	193.0	<0.1	1,600	3,010

Notes

Alkalinity analyzed via EPA Method 310.1 by DHL Analytical Inc., Round Rock, Texas

Anions analyzed via EPA Method 300 by DHL Analytical Inc., Round Rock, Texas

TDS analyzed via EPA Method 160.1 by DHL Analytical Inc., Round Rock, Texas

All values reported in Milligrams per liter (mg/L, parts per million).

< values - Indicate the value is less than Method Detection Limit MDL.

Table 4a
Groundwater Inorganics Other Than Metal Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
Duplicate-01 (P-02)	3/10/2008	357	<10	<10	357	67.4	<0.1	2,020	3,520
Duplicate-01 (MW-13)	9/16/2008	215	<10	<10	215	77.4	<0.1	1,650	2,740
Duplicate-01 (MW-13)	3/10/2009	170	<10	<10	170	51.9	0.136	1,540	2,560
Duplicate-01 (MW-16)	7/15/2009	224	<10	<10	224	1,480	4.95	7,480	14,400
Duplicate-01 (EB-05)	9/15/2009	176	<10	<10	176	54.0	<0.1	1,330	2,510
Duplicate-01 (MW-14)	3/30/2010	318	<10	<10	318	81.5	<0.1	1,410	2,770
Duplicate-01 (MW-17)	9/14/2010	385	<10	<10	385	114.0	<0.1	1,590	2,920
Duplicate-01	3/15/2011	356	<1.00	<1.00	356	79.3	<2.50	1,260	2,390
	3/13/2012	275	<10.0	<10.0	275	111.0	<0.100	1,810	3,140
	9/27/2012	292	<10.0	<10.0	292	54.9	<0.100	1,580	2,880
	5/20/2013	--	--	--	--	228	--	1650	2920
Duplicate-02 (MW-02-16)	3/11/2008	786	<10	<10	786	195	<0.1	1,920	3,870
Duplicate-02 (MW-02-07)	9/17/2008	670	<10	<10	670	108	<0.1	1,460	3,030
Duplicate-02 (MW-12)	3/11/2009	371	<10	<10	371	96.4	<0.1	1,640	3,140
Duplicate-02 (MW-02-15)	9/16/2009	358	<10	<10	358	279	<0.1	1,560	3,360
Duplicate-02 (MW-12)	3/31/2010	352	<10	<10	352	108	<0.1	1,580	3,160
Duplicate-02 (MW-02-12)	9/15/2010	526	<10	<10	526	134	<0.1	1,890	3,480
Duplicate-02	10/12/2011	263	<1.00	<1.00	263	55.3	6.98	1,920	3,220
	3/14/2012	707	<10.0	<10.0	707	198	<0.100	2,070	3,830
	9/28/2012	275	<10.0	<10.0	275	156	<0.100	1,800	3,150
	5/21/2013	--	--	--	--	248	--	3,020	4,770
Duplicate-03	5/22/2013	--	--	--	--	358	--	1,270	3,190
Duplicate-04	5/23/2013	--	--	--	--	122	--	1,870	3,390
Equipment Rinse-01	3/11/2008	<10	<10	<10	<10	<0.3	<0.1	<1	<10
	3/10/2009	<10	<10	<10	<10	0.349	<0.1	<1	48.0
	3/11/2009	<10	<10	<10	<10	<0.3	<0.1	<1	20.0
	9/15/2009	<10	<10	<10	<10	<0.3	<0.1	<1	71.0
	3/30/2010	<10	<10	<10	<10	<0.3	<0.1	<1	32.0
	9/14/2010	<10	<10	<10	<10	<0.3	<0.1	<1	31.0
	3/15/2011	63	<1.00	<1.00	63	<250	<2.50	<250	<20.0
	3/12/2012	<10	<1.00	<1.00	<10	<250	<2.50	<250	20.0

Table 4a
Groundwater Inorganics Other Than Metal Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000
	9/27/2012	<10.0	<10.0	<10.0	<10.0	<0.300	<0.100	<1.00	10.0
	5/20/2013	--	--	--	--	<0.300	--	<1.00	<200
Equipment Rinse-02	9/16/2009	<10	<10	<10	<10	<0.3	<0.1	<1	<10
	3/31/2010	<10	<10	<10	<10	0.308	<0.1	<1	38.0
	9/15/2010	<10	<10	<10	<10	<0.3	<0.1	<1	14.0
	3/17/2011	<4.00	90.0	<1.00	90.0	<12.5	<2.50	<12.5	73.0
	10/13/2011	75	<1.00	<1.00	75.0	<12.5	<2.50	<12.5	65.0
	3/13/2012	<10.0	<10.0	<10.0	<10.0	<0.300	<0.100	<1.00	<50.0
	9/28/2012	<10.0	<10.0	<10.0	<10.0	<0.300	<0.100	<1.00	<10.0
	5/21/2013	--	--	--	--	58.9	--	1170	1900.0
Equipment Rinse-03	3/14/2012	<10.0	<10.0	<10.0	<10.0	<0.300	<0.100	<1.00	<10.0
	5/22/2013	--	--	--	--	7.09	--	9.51	65.0
Equipment Rinse-04	5/23/2013	--	--	--	--	3.46	--	23.8	94.0
Triple Blank	10/13/2011	<4.00	<1.0	<1.0	<4.00	0.796	<0.0460	<0.177	10.0
	10/12/2011	<4.00	<1.00	<1.00	<4.00	<0.685	<0.0460	<0.177	<0.177
Field Blank-01	3/10/2008	<10	<10	<10	<10	<0.3	<0.1	<1	<10
	9/17/2008	<10	<10	<10	<10	<0.3	<0.1	<1	26.0
	3/10/2009	<10	<10	<10	<10	0.336	<0.1	<1	21.0
	9/15/2009	<10	<10	<10	<10	<0.3	<0.1	<1	46.0
	3/30/2010	<10	<10	<10	<10	<0.3	<0.1	<1	31.0
	9/14/2010	<10	<10	<10	<10	<0.3	<0.1	<1	11.0
Field Blank-02	9/16/2009	<10	<10	<10	<10	<0.3	<0.1	<1	10.0
	3/31/2010	<10	<10	<10	<10	<0.3	<0.1	<1	11.0
	9/15/2010	<10	<10	<10	<10	<0.3	<0.1	<1	46.0

Notes

Alkalinity analyzed via EPA Method 310.1 by DHL Analytical Inc., Round Rock, Texas

Anions analyzed via EPA Method 300 by DHL Analytical Inc., Round Rock, Texas

Table 4a
Groundwater Inorganics Other Than Metal Quality Control Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
Artesia, New Mexico

Wet Chemistry	Collection Date	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	250	10	600	1000

TDS analyzed via EPA Method 160.1 by DHL Analytical Inc., Round Rock, Texas

All values reported in Milligrams per liter (mg/L, parts per million).

< values - Indicate the value is less than Method Detection Limit MDL.

FIGURES

JWW

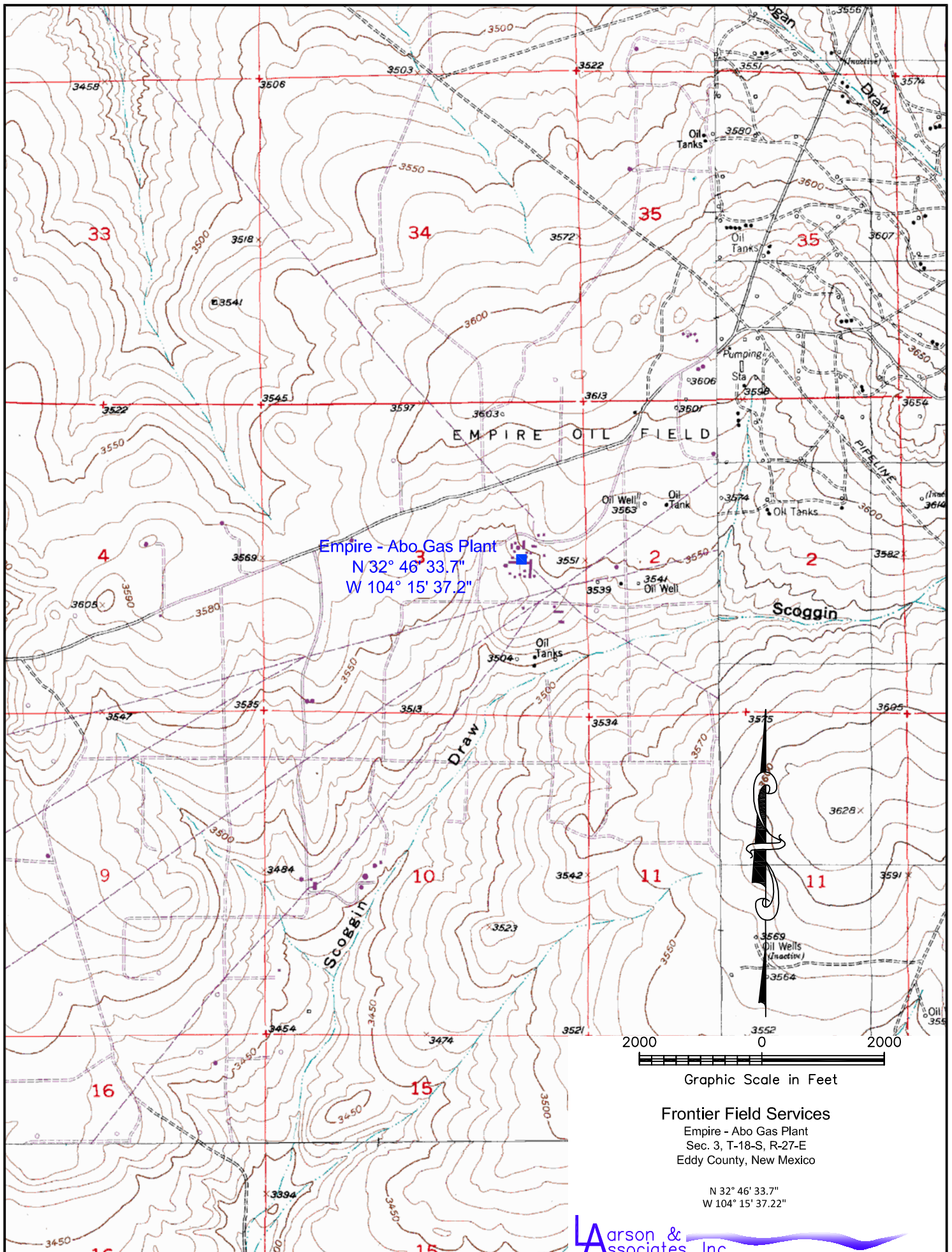


Figure 1 - Topographic Map

JWW

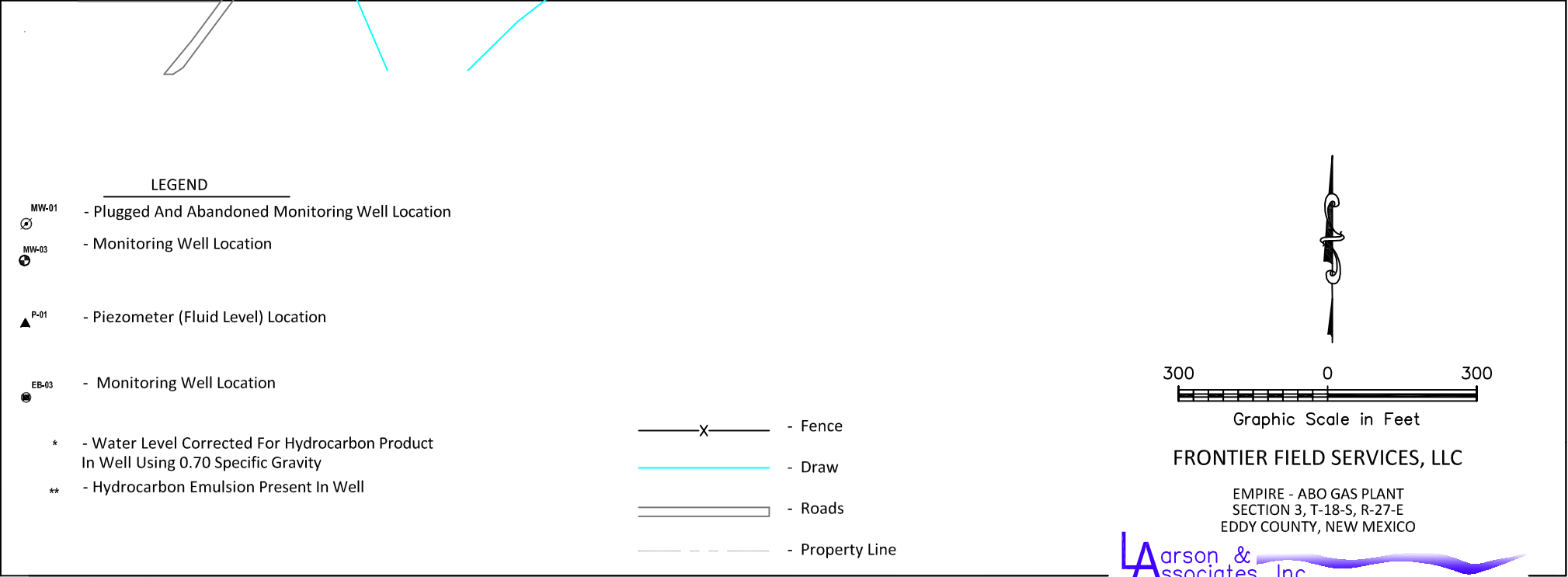
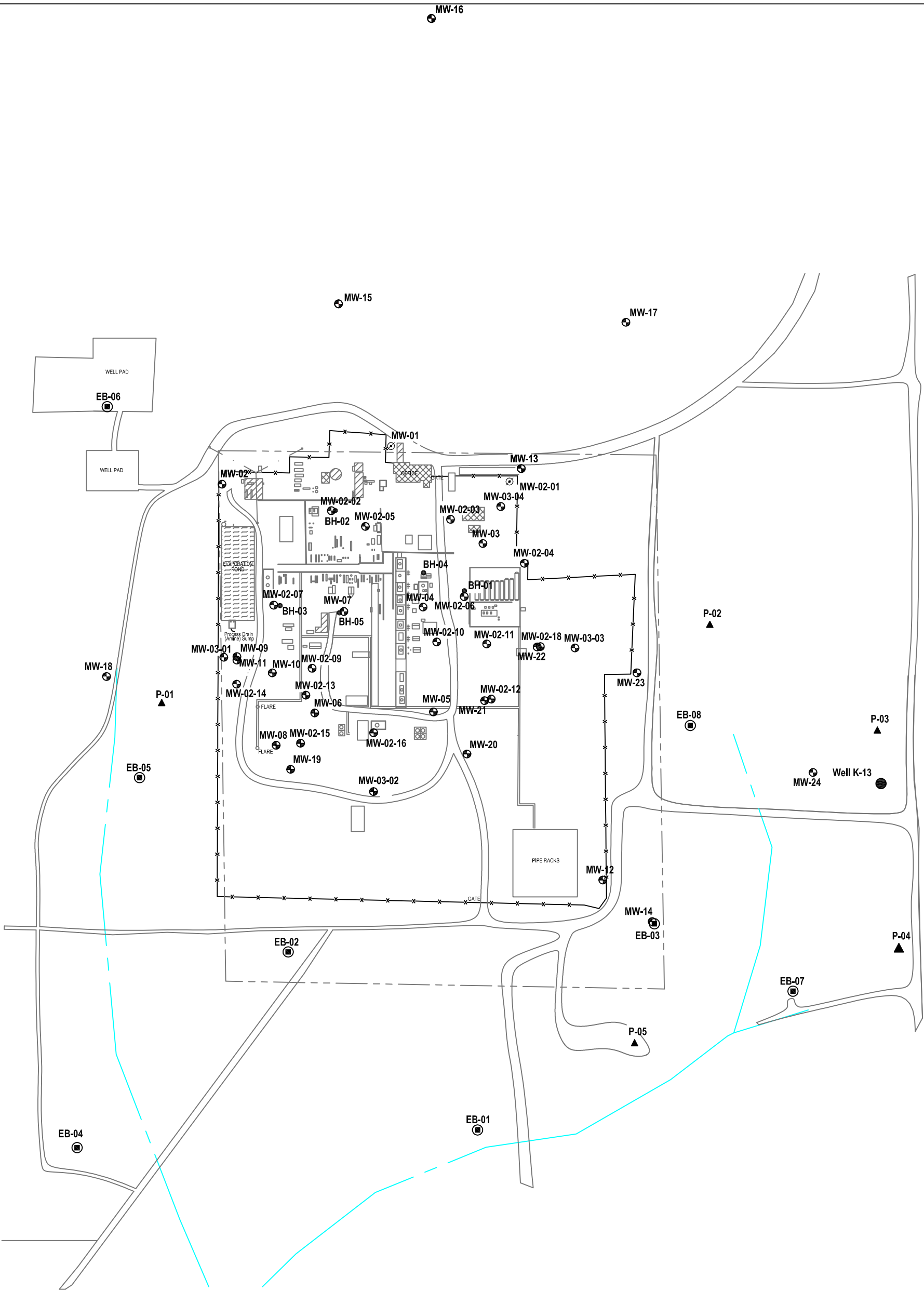


Figure 2 - Aerial Photograph

JWW



LEGEND

- MW-01 - Plugged And Abandoned Monitoring Well Location
- MW-03 - Monitoring Well Location
- P-01 - Piezometer (Fluid Level) Location
- EB-03 - Monitoring Well Location
- * - Water Level Corrected For Hydrocarbon Product In Well Using 0.70 Specific Gravity
- ** - Hydrocarbon Emulsion Present In Well

- Fence
- Draw
- Roads
- Property Line



FRONTIER FIELD SERVICES, LLC

EMPIRE - ABO GAS PLANT
SECTION 3, T-18-S, R-27-E
EDDY COUNTY, NEW MEXICO

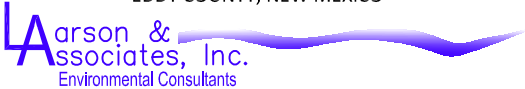


Figure 3 - Facility Drawing

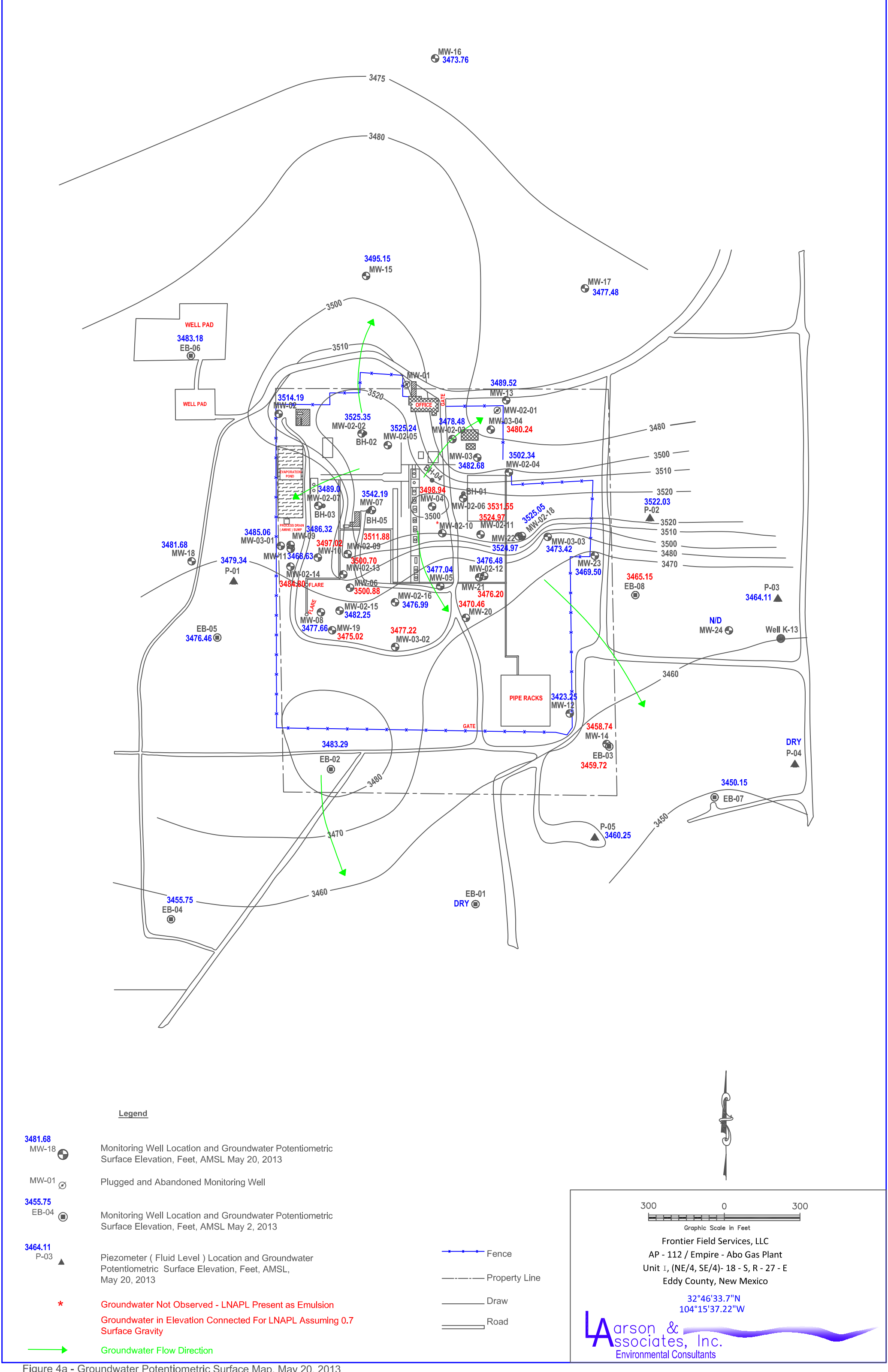
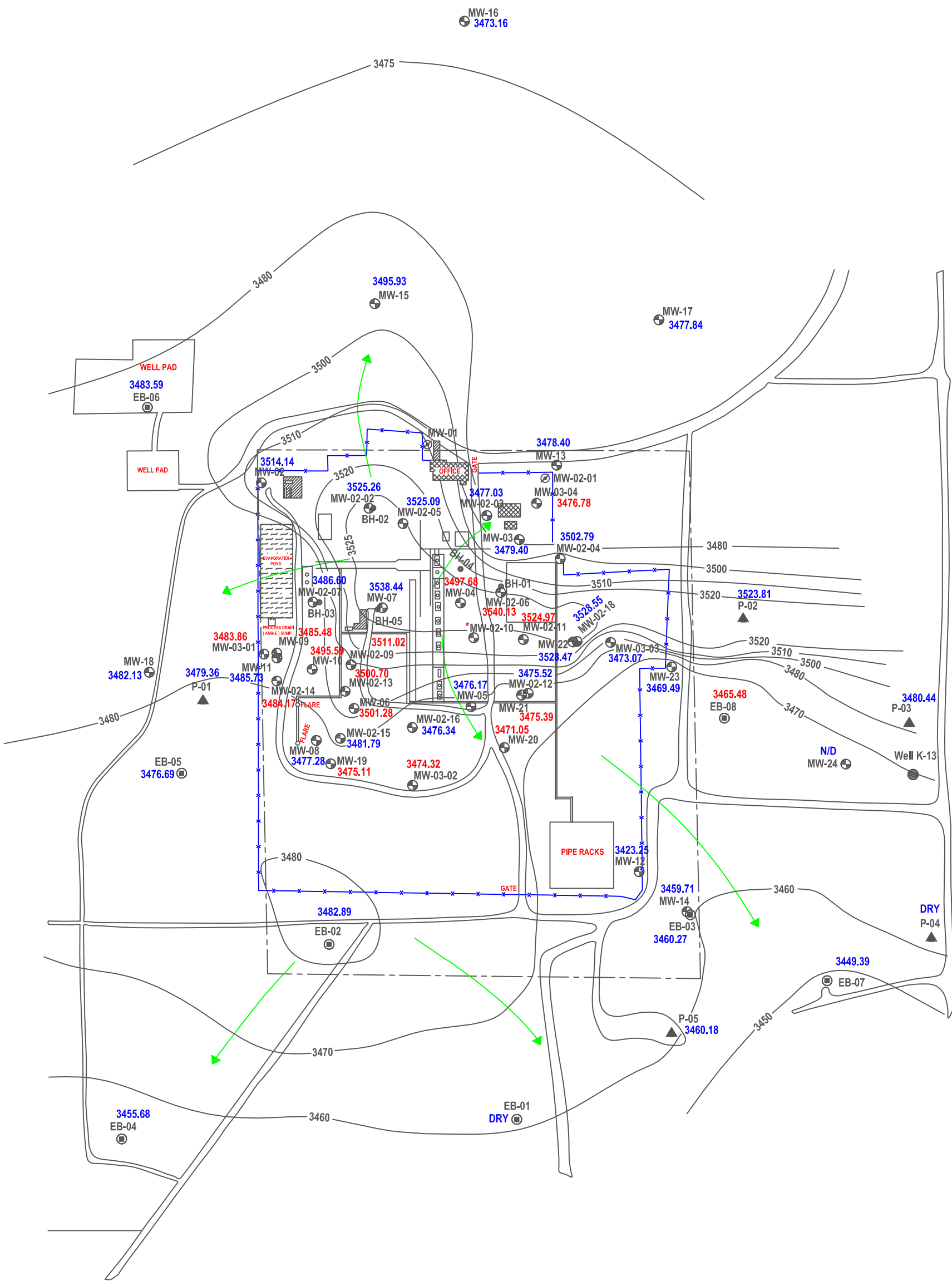


Figure 4a - Groundwater Potentiometric Surface Map, May 20, 2013



Legend

- 3482.13 MW-18 Monitoring Well Location Groundwater Potentiometric Surface Elevation, Feet, AMSL, October 14 - 15, 2013
- MW-01 Plugged and Abandoned Monitoring Well
- 3455.68 EB-04 Monitoring Well Location and Groundwater Potentiometric Surface Elevation, Feet, AMSL October 14 - 15, 2013
- 3480.44 P-03 Piezometer (Fluid Level) Location and Groundwater Potentiometric Surface Elevation, Feet, AMSL, October 14 - 15, 2013
- * Groundwater Not Observed - LNAPL Present as Emulsion
Groundwater Elevation Corrected for LNAPL Assuming 0.7 Specific Gravity
- Groundwater Flow Direction

- Fence
- Property Line
- Draw
- Road

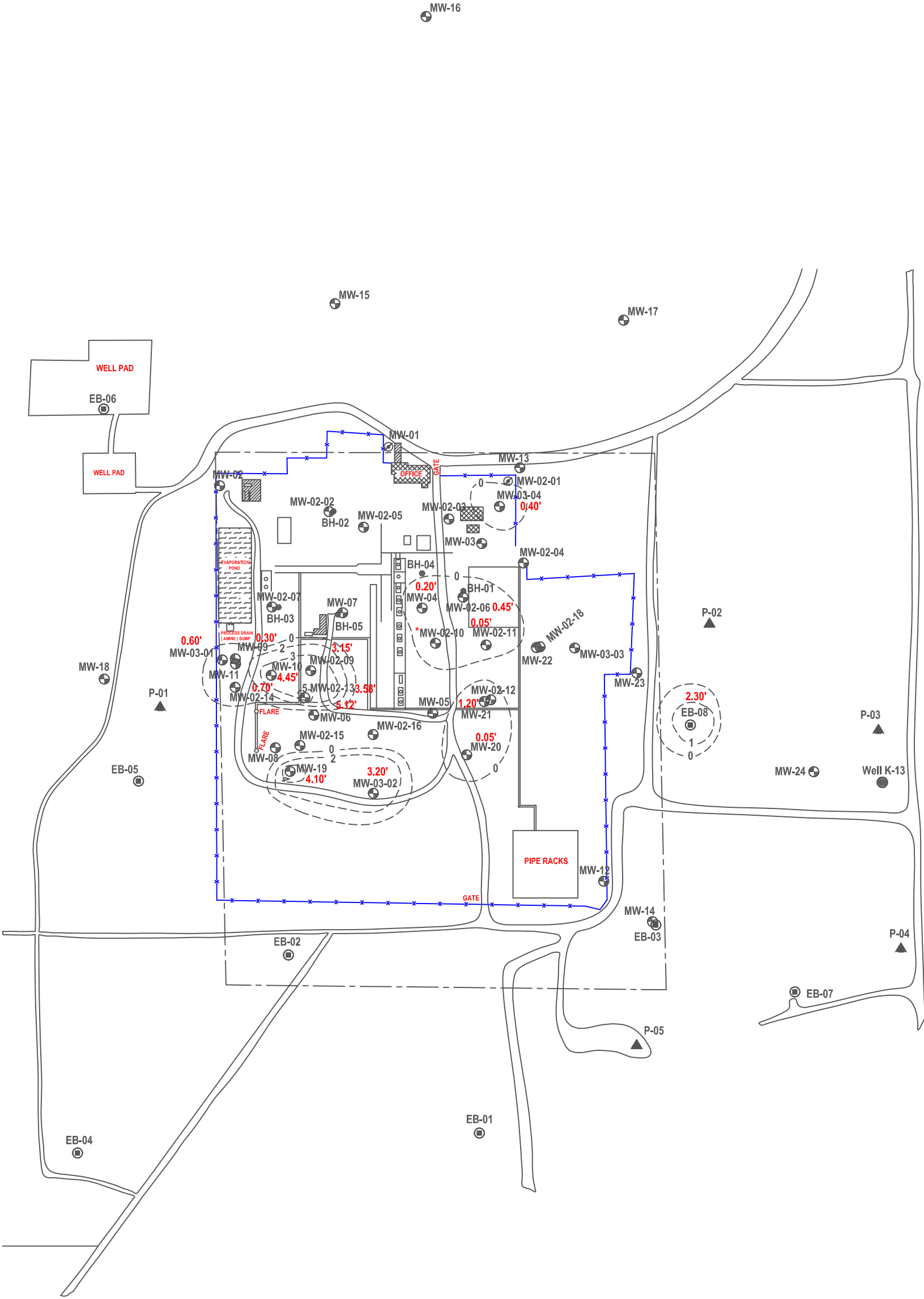


Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson & Associates, Inc.
Environmental Consultants

Figure 4b - Groundwater Potentiometric Surface Map, October 14 - 15, 2013



Legend

4.10'
MW-19 Monitoring Well Location and Apparent LNAPL Thickness, Feet, October 14 - 15, 2013

MW-01 Plugged and Abandoned Monitoring Well

2.30'
EB-08 Monitoring Well Location and Apparent LNAPL Thickness, Feet, October 14 - 15, 2013

P-03 Piezometer (Fluid Level) Location

***** Groundwater Not Observed In LNAPL Present as Emulsion

2 Contour of Apparent LNAPL Thickness, Feet, October 14 - 15, 2013

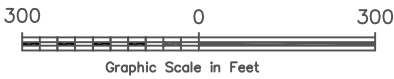
N/S Not Sampled

Fence

Property Line

Draw

Road

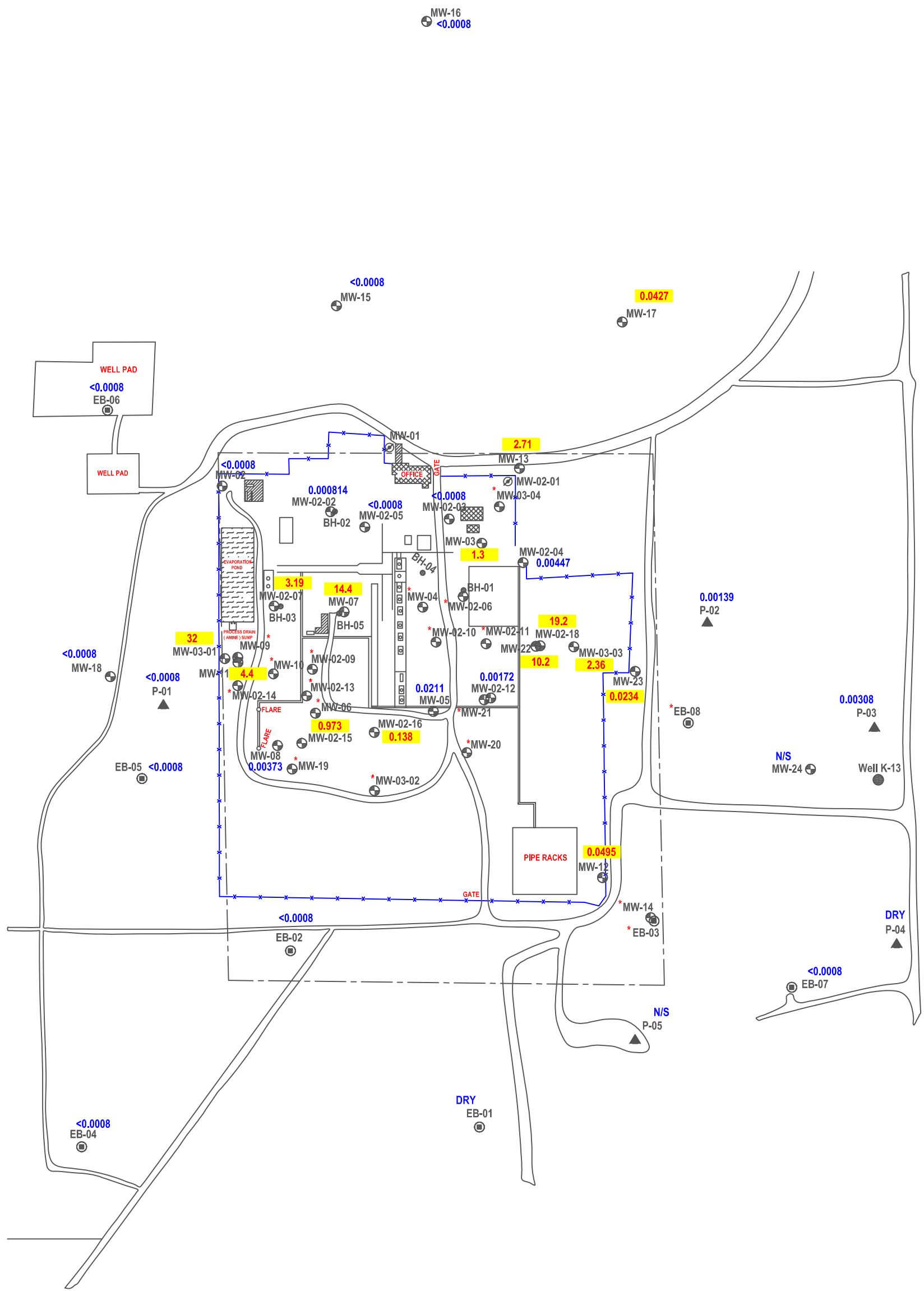


Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson & Associates, Inc.
Environmental Consultants

Figure 5b - Apparent LNAPL Thickness Map, October 14 - 15, 2013



Legend

- <0.0008**
MW-18
Monitoring Well Location and Bezeine Concentration in Groundwater, mg/L, May 20 - 23, 2013
- MW-01
Plugged and Abandoned Monitoring Well
- <0.0008**
EB-04
Monitoring Well Location and Bezeine Concentration in Groundwater, mg/L, May 20 - 23, 2013
- 0.00308**
P-03
Piezometer (Fluid Level) Location and Bezeine Concentration in Groundwater mg/L, May 20 - 23, 2013
- N/S**
Not Sampled Insufficient Water for Sample
- ***
LNAPL Present in Well - No Sample Collected
- Concentration Exceeds WQCC Human Health Standard : 0.01 mg/L**
- <**
Concentration Less Than Method Detection Limit

- *—*—*— Fence
- Property Line
- Draw
- ==== Road



Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

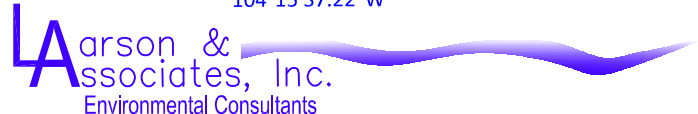
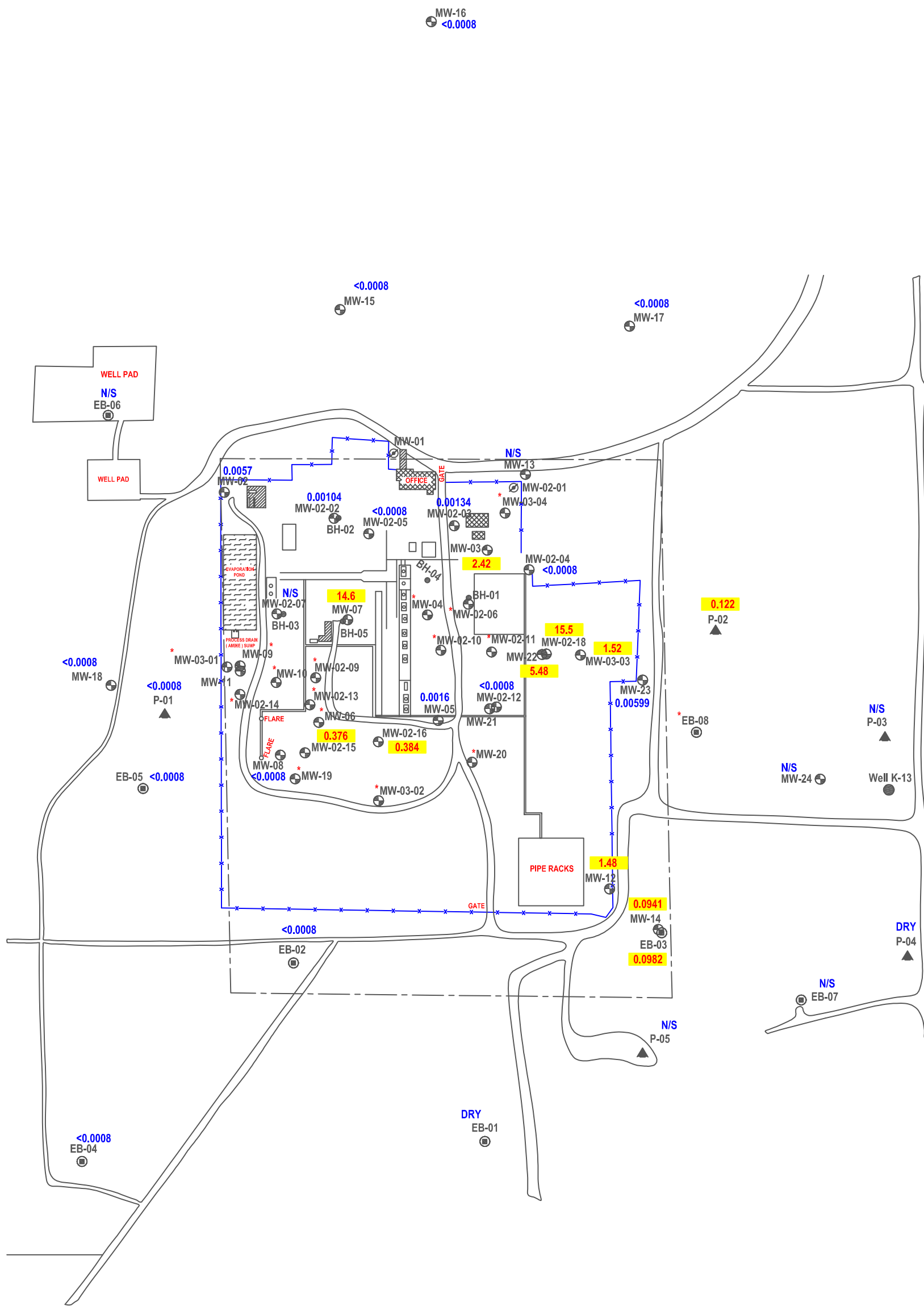


Figure 6a - Bezeine Concentration in Groundwater, May 20 - 23, 2013



Legend

- <0.0008**
MW-18
Monitoring Well Location and Bezene Concentration in Groundwater, mg/L, October 15 - 17, 2013
- MW-01
Plugged and Abandoned Monitoring Well
- <0.0008**
EB-04
Monitoring Well Location and Bezene Concentration in Groundwater, mg/L, October 15 - 17, 2013
- <0.0008**
P-01
Piezometer (Fluid Level) Location and Bezene Concentration in Groundwater, mg/L, October 15 - 17, 2013
- N/S**
Not Sampled - Insufficient Water for Sample
- ***
LNAPL Present in Well - No Sample Collected
- Concentration Exceeds WQCC Human Health Standard : 0.01 mg/L**
- <**
Concentration Less Than Method Detection Limit (MDL)

- +—+—+— Fence
- Property Line
- Draw
- == Road

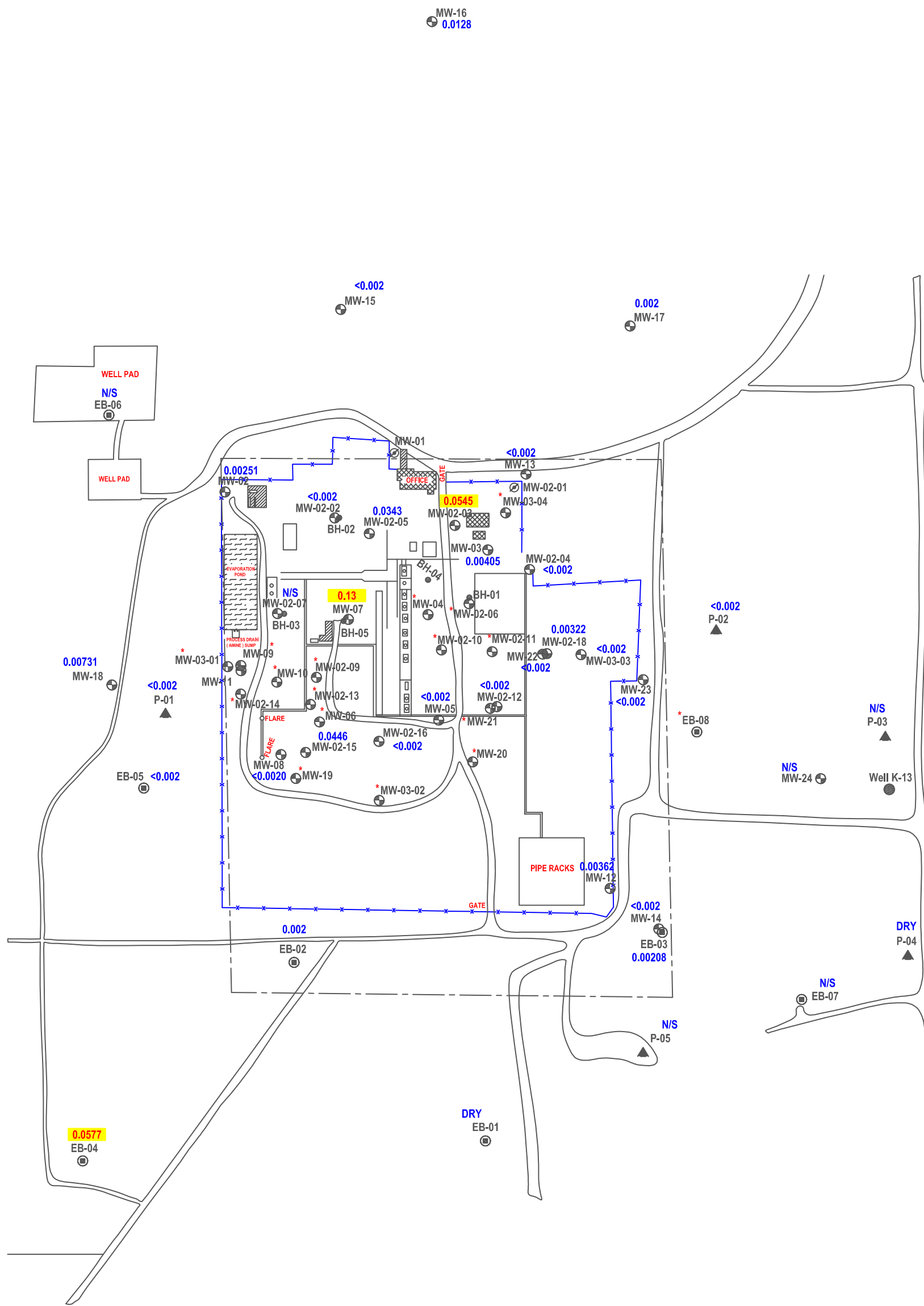


Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson & Associates, Inc.
Environmental Consultants

Figure 6b - Bezene Concentration in Groundwater, October 15 - 17, 2013



Legend

- 0.00731
MW-18

Monitoring Well Location and Dissolved Chromium Concentration in Groundwater, mg/L, October 15 - 17, 2013
- MW-01

Plugged and Abandoned Monitoring Well
- 0.0577
EB-04

Monitoring Well Location and Dissolved Chromium Concentration Groundwater, mg/L, October 15 - 17, 2013
- <0.0002
P-01

Piezometer (Fluid Level) Location and Dissolved Chromium Concentration in Groundwater, mg/L, October 15 - 17, 2013
- N/S

Not Sampled - Insufficient Water for Sample
- *

No Sample Collected - LNAPL Present in Well
- Concentration Exceeds WQCC Human Health Standard : 0.05 mg/L
- <

Concentration Less Than Method Detection Limit (MDL)

- Fence
- Property Line
- Draw
- Road

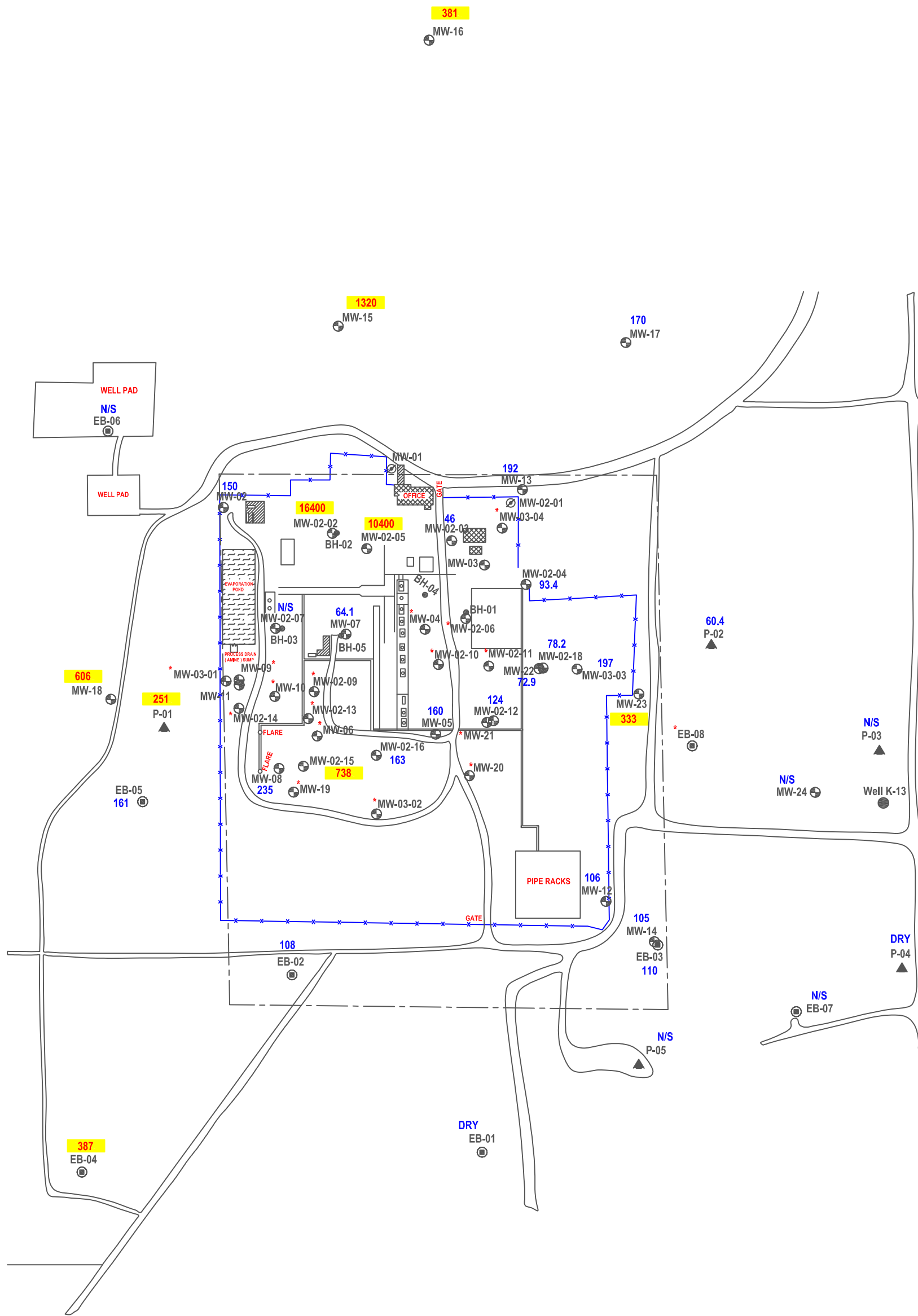


Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit 1, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson &
Associates, Inc.
Environmental Consultants

Figure 7 - Dissolved Chromium Concentration in Groundwater, October 15 - 17, 2013



Legend

- 606** MW-18 Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, October 15 - 17, 2013
- MW-01 Plugged and Abandoned Monitoring Well
- 387** EB-04 Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, October 15 - 17, 2013
- 251** P-01 Piezometer (Fluid Level) Location and Chloride Concentration in Groundwater, mg/L, October 15 - 17, 2013
- N/S** Not Sampled - Insufficient Water For Sample
- *** No Sample Collected - LNAPL Present in Well
- Concentration Exceeds WQCC Domestic Water Quality Standard : 250 mg/L**

- +—+—+— Fence
- Property Line
- Draw
- == Road

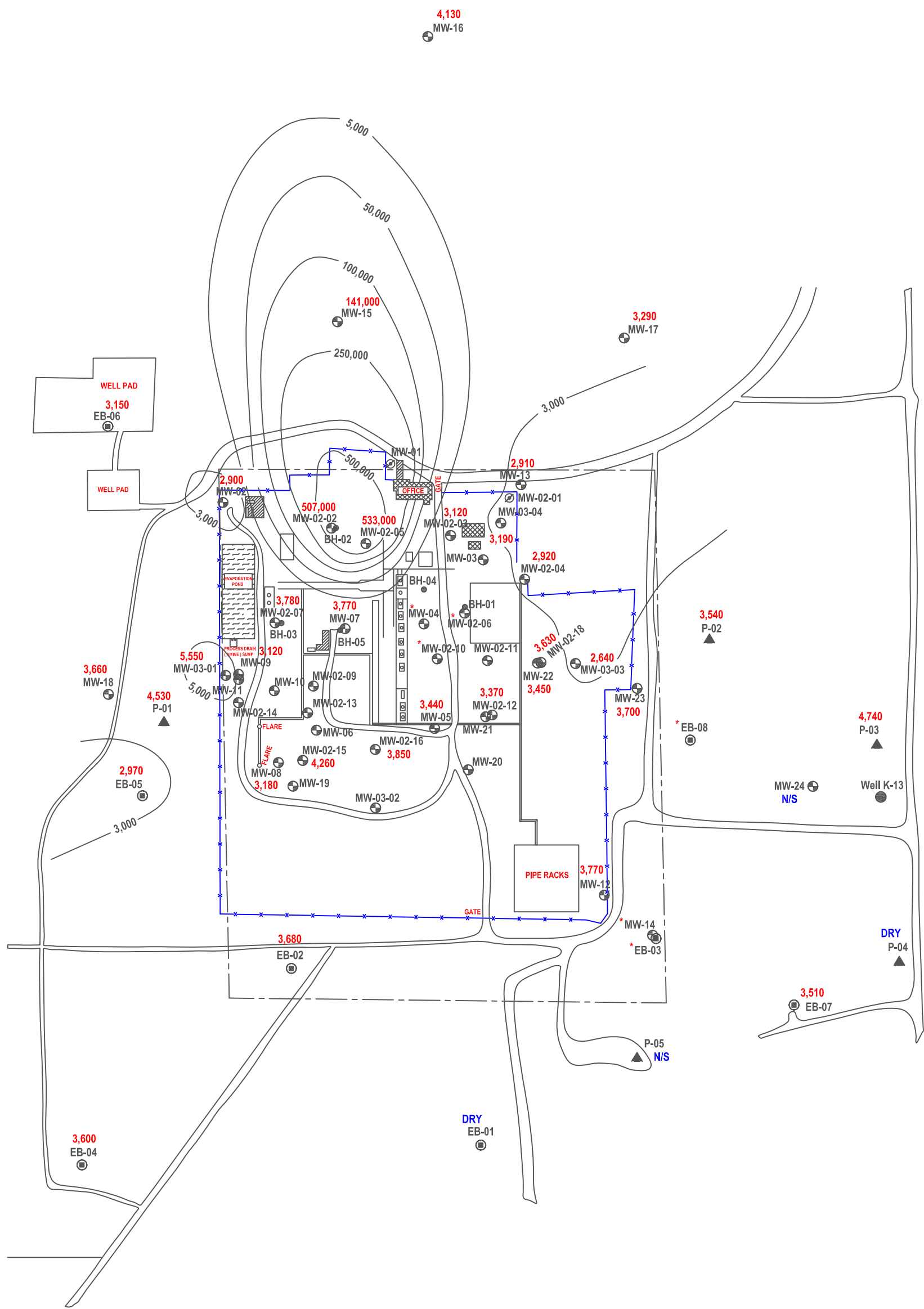


Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit 1, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson &
Associates, Inc.
Environmental Consultants

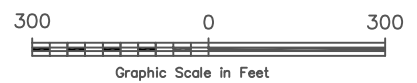
Figure 8b - Chloride Concentration in Groundwater, October 15 - 17, 2013



Legend

- 3,660**
MW-19
Monitoring Well Location and TDS Concentration in Groundwater, mg/L, May 20 - 23, 2013
- 3,600**
EB-08
Monitoring Well Location and TDS Concentration in Groundwater, mg/L, May 20 - 23, 2013
- 4,740**
P-03
Piezometer (Fluid Level) Location and TDS Concentration, in Groundwater, mg/L, May 20 - 23, 2013
- ***
No Sample Collected - LNAPL Present in Well
- N/S**
Not Sampled - Insufficient Water For Sample
- Concentration Exceeds WQCC Domestic Water Quality Standard : 1,000 mg/L**

- Fence**
- Property Line**
- Draw**
- Road**

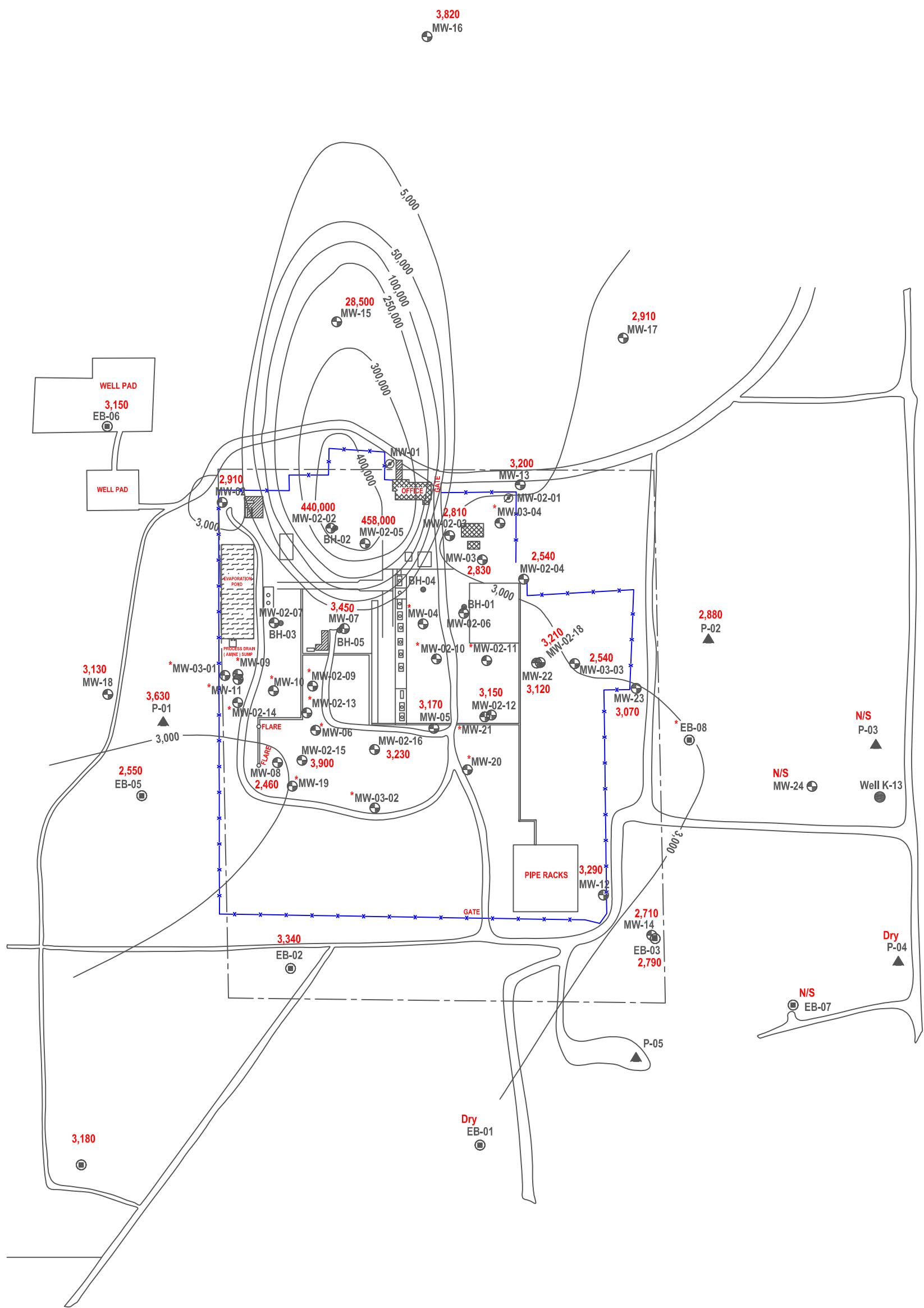


Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson & Associates, Inc.
Environmental Consultants

Figure 9a - TDS Concentration in Groundwater, May 20 - 23, 2013



Legend

- 3,130**
MW-19  Monitoring Well Location and TDS Concentration in Groundwater, mg/L, October 15 - 17, 2013
- 3,180**
EB-08  Monitoring Well Location and TDS Concentration in Groundwater, mg/L, October 15 - 17, 2013
- 3,630**
P-01  Piezometer (Fluid Level) Location and TDS Concentration, in Groundwater, mg/L, October 15 - 17, 2013
- N/S**
Not Sampled - Insufficient Water for Sample
- ***
No Sample Collected - LNAPL Present in Well
- 5,000**
 Contour of TDS Concentration in Groundwater mg/L, October 15 - 17, 2013
- Exceeds WQCC Domestic Water Quality Standard : 1,000 mg/L

-  Fence
-  Property Line
-  Draw
-  Road



Frontier Field Services, LLC
AP - 112 / Empire - Abo Gas Plant
Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson & Associates, Inc.
Environmental Consultants

Figure 9b - TDS Concentration in Groundwater, October 15 - 17, 2013

APPENDIX A



May 30, 2013

Coty Woolf
Larson & Associates
507 N. Marienfeld #200
Midland, TX 79701
TEL: (432) 687-0901
FAX (432) 687-0456
RE: Frontier ABO

Order No.: 1305221

Dear Coty Woolf:

DHL Analytical, Inc. received 18 sample(s) on 5/22/2013 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

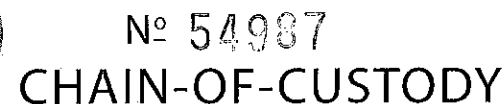
John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-13-10



Table of Contents

Miscellaneous Documents	3
CaseNarrative 1305221	8
WorkOrderSampleSummary 1305221	9
PrepDatesReport 1305221	10
AnalyticalDatesReport 1305221	13
Analytical Report 1305221	16
AnalyticalQCSummaryReport 1305221	34



DATE: 5-21-13 PAGE 1 OF 1
PO #: _____ DHL WORK ORDER #: 1305221
PROJECT LOCATION OR NAME: ABO
CLIENT PROJECT #: 6-0141 COLLECTOR: R. Brooks

4

FedEx US Airbill
Express

FedEx Tracking Number 8692 2978 1610

Form ID No.

0200

Recipient's Copy

1 From

Date 5-21-13

Sender's Name LARSON

Phone 432 687-1901

Company LARSON

Address

Dept./Floor/Suite/Room

City MIDLAND

State TX ZIP 79701

2 Your Internal Billing Reference

6-0141

3 To

Recipient's Name DALL ANALYTICAL Phone 512 388-8222

Company DALL ANALYTICAL

Recipient's Address 2300 DOUBLE CREEK DR

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City ROUND ROCK

State TX ZIP 78664



8692 2978 1610

4a Express Package Service

☒ FedEx Priority Overnight
Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight
Next business afternoon.* Saturday Delivery NOT available.

☐ FedEx First Overnight
Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.

☐ FedEx 2Day
Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver
Third business day.* Saturday Delivery NOT available.

* To most locations.

4b Express Freight Service

☐ FedEx 1Day Freight*
Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx 2Day Freight
Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx 3Day Freight
Third business day.** Saturday Delivery NOT available.

** To most locations.

* Call for Confirmation.

5 Packaging

☐ FedEx Envelope*

☐ FedEx Pak*
Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.

☐ FedEx Box

☐ FedEx Tube

☐ Other

* Declared value limit \$500.

6 Special Handling

Include FedEx address in Section 3.

☐ SATURDAY Delivery
Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

☐ HOLD Weekday at FedEx Location
Not available for FedEx First Overnight.

☐ HOLD Saturday at FedEx Location
Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods?

☐ No ☐ Yes
One box must be checked.
As per attached Shipper's Declaration.

☐ Yes
Shipper's Declaration not required.

☐ Dry Ice
Dry Ice, 9, UN 1845 x kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

☐ Cargo Aircraft Only

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain Recip. Acct. No.

☐ Sender Acct. No. in Section 1 will be billed.

☐ Recipient

☐ Third Party

☐ Credit Card

☐ Cash/Check



Total Packages

Total Weight

Total Declared Value†

\$.00

†Our liability is limited to \$100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options

If you require a signature, check Direct or Indirect.

☐ No Signature Required
Package may be left without obtaining a signature for delivery.

☐ Direct Signature
Someone at recipient's address may sign for delivery. Fee applies.

☐ Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. Fee applies.

520

Rev. Date 10/06/Part #159251-01/1594-2005 FedEx-PRINTED IN U.S.A. 517

CUSTODY SEAL

DATE 5-21-13

SIGNATURE R.W. Brown

QEC

Quality Environmental Containers
800-255-3950 • 304-255-3900

FedEx US Airbill
Express

FedEx
Tracking
Number

8692 2978 1609

1 From

Date 5-21-13

Sender's Name LARSON

Phone 482-687-0901

Company LARSON

Address

City MIDLAND

State TX

ZIP

79701

2 Your Internal Billing Reference

6-0141

3 To

Recipient's Name

Phone 512 388-8222

Company DUE ANALYTICAL

Recipient's Address 2300 DOUBLE CREEK DR

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City ROUND ROCK

State TX

ZIP

78664



8692 2978 1609

Form
ID No.

0200

Recipient's Cop

4a Express Package Service

☒ FedEx Priority Overnight

Next business morning.* FedEx shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight

Next business afternoon.* Saturday Delivery NOT available.

Packages up to 150 lbs.

☐ FedEx First Overnight
Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.

☐ FedEx 2Day

Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver

Third business day.* Saturday Delivery NOT available.

* FedEx Envelope rate not available. Minimum charge: One-pound rate.

** To most locations.

4b Express Freight Service

☐ FedEx 1Day Freight*

Next business day.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx 2Day Freight

Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

Packages over 150 lbs.

☐ FedEx 3Day Freight
Third business day.* Saturday Delivery NOT available.

* Call for Confirmation.

** To most locations.

5 Packaging

☐ FedEx Envelope*

☐ FedEx Pak*
Includes FedEx Small Pak,
FedEx Large Pak, and FedEx Sturdy Pak.

☐ FedEx Box

☐ FedEx Tube

☐ Other

* Declared value limit \$500.

6 Special Handling

Include FedEx address in Section 3.

☐ SATURDAY Delivery

Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

☐ HOLD Weekday at FedEx Location

Not available for FedEx First Overnight.

☐ HOLD Saturday at FedEx Location

Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods?

☐ No

☐ Yes

One box must be checked.

☐ Yes

Shipper's Declaration not required.

☐ Dry Ice

Dry Ice, 5/UN 1845

kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

☐ Cargo Aircraft Only

7 Payment: Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain Recip. Acct. No.

☐ Sender Acct. No. in Section 1 will be billed.

☐ Recipient

☐ Third Party

☐ Credit Card

☐ Cash/Check

Total Packages

Total Weight

Total Declared Value

* Our liability is limited to \$100 unless you declare a higher value. See back for details.

Credit Card Auth.

8 Residential Delivery Signature Options

If you require a signature, check Direct or Indirect.

☐ No Signature Required
Packages may be left without obtaining a signature for delivery.

☐ Direct Signature
Someone at recipient's address may sign for delivery. Fee applies.

☐ Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. Fee applies.

520

Rev. Date 10/09 Part #158281 ©1994-2006 FedEx PRINTED IN U.S.A. SRY

CUSTODY SEAL

DATE 5-13-21

SIGNATURE Rm Paul

QEC

Quality Environmental Containers
800-255-3950 • 304-255-3900

Sample Receipt Checklist

Client Name Larson & Associates

Date Received: 5/22/2013

Work Order Number 1305221

Received by JB

Checklist completed by: [Signature] 5/22/2013
Signature Date

Reviewed by: [Initials] 5/22/2013
Initials Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	2.5 °C
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CLIENT: Larson & Associates**Project:** Frontier ABO**Lab Order:** 1305221**CASE NARRATIVE**

Sample was analyzed using the methods outlined in the following references:

Method SW8021B - Volatile Organics by GC Analysis

Method E300 - Anions Analysis

Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 5/22/13. A total of 18 samples were received. The Time of Collection was Mountain Standard Time. The samples arrived in good condition and were properly packaged.

ANIONS ANALYSIS

For Anions analysis performed on 5/22/13 the matrix spike recovery (1305221-12) was slightly below control limits for Chloride. This is flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

CLIENT: Larson & Associates
Project: Frontier ABO
Lab Order: 1305221

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1305221-01	MW-13		05/21/13 11:15 AM	5/22/2013
1305221-02	MW-16		05/21/13 01:00 PM	5/22/2013
1305221-03	MW-17		05/21/13 01:55 PM	5/22/2013
1305221-04	MW-23		05/21/13 10:00 AM	5/22/2013
1305221-05	P-02		05/21/13 10:25 AM	5/22/2013
1305221-06	P-03		05/21/13 09:15 AM	5/22/2013
1305221-07	MW-15		05/21/13 02:40 PM	5/22/2013
1305221-08	DUP-2		05/21/13	5/22/2013
1305221-09	RINSATE-2		05/21/13 03:15 PM	5/22/2013
1305221-10	MW-18		05/20/13 02:40 PM	5/22/2013
1305221-11	EB-06		05/20/13 02:00 PM	5/22/2013
1305221-12	P-01		05/20/13 05:00 PM	5/22/2013
1305221-13	EB-05		05/20/13 03:25 PM	5/22/2013
1305221-14	EB-04		05/20/13 03:50 PM	5/22/2013
1305221-15	EB-02		05/20/13 04:10 PM	5/22/2013
1305221-16	EB-07		05/20/13 04:40 PM	5/22/2013
1305221-17	DUP-1		05/20/13	5/22/2013
1305221-18	RINSATE-1		05/20/13 05:10 PM	5/22/2013

Lab Order: 1305221
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1305221-01A	MW-13	05/21/13 11:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
	MW-13	05/21/13 11:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-01B	MW-13	05/21/13 11:15 AM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-13	05/21/13 11:15 AM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-13	05/21/13 11:15 AM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-02A	MW-16	05/21/13 01:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
	MW-16	05/21/13 01:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-02B	MW-16	05/21/13 01:00 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-16	05/21/13 01:00 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-16	05/21/13 01:00 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-03A	MW-17	05/21/13 01:55 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-03B	MW-17	05/21/13 01:55 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-17	05/21/13 01:55 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-17	05/21/13 01:55 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-04A	MW-23	05/21/13 10:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-04B	MW-23	05/21/13 10:00 AM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-23	05/21/13 10:00 AM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-05A	P-02	05/21/13 10:25 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-05B	P-02	05/21/13 10:25 AM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	P-02	05/21/13 10:25 AM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	P-02	05/21/13 10:25 AM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-06A	P-03	05/21/13 09:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-06B	P-03	05/21/13 09:15 AM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	P-03	05/21/13 09:15 AM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	P-03	05/21/13 09:15 AM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-07A	MW-15	05/21/13 02:40 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-07B	MW-15	05/21/13 02:40 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-15	05/21/13 02:40 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600

Lab Order: 1305221
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1305221-08A	DUP-2	05/21/13	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-08B	DUP-2	05/21/13	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	DUP-2	05/21/13	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-09A	RINSATE-2	05/21/13 03:15 PM	Equip Blank	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-09B	RINSATE-2	05/21/13 03:15 PM	Equip Blank	E300	Anion Preparation	05/22/13 10:28 AM	57579
	RINSATE-2	05/21/13 03:15 PM	Equip Blank	E300	Anion Preparation	05/22/13 10:28 AM	57579
	RINSATE-2	05/21/13 03:15 PM	Equip Blank	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-10A	MW-18	05/20/13 02:40 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-10B	MW-18	05/20/13 02:40 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	MW-18	05/20/13 02:40 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-11A	EB-06	05/20/13 02:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-11B	EB-06	05/20/13 02:00 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-06	05/20/13 02:00 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-06	05/20/13 02:00 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-12A	P-01	05/20/13 05:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-12B	P-01	05/20/13 05:00 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	P-01	05/20/13 05:00 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	P-01	05/20/13 05:00 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-13A	EB-05	05/20/13 03:25 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-13B	EB-05	05/20/13 03:25 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-05	05/20/13 03:25 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-05	05/20/13 03:25 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-14A	EB-04	05/20/13 03:50 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-14B	EB-04	05/20/13 03:50 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-04	05/20/13 03:50 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-15A	EB-02	05/20/13 04:10 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-15B	EB-02	05/20/13 04:10 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-02	05/20/13 04:10 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579

Lab Order: 1305221
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1305221-15B	EB-02	05/20/13 04:10 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-16A	EB-07	05/20/13 04:40 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-16B	EB-07	05/20/13 04:40 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-07	05/20/13 04:40 PM	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	EB-07	05/20/13 04:40 PM	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-17A	DUP-1	05/20/13	Aqueous	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-17B	DUP-1	05/20/13	Aqueous	E300	Anion Preparation	05/22/13 10:28 AM	57579
	DUP-1	05/20/13	Aqueous	M2540C	TDS Preparation	05/23/13 05:20 PM	57600
1305221-18A	RINSATE-1	05/20/13 05:10 PM	Equip Blank	SW5030C	Purge and Trap Water GC	05/22/13 10:15 AM	57578
1305221-18B	RINSATE-1	05/20/13 05:10 PM	Equip Blank	E300	Anion Preparation	05/22/13 10:28 AM	57579
	RINSATE-1	05/20/13 05:10 PM	Equip Blank	M2540C	TDS Preparation	05/23/13 05:20 PM	57600

Lab Order: 1305221
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1305221-01A	MW-13	Aqueous	SW8021B	Volatile Organics by GC	57578	50	05/22/13 08:04 PM	GC8_130522A
	MW-13	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 12:01 PM	GC8_130522A
1305221-01B	MW-13	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 10:43 AM	IC2_130522A
	MW-13	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 11:57 AM	IC2_130522A
	MW-13	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-02A	MW-16	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 12:22 PM	GC8_130522A
	MW-16	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 07:43 PM	GC8_130522A
1305221-02B	MW-16	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 10:58 AM	IC2_130522A
	MW-16	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 12:14 PM	IC2_130522A
	MW-16	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-03A	MW-17	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 12:43 PM	GC8_130522A
1305221-03B	MW-17	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 11:13 AM	IC2_130522A
	MW-17	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 11:28 AM	IC2_130522A
	MW-17	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-04A	MW-23	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 01:05 PM	GC8_130522A
1305221-04B	MW-23	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 11:42 AM	IC2_130522A
	MW-23	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-05A	P-02	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 01:25 PM	GC8_130522A
1305221-05B	P-02	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 01:19 PM	IC2_130522A
	P-02	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 01:34 PM	IC2_130522A
	P-02	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-06A	P-03	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 01:46 PM	GC8_130522A
1305221-06B	P-03	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 02:03 PM	IC2_130522A
	P-03	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 01:48 PM	IC2_130522A
	P-03	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-07A	MW-15	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 02:07 PM	GC8_130522A
1305221-07B	MW-15	Aqueous	E300	Anions by IC method - Water	57579	1000	05/22/13 03:56 PM	IC2_130522A
	MW-15	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A

Lab Order: 1305221
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1305221-08A	DUP-2	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 02:27 PM	GC8_130522A
1305221-08B	DUP-2	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 02:32 PM	IC2_130522A
	DUP-2	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-09A	RINSATE-2	Equip Blank	SW8021B	Volatile Organics by GC	57578	1	05/22/13 02:49 PM	GC8_130522A
1305221-09B	RINSATE-2	Equip Blank	E300	Anions by IC method - Water	57579	100	05/22/13 08:48 PM	IC2_130522A
	RINSATE-2	Equip Blank	E300	Anions by IC method - Water	57579	10	05/22/13 08:33 PM	IC2_130522A
	RINSATE-2	Equip Blank	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-10A	MW-18	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 03:10 PM	GC8_130522A
1305221-10B	MW-18	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 10:00 PM	IC2_130522A
	MW-18	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-11A	EB-06	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 03:53 PM	GC8_130522A
1305221-11B	EB-06	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 04:25 PM	IC2_130522A
	EB-06	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 04:11 PM	IC2_130522A
	EB-06	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-12A	P-01	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 04:14 PM	GC8_130522A
1305221-12B	P-01	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 04:40 PM	IC2_130522A
	P-01	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 05:24 PM	IC2_130522A
	P-01	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-13A	EB-05	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 05:16 PM	GC8_130522A
1305221-13B	EB-05	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 06:07 PM	IC2_130522A
	EB-05	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 06:36 PM	IC2_130522A
	EB-05	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-14A	EB-04	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 05:37 PM	GC8_130522A
1305221-14B	EB-04	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 06:51 PM	IC2_130522A
	EB-04	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-15A	EB-02	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 05:58 PM	GC8_130522A
1305221-15B	EB-02	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 07:06 PM	IC2_130522A
	EB-02	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 07:20 PM	IC2_130522A

Lab Order: 1305221
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1305221-15B	EB-02	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-16A	EB-07	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 06:19 PM	GC8_130522A
1305221-16B	EB-07	Aqueous	E300	Anions by IC method - Water	57579	10	05/22/13 07:35 PM	IC2_130522A
	EB-07	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 07:49 PM	IC2_130522A
	EB-07	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-17A	DUP-1	Aqueous	SW8021B	Volatile Organics by GC	57578	1	05/22/13 06:40 PM	GC8_130522A
1305221-17B	DUP-1	Aqueous	E300	Anions by IC method - Water	57579	100	05/22/13 08:04 PM	IC2_130522A
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A
1305221-18A	RINSATE-1	Equip Blank	SW8021B	Volatile Organics by GC	57578	1	05/22/13 07:01 PM	GC8_130522A
1305221-18B	RINSATE-1	Equip Blank	E300	Anions by IC method - Water	57579	1	05/22/13 09:17 PM	IC2_130522A
	RINSATE-1	Equip Blank	M2540C	Total Dissolved Solids	57600	1	05/23/13 05:20 PM	WC_130523A

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: MW-13
Lab ID: 1305221-01
Collection Date: 05/21/13 11:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	2.71	0.0400	0.100		mg/L	50	05/22/13 08:04 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 12:01 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 12:01 PM
Xylenes, Total	0.110	0.00300	0.00900		mg/L	1	05/22/13 12:01 PM
Surr: a,a,a-Trifluorotoluene	98.0	0	87-113		%REC	50	05/22/13 08:04 PM
Surr: a,a,a-Trifluorotoluene	99.7	0	87-113		%REC	1	05/22/13 12:01 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	138	3.00	10.0		mg/L	10	05/22/13 11:57 AM
Sulfate	1440	100	300		mg/L	100	05/22/13 10:43 AM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	2910	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: MW-16
Lab ID: 1305221-02
Collection Date: 05/21/13 01:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 07:43 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 07:43 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 07:43 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 07:43 PM
Surr: a,a,a-Trifluorotoluene	103	0	87-113		%REC	1	05/22/13 07:43 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	353	3.00	10.0		mg/L	10	05/22/13 10:58 AM
Sulfate	2260	100	300		mg/L	100	05/22/13 12:14 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	4130	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: MW-17
Lab ID: 1305221-03
Collection Date: 05/21/13 01:55 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B				Analyst: DEW	
Benzene	0.0427	0.000800	0.00200		mg/L	1	05/22/13 12:43 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 12:43 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 12:43 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 12:43 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/22/13 12:43 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: JBC	
Chloride	158	3.00	10.0		mg/L	10	05/22/13 11:13 AM
Sulfate	1810	100	300		mg/L	100	05/22/13 11:28 AM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3290	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: MW-23
Lab ID: 1305221-04
Collection Date: 05/21/13 10:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	0.0234	0.000800	0.00200		mg/L	1	05/22/13 01:05 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 01:05 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 01:05 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 01:05 PM
Surr: a,a,a-Trifluorotoluene	99.4	0	87-113		%REC	1	05/22/13 01:05 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	326	30.0	100		mg/L	100	05/22/13 11:42 AM
Sulfate	1750	100	300		mg/L	100	05/22/13 11:42 AM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3700	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: P-02
Lab ID: 1305221-05
Collection Date: 05/21/13 10:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	0.00139	0.000800	0.00200	J	mg/L	1	05/22/13 01:25 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 01:25 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 01:25 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 01:25 PM
Surr: a,a,a-Trifluorotoluene	98.0	0	87-113		%REC	1	05/22/13 01:25 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	75.4	3.00	10.0		mg/L	10	05/22/13 01:19 PM
Sulfate	2020	100	300		mg/L	100	05/22/13 01:34 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3540	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: P-03
Lab ID: 1305221-06
Collection Date: 05/21/13 09:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	0.00308	0.000800	0.00200		mg/L	1	05/22/13 01:46 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 01:46 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 01:46 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 01:46 PM
Surr: a,a,a-Trifluorotoluene	100	0	87-113		%REC	1	05/22/13 01:46 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	216	3.00	10.0		mg/L	10	05/22/13 01:48 PM
Sulfate	2850	100	300		mg/L	100	05/22/13 02:03 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	4740	50.0	50.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: MW-15
Lab ID: 1305221-07
Collection Date: 05/21/13 02:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 02:07 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 02:07 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 02:07 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 02:07 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/22/13 02:07 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	6360	300	1000		mg/L	1000	05/22/13 03:56 PM
Sulfate	95600	1000	3000		mg/L	1000	05/22/13 03:56 PM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	141000	200	200		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: DUP-2
Lab ID: 1305221-08
Collection Date: 05/21/13
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	0.00246	0.000800	0.00200		mg/L	1	05/22/13 02:27 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 02:27 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 02:27 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 02:27 PM
Surr: a,a,a-Trifluorotoluene	99.8	0	87-113		%REC	1	05/22/13 02:27 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	248	30.0	100		mg/L	100	05/22/13 02:32 PM
Sulfate	3020	100	300		mg/L	100	05/22/13 02:32 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	4770	50.0	50.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: RINSATE-2
Lab ID: 1305221-09
Collection Date: 05/21/13 03:15 PM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 02:49 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 02:49 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 02:49 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 02:49 PM
Surr: a,a,a-Trifluorotoluene	104	0	87-113		%REC	1	05/22/13 02:49 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	58.9	3.00	10.0		mg/L	10	05/22/13 08:33 PM
Sulfate	1170	100	300		mg/L	100	05/22/13 08:48 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	1900	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: MW-18
Lab ID: 1305221-10
Collection Date: 05/20/13 02:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 03:10 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 03:10 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 03:10 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 03:10 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/22/13 03:10 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	734	30.0	100		mg/L	100	05/22/13 10:00 PM
Sulfate	1610	100	300		mg/L	100	05/22/13 10:00 PM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3660	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: EB-06
Lab ID: 1305221-11
Collection Date: 05/20/13 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 03:53 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 03:53 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 03:53 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 03:53 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/22/13 03:53 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	193	3.00	10.0		mg/L	10	05/22/13 04:11 PM
Sulfate	1760	100	300		mg/L	100	05/22/13 04:25 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3150	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: P-01
Lab ID: 1305221-12
Collection Date: 05/20/13 05:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 04:14 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 04:14 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 04:14 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 04:14 PM
Surr: a,a,a-Trifluorotoluene	97.8	0	87-113		%REC	1	05/22/13 04:14 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	158	3.00	10.0		mg/L	10	05/22/13 04:40 PM
Sulfate	2790	100	300		mg/L	100	05/22/13 05:24 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	4530	50.0	50.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: EB-05
Lab ID: 1305221-13
Collection Date: 05/20/13 03:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 05:16 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 05:16 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 05:16 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 05:16 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/22/13 05:16 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	208	3.00	10.0		mg/L	10	05/22/13 06:07 PM
Sulfate	1630	100	300		mg/L	100	05/22/13 06:36 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2970	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: EB-04
Lab ID: 1305221-14
Collection Date: 05/20/13 03:50 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 05:37 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 05:37 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 05:37 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 05:37 PM
Surr: a,a,a-Trifluorotoluene	106	0	87-113		%REC	1	05/22/13 05:37 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	481	30.0	100		mg/L	100	05/22/13 06:51 PM
Sulfate	1750	100	300		mg/L	100	05/22/13 06:51 PM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3600	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: EB-02
Lab ID: 1305221-15
Collection Date: 05/20/13 04:10 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 05:58 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 05:58 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 05:58 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 05:58 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/22/13 05:58 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	124	3.00	10.0		mg/L	10	05/22/13 07:06 PM
Sulfate	2140	100	300		mg/L	100	05/22/13 07:20 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3680	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: EB-07
Lab ID: 1305221-16
Collection Date: 05/20/13 04:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 06:19 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 06:19 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 06:19 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 06:19 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/22/13 06:19 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	140	3.00	10.0		mg/L	10	05/22/13 07:35 PM
Sulfate	1910	100	300		mg/L	100	05/22/13 07:49 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3510	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: DUP-1
Lab ID: 1305221-17
Collection Date: 05/20/13
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 06:40 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 06:40 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 06:40 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 06:40 PM
Surr: a,a,a-Trifluorotoluene	101	0	87-113		%REC	1	05/22/13 06:40 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	228	30.0	100		mg/L	100	05/22/13 08:04 PM
Sulfate	1650	100	300		mg/L	100	05/22/13 08:04 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2920	10.0	10.0		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 30-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305221

Client Sample ID: RINSATE-1
Lab ID: 1305221-18
Collection Date: 05/20/13 05:10 PM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	ND	0.000800	0.00200		mg/L	1	05/22/13 07:01 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/22/13 07:01 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/22/13 07:01 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/22/13 07:01 PM
Surr: a,a,a-Trifluorotoluene	104	0	87-113		%REC	1	05/22/13 07:01 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	ND	0.300	1.00		mg/L	1	05/22/13 09:17 PM
Sulfate	ND	1.00	3.00		mg/L	1	05/22/13 09:17 PM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	ND	200	200		mg/L	1	05/23/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Larson & Associates

Work Order: 1305221

Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_130522A

The QC data in batch 57578 applies to the following samples: 1305221-01A, 1305221-02A, 1305221-03A, 1305221-04A, 1305221-05A, 1305221-06A, 1305221-07A, 1305221-08A, 1305221-09A, 1305221-10A, 1305221-11A, 1305221-12A, 1305221-13A, 1305221-14A, 1305221-15A, 1305221-16A, 1305221-17A, 1305221-18A

Sample ID: **LCS-57578** Batch ID: **57578** TestNo: **SW8021B** Units: **mg/L**
 SampType: **LCS** Run ID: **GC8_130522A** Analysis Date: **5/22/2013 11:19:24 AM** Prep Date: **5/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0508	0.00200	0.0500	0	102	81	125			
Toluene	0.0524	0.00600	0.0500	0	105	84	123			
Ethylbenzene	0.0522	0.00600	0.0500	0	104	83	119			
Xylenes, Total	0.156	0.00900	0.150	0	104	81	117			
Surr: a,a,a-Trifluorotoluene	204		200.0		102	87	113			

Sample ID: **MB-57578** Batch ID: **57578** TestNo: **SW8021B** Units: **mg/L**
 SampType: **MBLK** Run ID: **GC8_130522A** Analysis Date: **5/22/2013 11:40:08 AM** Prep Date: **5/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.00200								
Toluene	ND	0.00600								
Ethylbenzene	ND	0.00600								
Xylenes, Total	ND	0.00900								
Surr: a,a,a-Trifluorotoluene	211		200.0		105	87	113			

Sample ID: **1305221-12AMS** Batch ID: **57578** TestNo: **SW8021B** Units: **mg/L**
 SampType: **MS** Run ID: **GC8_130522A** Analysis Date: **5/22/2013 4:34:55 PM** Prep Date: **5/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0521	0.00200	0.0500	0	104	81	125			
Toluene	0.0519	0.00600	0.0500	0	104	84	123			
Ethylbenzene	0.0519	0.00600	0.0500	0	104	83	119			
Xylenes, Total	0.152	0.00900	0.150	0	102	81	117			
Surr: a,a,a-Trifluorotoluene	198		200.0		99.2	87	113			

Sample ID: **1305221-12AMSD** Batch ID: **57578** TestNo: **SW8021B** Units: **mg/L**
 SampType: **MSD** Run ID: **GC8_130522A** Analysis Date: **5/22/2013 4:55:42 PM** Prep Date: **5/22/2013**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0526	0.00200	0.0500	0	105	81	125	1.02	20	
Toluene	0.0532	0.00600	0.0500	0	106	84	123	2.52	20	
Ethylbenzene	0.0517	0.00600	0.0500	0	103	83	119	0.263	20	
Xylenes, Total	0.152	0.00900	0.150	0	101	81	117	0.493	20	
Surr: a,a,a-Trifluorotoluene	203		200.0		102	87	113	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305221
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_130522A

Sample ID: ICV-130522	Batch ID: R66545	TestNo: SW8021B	Units: mg/L							
SampType: ICV	Run ID: GC8_130522A	Analysis Date: 5/22/2013 10:58:27 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0965	0.00200	0.100	0	96.5	80	120			
Toluene	0.0997	0.00600	0.100	0	99.7	80	120			
Ethylbenzene	0.101	0.00600	0.100	0	101	80	120			
Xylenes, Total	0.303	0.00900	0.300	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	199		200.0		99.3	87	113			

Sample ID: CCV1-130522	Batch ID: R66545	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130522A	Analysis Date: 5/22/2013 3:32:08 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0516	0.00200	0.0500	0	103	80	120			
Toluene	0.0524	0.00600	0.0500	0	105	80	120			
Ethylbenzene	0.0521	0.00600	0.0500	0	104	80	120			
Xylenes, Total	0.153	0.00900	0.150	0	102	80	120			
Surr: a,a,a-Trifluorotoluene	204		200.0		102	87	113			

Sample ID: CCV2-130522	Batch ID: R66545	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130522A	Analysis Date: 5/22/2013 7:22:10 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0539	0.00200	0.0500	0	108	80	120			
Toluene	0.0541	0.00600	0.0500	0	108	80	120			
Ethylbenzene	0.0537	0.00600	0.0500	0	107	80	120			
Xylenes, Total	0.158	0.00900	0.150	0	105	80	120			
Surr: a,a,a-Trifluorotoluene	205		200.0		102	87	113			

Sample ID: CCV3-130522	Batch ID: R66545	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130522A	Analysis Date: 5/22/2013 8:25:34 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0500	0.00200	0.0500	0	100	80	120			
Toluene	0.0507	0.00600	0.0500	0	101	80	120			
Ethylbenzene	0.0516	0.00600	0.0500	0	103	80	120			
Xylenes, Total	0.152	0.00900	0.150	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	198		200.0		98.9	87	113			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305221
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130522A

The QC data in batch 57579 applies to the following samples: 1305221-01B, 1305221-02B, 1305221-03B, 1305221-04B, 1305221-05B, 1305221-06B, 1305221-07B, 1305221-08B, 1305221-09B, 1305221-10B, 1305221-11B, 1305221-12B, 1305221-13B, 1305221-14B, 1305221-15B, 1305221-16B, 1305221-17B, 1305221-18B

Sample ID: LCS-57579	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC2_130522A	Analysis Date: 5/22/2013 9:20:44 AM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.7	3.00	30.00	0	102	90	110			

Sample ID: LCSD-57579	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC2_130522A	Analysis Date: 5/22/2013 9:35:19 AM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.1	1.00	10.00	0	101	90	110	0.172	20	
Sulfate	30.5	3.00	30.00	0	102	90	110	0.537	20	

Sample ID: MB-57579	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC2_130522A	Analysis Date: 5/22/2013 9:49:53 AM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID: 1305221-04B MS	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_130522A	Analysis Date: 5/22/2013 12:50:41 PM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2210	100	2000	326.2	94.2	90	110			
Sulfate	3690	300	2000	1750	97.1	90	110			

Sample ID: 1305221-04B MSD	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_130522A	Analysis Date: 5/22/2013 1:05:16 PM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2290	100	2000	326.2	98.2	90	110	3.54	20	
Sulfate	3780	300	2000	1750	101	90	110	2.27	20	

Sample ID: 1305221-12B MS	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_130522A	Analysis Date: 5/22/2013 4:54:52 PM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	334	10.0	200.0	157.7	88.1	90	110			S
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Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305221
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130522A

Sample ID: 1305221-12B MSD		Batch ID: 57579		TestNo: E300		Units: mg/L				
SampType: MSD		Run ID: IC2_130522A		Analysis Date: 5/22/2013 5:09:27 PM		Prep Date: 5/22/2013				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	337	10.0	200.0	157.7	89.7	90	110	0.921	20	

Sample ID: 1305221-12B MS	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_130522A	Analysis Date: 5/22/2013 5:38:36 PM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	4720	300	2000	2792	96.7	90	110			

Sample ID: 1305221-12B MSD	Batch ID: 57579	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_130522A	Analysis Date: 5/22/2013 5:53:10 PM	Prep Date: 5/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	4740	300	2000	2792	97.3	90	110	0.278	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305221
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130522A

Sample ID: ICV-130522	Batch ID: R66539	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_130522A	Analysis Date: 5/22/2013 8:59:25 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	25.9	1.00	25.00	0	104	90	110			
Sulfate	79.8	3.00	75.00	0	106	90	110			

Sample ID: CCV1-130522	Batch ID: R66539	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130522A	Analysis Date: 5/22/2013 12:29:12 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.99	1.00	10.00	0	99.9	90	110			
Sulfate	30.3	3.00	30.00	0	101	90	110			

Sample ID: CCV2-130522	Batch ID: R66539	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130522A	Analysis Date: 5/22/2013 3:31:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.96	1.00	10.00	0	99.6	90	110			
Sulfate	30.3	3.00	30.00	0	101	90	110			

Sample ID: CCV3-130522	Batch ID: R66539	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130522A	Analysis Date: 5/22/2013 6:22:19 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.92	1.00	10.00	0	99.2	90	110			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Sample ID: CCV4-130522	Batch ID: R66539	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130522A	Analysis Date: 5/22/2013 9:02:38 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.69	1.00	10.00	0	96.9	90	110			
Sulfate	29.7	3.00	30.00	0	99.0	90	110			

Sample ID: CCV5-130522	Batch ID: R66539	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130522A	Analysis Date: 5/22/2013 10:15:30 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.98	1.00	10.00	0	99.8	90	110			
Sulfate	30.2	3.00	30.00	0	101	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305221
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: WC_130523A

The QC data in batch 57600 applies to the following samples: 1305221-01B, 1305221-02B, 1305221-03B, 1305221-04B, 1305221-05B, 1305221-06B, 1305221-07B, 1305221-08B, 1305221-09B, 1305221-10B, 1305221-11B, 1305221-12B, 1305221-13B, 1305221-14B, 1305221-15B, 1305221-16B, 1305221-17B, 1305221-18B

Sample ID: LCS-57600	Batch ID: 57600	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_130523A	Analysis Date: 5/23/2013 5:20:00 PM	Prep Date: 5/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 731 10.0 745.6 0 98.0 90 113

Sample ID: MB-57600	Batch ID: 57600	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_130523A	Analysis Date: 5/23/2013 5:20:00 PM	Prep Date: 5/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera ND 10.0

Sample ID: 1305221-01B-DUP	Batch ID: 57600	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130523A	Analysis Date: 5/23/2013 5:20:00 PM	Prep Date: 5/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2910 10.0 0 2909 0.103 5

Sample ID: 1305221-03B-DUP	Batch ID: 57600	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130523A	Analysis Date: 5/23/2013 5:20:00 PM	Prep Date: 5/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3280 10.0 0 3293 0.396 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified



May 31, 2013

Coty Woolf
Larson & Associates
507 N. Marienfeld #200
Midland, TX 79701
TEL: (432) 687-0901
FAX (432) 687-0456
RE: Frontier ABO

Order No.: 1305234

Dear Coty Woolf:

DHL Analytical, Inc. received 11 sample(s) on 5/23/2013 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

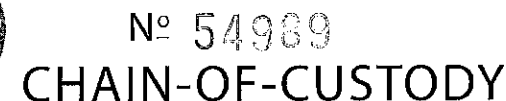
John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-13-10



Table of Contents

Miscellaneous Documents	3
CaseNarrative 1305234	6
WorkOrderSampleSummary 1305234	7
PrepDatesReport 1305234	8
AnalyticalDatesReport 1305234	10
Analytical Report 1305234	12
AnalyticalQCSummaryReport 1305234	23



DATE: 5-22-13 PAGE 1 OF 1
PO #: _____ DHL WORK ORDER #: 1395234
PROJECT LOCATION OR NAME: ARO
CLIENT PROJECT #: 6-0141 COLLECTOR: R. Brooks

Authorize 5% surcharge for TRRP Report? ☐ Yes ☐ No		S=SOIL P=PAINT W=WATER SL=SLUDGE A=AIR O=OTHER L=LIQUID SO=SOLID		PRESERVATION		# of Containers	ANALYSES												FIELD NOTES												
Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type		HCl	HNO ₃	H ₂ SO ₄ □ NaOH □	ICE	UNPRESERVED	BTEX □ MTBE □	TPH 1005 □	GRO 1006 □	VOC 8260 □	SVOC 8270 □	8081 PEST □	8270 O-P PEST □		8271 HERB □	METALS 8020 □	PCB 8270 □	PH □	HEX CHROM □	CHLORIDE □	TCLP-SVOC □	TCLP-METALS □	RCRA 800 □	TDS □	% MOISTURE □	CYANIDE □
MW-07	01	05-22	1225	W		4			X	X																					
MW-03-01	02		0945																												
MW-09	03		0850																												
MW-02	04		0730																												
MW-02-07	05		0800																												
MW-08	06		1015																												
MW-12	07		1330																												
MW-2-15	08		1100																												
DUP-3	09																														
RINSE-3	10		1500																												
Trip Blank	11					2																									
TOTAL																															

RELINQUISHED BY: (Signature) R.W. Brook

RELINQUISHED BY: (Signature) Edy

RELINQUISHED BY: (Signature) _____

DATE/TIME 5/22/13 1600

DATE/TIME 5/23/13

DATE/TIME _____

RECEIVED BY: (Signature) Edy

RECEIVED BY: (Signature) Bank

RECEIVED BY: (Signature) _____

TURN AROUND TIME

RUSH ☐ CALL FIRST

1 DAY ☐ CALL FIRST

2 DAY ☐

NORMAL ☒

OTHER ☐

LABORATORY USE ONLY:

RECEIVING TEMP: 24 THERM #: 57

CUSTODY SEALS: ☐ BROKEN ☒ CONTACT ☐ NOT USED

CARRIER BILL #: Edy

☒ APC DELIVERY

☐ HAND DELIVERED

☐ DHL DISPOSAL @ \$5.00 each ☐ Return

FedEx US Airbill
Express

FedEx Tracking Number 8692 2978 1620

1 From
Date 5/11/13
Sender's Name Larson - 1650 Phone 432 697-0301
Company Larson - 1550
Address
City Midland State TX ZIP 79701

2 Your Internal Billing Reference 16-0141

3 To
Recipient's Name
Company DML Antiviral
Recipient's Address 2300 Double Creek Dr.
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Address
To request a package be held at a specific FedEx location, print FedEx address here.
City Round Rock State TX ZIP 78664



8692 2978 1620

Form ID No. 0200 Recipient's Copy

4a Express Package Service
☐ FedEx Priority Overnight
Next business morning. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Standard Overnight
Next business afternoon. * Saturday Delivery NOT available.
☐ FedEx First Overnight
Earliest next business morning delivery to select locations. * Saturday Delivery NOT available.
☐ FedEx 2Day
Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Express Saver
Third business day. * Saturday Delivery NOT available.
* To most locations. Minimum charge: One-pound rate.

4b Express Freight Service
☐ FedEx 1Day Freight
Next business day. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx 2Day Freight
Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx 3Day Freight
Third business day. * Saturday Delivery NOT available.
* To most locations. ** Call for Confirmation.

5 Packaging
☐ FedEx Envelope*
☐ FedEx Pak*
Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
☐ FedEx Box
☐ FedEx Tube
☐ Other
* Declared value limit \$500.

6 Special Handling
Include FedEx address in Section 3.
☐ SATURDAY Delivery
Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
☐ HOLD Weekday at FedEx Location
Not available for FedEx First Overnight.
☐ HOLD Saturday at FedEx Location
Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods?
One box must be checked.
☐ No
☐ Yes
As per attached Shipper's Declaration.
☐ Yes
Shipper's Declaration not required.
☐ Dry Ice
Dry Ice, 9, UN 1845 x kg
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. ☐ Cargo Aircraft Only

7 Payment Bill to:
Enter FedEx Acct. No. or Credit Card No. below.
☐ Sender Acct. No. in Section 1 will be billed.
☐ Recipient
☐ Third Party
☐ Credit Card
☐ Obtain Recip. Acct. No.
☐ Cash/Check

Total Packages Total Weight Total Declared Value
\$.00
Our liability is limited to \$100 unless you declare a higher value. See back for details. Credit Card Auth.

8 Residential Delivery Signature Options
If you require a signature, check Direct or Indirect.
☐ No Signature Required
Package may be left without obtaining a signature for delivery.
☐ Direct Signature
Someone at recipient's address may sign for delivery. Fee applies.
☐ Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. Fee applies.
520
Rev. Date 10/05 Part #158281 © 1994-2006 FedEx PRINTED IN U.S.A. SRY

CUSTODY SEAL
DATE 5/12/13
SIGNATURE R.W. Brook

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

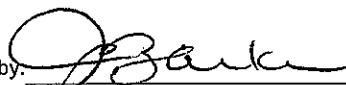
Sample Receipt Checklist

Client Name **Larson & Associates**

Date Received: **5/23/2013**

Work Order Number **1305234**

Received by **JB**

Checklist completed by:  **5/23/2013**
Signature Date

Reviewed by:  **5/23/2013**
Initials Date

Carrier name **FedEx 1day**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	2.4 °C
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CLIENT: Larson & Associates**Project:** Frontier ABO**Lab Order:** 1305234**CASE NARRATIVE**

Sample was analyzed using the methods outlined in the following references:

Method SW8021B - Volatile Organics by GC Analysis

Method E300 - Anions Analysis

Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 5/23/13. A total of 11 samples were received. The Time of Collection was Mountain Standard Time. The samples arrived in good condition and were properly packaged.

ANIONS ANALYSIS

For Anions analysis performed on 5/24/13 the matrix spike and matrix spike duplicate recoveries were out of control limits for Chloride and/or Sulfate. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

VOLATILE ORGANICS BY GC ANALYSIS

For Volatile Organics by GC analysis some samples were diluted prior to analysis due to the nature of the samples (concentration of target compounds).

CLIENT: Larson & Associates
Project: Frontier ABO
Lab Order: 1305234**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1305234-01	MW-07		05/22/13 12:25 PM	5/23/2013
1305234-02	MW-03-01		05/22/13 09:45 AM	5/23/2013
1305234-03	MW-09		05/22/13 08:50 AM	5/23/2013
1305234-04	MW-02		05/22/13 07:30 AM	5/23/2013
1305234-05	MW-02-07		05/22/13 08:00 AM	5/23/2013
1305234-06	MW-08		05/22/13 10:15 AM	5/23/2013
1305234-07	MW-12		05/22/13 01:30 PM	5/23/2013
1305234-08	MW-2-15		05/22/13 11:00 AM	5/23/2013
1305234-09	DUP-3		05/22/13	5/23/2013
1305234-10	RINSATE-3		05/22/13 03:00 PM	5/23/2013
1305234-11	TRIP BLANK		05/22/13	5/23/2013

Lab Order: 1305234
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1305234-01A	MW-07	05/22/13 12:25 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-01B	MW-07	05/22/13 12:25 PM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-07	05/22/13 12:25 PM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-07	05/22/13 12:25 PM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-02A	MW-03-01	05/22/13 09:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
	MW-03-01	05/22/13 09:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-02B	MW-03-01	05/22/13 09:45 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-03-01	05/22/13 09:45 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-03A	MW-09	05/22/13 08:50 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
	MW-09	05/22/13 08:50 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
	MW-09	05/22/13 08:50 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-03B	MW-09	05/22/13 08:50 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-09	05/22/13 08:50 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-04A	MW-02	05/22/13 07:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
	MW-02	05/22/13 07:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-04B	MW-02	05/22/13 07:30 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-02	05/22/13 07:30 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-02	05/22/13 07:30 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-05A	MW-02-07	05/22/13 08:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
	MW-02-07	05/22/13 08:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-05B	MW-02-07	05/22/13 08:00 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-02-07	05/22/13 08:00 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-02-07	05/22/13 08:00 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-06A	MW-08	05/22/13 10:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-06B	MW-08	05/22/13 10:15 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-08	05/22/13 10:15 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-08	05/22/13 10:15 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-07A	MW-12	05/22/13 01:30 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611

Lab Order: 1305234
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1305234-07B	MW-12	05/22/13 01:30 PM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-12	05/22/13 01:30 PM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-08A	MW-2-15	05/22/13 11:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-08B	MW-2-15	05/22/13 11:00 AM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	MW-2-15	05/22/13 11:00 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-09A	DUP-3	05/22/13	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
	DUP-3	05/22/13	Aqueous	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-09B	DUP-3	05/22/13	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	DUP-3	05/22/13	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-10A	RINSATE-3	05/22/13 03:00 PM	Equip Blank	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611
1305234-10B	RINSATE-3	05/22/13 03:00 PM	Aqueous	E300	Anion Preparation	05/24/13 08:07 AM	57619
	RINSATE-3	05/22/13 03:00 PM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305234-11A	TRIP BLANK	05/22/13	Trip Blank	SW5030C	Purge and Trap Water GC	05/23/13 12:14 PM	57611

Lab Order: 1305234
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1305234-01A	MW-07	Aqueous	SW8021B	Volatile Organics by GC	57611	100	05/23/13 02:46 PM	GC8_130523B
1305234-01B	MW-07	Aqueous	E300	Anions by IC method - Water	57619	10	05/24/13 09:57 AM	IC2_130524A
	MW-07	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 10:11 AM	IC2_130524A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-02A	MW-03-01	Aqueous	SW8021B	Volatile Organics by GC	57611	1	05/23/13 03:07 PM	GC8_130523B
	MW-03-01	Aqueous	SW8021B	Volatile Organics by GC	57611	200	05/23/13 09:05 PM	GC8_130523B
1305234-02B	MW-03-01	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 10:41 AM	IC2_130524A
	MW-03-01	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-03A	MW-09	Aqueous	SW8021B	Volatile Organics by GC	57611	10	05/23/13 08:44 PM	GC8_130523B
	MW-09	Aqueous	SW8021B	Volatile Organics by GC	57611	50	05/24/13 10:43 AM	GC8_130523B
	MW-09	Aqueous	SW8021B	Volatile Organics by GC	57611	1	05/23/13 03:27 PM	GC8_130523B
1305234-03B	MW-09	Aqueous	E300	Anions by IC method - Water	57619	10	05/24/13 11:11 AM	IC2_130524A
	MW-09	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-04A	MW-02	Aqueous	SW8021B	Volatile Organics by GC	57611	1	05/23/13 03:48 PM	GC8_130523B
	MW-02	Aqueous	SW8021B	Volatile Organics by GC	57611	1	05/23/13 08:01 PM	GC8_130523B
1305234-04B	MW-02	Aqueous	E300	Anions by IC method - Water	57619	10	05/24/13 11:26 AM	IC2_130524A
	MW-02	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 11:40 AM	IC2_130524A
	MW-02	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-05A	MW-02-07	Aqueous	SW8021B	Volatile Organics by GC	57611	20	05/23/13 08:22 PM	GC8_130523B
	MW-02-07	Aqueous	SW8021B	Volatile Organics by GC	57611	100	05/23/13 04:09 PM	GC8_130523B
1305234-05B	MW-02-07	Aqueous	E300	Anions by IC method - Water	57619	10	05/24/13 11:55 AM	IC2_130524A
	MW-02-07	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 12:10 PM	IC2_130524A
	MW-02-07	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-06A	MW-08	Aqueous	SW8021B	Volatile Organics by GC	57611	1	05/23/13 04:31 PM	GC8_130523B
1305234-06B	MW-08	Aqueous	E300	Anions by IC method - Water	57619	10	05/24/13 12:24 PM	IC2_130524A
	MW-08	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 12:39 PM	IC2_130524A
	MW-08	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-07A	MW-12	Aqueous	SW8021B	Volatile Organics by GC	57611	1	05/23/13 05:34 PM	GC8_130523B

Lab Order: 1305234
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1305234-07B	MW-12	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 01:22 PM	IC2_130524A
	MW-12	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-08A	MW-2-15	Aqueous	SW8021B	Volatile Organics by GC	57611	10	05/23/13 06:15 PM	GC8_130523B
1305234-08B	MW-2-15	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 01:54 PM	IC2_130524A
	MW-2-15	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-09A	DUP-3	Aqueous	SW8021B	Volatile Organics by GC	57611	10	05/23/13 06:37 PM	GC8_130523B
	DUP-3	Aqueous	SW8021B	Volatile Organics by GC	57611	50	05/24/13 10:22 AM	GC8_130523B
1305234-09B	DUP-3	Aqueous	E300	Anions by IC method - Water	57619	100	05/24/13 02:09 PM	IC2_130524A
	DUP-3	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-10A	RINSATE-3	Equip Blank	SW8021B	Volatile Organics by GC	57611	1	05/24/13 10:01 AM	GC8_130523B
1305234-10B	RINSATE-3	Aqueous	E300	Anions by IC method - Water	57619	1	05/24/13 02:39 PM	IC2_130524A
	RINSATE-3	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305234-11A	TRIP BLANK	Trip Blank	SW8021B	Volatile Organics by GC	57611	1	05/24/13 09:39 AM	GC8_130523B

DHL Analytical, Inc.

Date: 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-07
Lab ID: 1305234-01
Collection Date: 05/22/13 12:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B		Analyst: DEW			
Benzene	14.4	0.0800	0.200		mg/L	100	05/23/13 02:46 PM
Ethylbenzene	0.207	0.200	0.600	J	mg/L	100	05/23/13 02:46 PM
Toluene	2.26	0.200	0.600		mg/L	100	05/23/13 02:46 PM
Xylenes, Total	ND	0.300	0.900		mg/L	100	05/23/13 02:46 PM
Surr: a,a,a-Trifluorotoluene	94.1	0	87-113		%REC	100	05/23/13 02:46 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Chloride	66.9	3.00	10.0		mg/L	10	05/24/13 09:57 AM
Sulfate	2100	100	300		mg/L	100	05/24/13 10:11 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	3770	50.0	50.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-03-01
Lab ID: 1305234-02
Collection Date: 05/22/13 09:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	32.0	0.160	0.400		mg/L	200	05/23/13 09:05 PM
Ethylbenzene	0.745	0.400	1.20	J	mg/L	200	05/23/13 09:05 PM
Toluene	11.5	0.400	1.20		mg/L	200	05/23/13 09:05 PM
Xylenes, Total	0.841	0.600	1.80	J	mg/L	200	05/23/13 09:05 PM
Surr: a,a,a-Trifluorotoluene	97.7	0	87-113		%REC	200	05/23/13 09:05 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	2720	30.0	100		mg/L	100	05/24/13 10:41 AM
Sulfate	2900	100	300		mg/L	100	05/24/13 10:41 AM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	5550	50.0	50.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-09
Lab ID: 1305234-03
Collection Date: 05/22/13 08:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	4.40	0.0400	0.100		mg/L	50	05/24/13 10:43 AM
Ethylbenzene	0.0448	0.00200	0.00600		mg/L	1	05/23/13 03:27 PM
Toluene	0.0378	0.00200	0.00600		mg/L	1	05/23/13 03:27 PM
Xylenes, Total	0.216	0.00300	0.00900		mg/L	1	05/23/13 03:27 PM
Surr: a,a,a-Trifluorotoluene	98.8	0	87-113		%REC	50	05/24/13 10:43 AM
Surr: a,a,a-Trifluorotoluene	92.0	0	87-113		%REC	1	05/23/13 03:27 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	318	3.00	10.0		mg/L	10	05/24/13 11:11 AM
Sulfate	1270	10.0	30.0		mg/L	10	05/24/13 11:11 AM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3120	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-02
Lab ID: 1305234-04
Collection Date: 05/22/13 07:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/23/13 08:01 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/23/13 08:01 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/23/13 08:01 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/23/13 08:01 PM
Surr: a,a,a-Trifluorotoluene	103	0	87-113		%REC	1	05/23/13 08:01 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: JBC
Chloride	124	3.00	10.0		mg/L	10	05/24/13 11:26 AM
Sulfate	1670	100	300		mg/L	100	05/24/13 11:40 AM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2900	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-02-07
Lab ID: 1305234-05
Collection Date: 05/22/13 08:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B		Analyst: DEW			
Benzene	3.19	0.0160	0.0400		mg/L	20	05/23/13 08:22 PM
Ethylbenzene	0.0489	0.0400	0.120	J	mg/L	20	05/23/13 08:22 PM
Toluene	ND	0.0400	0.120		mg/L	20	05/23/13 08:22 PM
Xylenes, Total	0.0605	0.0600	0.180	J	mg/L	20	05/23/13 08:22 PM
Surr: a,a,a-Trifluorotoluene	103	0	87-113		%REC	20	05/23/13 08:22 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Chloride	158	3.00	10.0		mg/L	10	05/24/13 11:55 AM
Sulfate	1950	100	300		mg/L	100	05/24/13 12:10 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	3780	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-08
Lab ID: 1305234-06
Collection Date: 05/22/13 10:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: DEW
Benzene	0.00373	0.000800	0.00200		mg/L	1	05/23/13 04:31 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/23/13 04:31 PM
Toluene	0.00218	0.00200	0.00600	J	mg/L	1	05/23/13 04:31 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/23/13 04:31 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/23/13 04:31 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	278	3.00	10.0		mg/L	10	05/24/13 12:24 PM
Sulfate	1610	100	300		mg/L	100	05/24/13 12:39 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3180	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-12
Lab ID: 1305234-07
Collection Date: 05/22/13 01:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B				Analyst: DEW	
Benzene	0.0495	0.000800	0.00200		mg/L	1	05/23/13 05:34 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/23/13 05:34 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/23/13 05:34 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/23/13 05:34 PM
Surr: a,a,a-Trifluorotoluene	103	0	87-113		%REC	1	05/23/13 05:34 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: JBC	
Chloride	109	30.0	100		mg/L	100	05/24/13 01:22 PM
Sulfate	2230	100	300		mg/L	100	05/24/13 01:22 PM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3770	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: MW-2-15
Lab ID: 1305234-08
Collection Date: 05/22/13 11:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	0.973	0.00800	0.0200		mg/L	10	05/23/13 06:15 PM
Ethylbenzene	ND	0.0200	0.0600		mg/L	10	05/23/13 06:15 PM
Toluene	ND	0.0200	0.0600		mg/L	10	05/23/13 06:15 PM
Xylenes, Total	ND	0.0300	0.0900		mg/L	10	05/23/13 06:15 PM
Surr: a,a,a-Trifluorotoluene	101	0	87-113		%REC	10	05/23/13 06:15 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	835	30.0	100		mg/L	100	05/24/13 01:54 PM
Sulfate	1620	100	300		mg/L	100	05/24/13 01:54 PM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	4260	50.0	50.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: DUP-3
Lab ID: 1305234-09
Collection Date: 05/22/13
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	4.40	0.0400	0.100		mg/L	50	05/24/13 10:22 AM
Ethylbenzene	0.0289	0.0200	0.0600	J	mg/L	10	05/23/13 06:37 PM
Toluene	ND	0.0200	0.0600		mg/L	10	05/23/13 06:37 PM
Xylenes, Total	0.181	0.0300	0.0900		mg/L	10	05/23/13 06:37 PM
Surr: a,a,a-Trifluorotoluene	95.7	0	87-113		%REC	50	05/24/13 10:22 AM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	10	05/23/13 06:37 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	358	30.0	100		mg/L	100	05/24/13 02:09 PM
Sulfate	1270	100	300		mg/L	100	05/24/13 02:09 PM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3190	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: RINSATE-3
Lab ID: 1305234-10
Collection Date: 05/22/13 03:00 PM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: DEW
Benzene	0.000971	0.000800	0.00200	J	mg/L	1	05/24/13 10:01 AM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 10:01 AM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 10:01 AM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 10:01 AM
Surr: a,a,a-Trifluorotoluene	96.5	0	87-113		%REC	1	05/24/13 10:01 AM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	7.09	0.300	1.00		mg/L	1	05/24/13 02:39 PM
Sulfate	9.51	1.00	3.00		mg/L	1	05/24/13 02:39 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	65.0	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 31-May-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305234

Client Sample ID: TRIP BLANK
Lab ID: 1305234-11
Collection Date: 05/22/13
Matrix: TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	ND	0.000800	0.00200		mg/L	1	05/24/13 09:39 AM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 09:39 AM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 09:39 AM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 09:39 AM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	1	05/24/13 09:39 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Larson & Associates

Work Order: 1305234

Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_130523B

The QC data in batch 57611 applies to the following samples: 1305234-01A, 1305234-02A, 1305234-03A, 1305234-04A, 1305234-05A, 1305234-06A, 1305234-07A, 1305234-08A, 1305234-09A, 1305234-10A, 1305234-11A

Sample ID: LCS-57611	Batch ID: 57611	TestNo: SW8021B	Units: mg/L
SampType: LCS	Run ID: GC8_130523B	Analysis Date: 5/23/2013 1:01:06 PM	Prep Date: 5/23/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0466	0.00200	0.0500	0	93.2	81	125			
Toluene	0.0469	0.00600	0.0500	0	93.8	84	123			
Ethylbenzene	0.0487	0.00600	0.0500	0	97.3	83	119			
Xylenes, Total	0.145	0.00900	0.150	0	96.9	81	117			
Surr: a,a,a-Trifluorotoluene	198		200.0		99.0	87	113			

Sample ID: MB-57611	Batch ID: 57611	TestNo: SW8021B	Units: mg/L
SampType: MBLK	Run ID: GC8_130523B	Analysis Date: 5/23/2013 1:21:38 PM	Prep Date: 5/23/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.00200								
Toluene	ND	0.00600								
Ethylbenzene	ND	0.00600								
Xylenes, Total	ND	0.00900								
Surr: a,a,a-Trifluorotoluene	216		200.0		108	87	113			

Sample ID: 1305234-06AMS	Batch ID: 57611	TestNo: SW8021B	Units: mg/L
SampType: MS	Run ID: GC8_130523B	Analysis Date: 5/23/2013 4:52:30 PM	Prep Date: 5/23/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0544	0.00200	0.0500	0.00373	101	81	125			
Toluene	0.0539	0.00600	0.0500	0.00218	103	84	123			
Ethylbenzene	0.0525	0.00600	0.0500	0	105	83	119			
Xylenes, Total	0.150	0.00900	0.150	0	100	81	117			
Surr: a,a,a-Trifluorotoluene	199		200.0		99.5	87	113			

Sample ID: 1305234-06AMSD	Batch ID: 57611	TestNo: SW8021B	Units: mg/L
SampType: MSD	Run ID: GC8_130523B	Analysis Date: 5/23/2013 5:13:28 PM	Prep Date: 5/23/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0521	0.00200	0.0500	0.00373	96.8	81	125	4.22	20	
Toluene	0.0533	0.00600	0.0500	0.00218	102	84	123	0.987	20	
Ethylbenzene	0.0525	0.00600	0.0500	0	105	83	119	0.022	20	
Xylenes, Total	0.152	0.00900	0.150	0	102	81	117	1.57	20	
Surr: a,a,a-Trifluorotoluene	197		200.0		98.4	87	113	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305234
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_130523B

Sample ID: ICV-130523	Batch ID: R66600	TestNo: SW8021B	Units: mg/L							
SampType: ICV	Run ID: GC8_130523B	Analysis Date: 5/23/2013 10:32:04 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0953	0.00200	0.100	0	95.3	80	120			
Toluene	0.0989	0.00600	0.100	0	98.9	80	120			
Ethylbenzene	0.101	0.00600	0.100	0	101	80	120			
Xylenes, Total	0.297	0.00900	0.300	0	99.1	80	120			
Surr: a,a,a-Trifluorotoluene	200		200.0		99.9	87	113			

Sample ID: CCV2-130523	Batch ID: R66600	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130523B	Analysis Date: 5/23/2013 5:54:46 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0535	0.00200	0.0500	0	107	80	120			
Toluene	0.0540	0.00600	0.0500	0	108	80	120			
Ethylbenzene	0.0534	0.00600	0.0500	0	107	80	120			
Xylenes, Total	0.157	0.00900	0.150	0	104	80	120			
Surr: a,a,a-Trifluorotoluene	204		200.0		102	87	113			

Sample ID: CCV3-130523	Batch ID: R66600	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130523B	Analysis Date: 5/23/2013 7:40:34 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0529	0.00200	0.0500	0	106	80	120			
Toluene	0.0530	0.00600	0.0500	0	106	80	120			
Ethylbenzene	0.0527	0.00600	0.0500	0	105	80	120			
Xylenes, Total	0.155	0.00900	0.150	0	103	80	120			
Surr: a,a,a-Trifluorotoluene	203		200.0		101	87	113			

Sample ID: CCV4-130523	Batch ID: R66600	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130523B	Analysis Date: 5/23/2013 9:26:18 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0481	0.00200	0.0500	0	96.2	80	120			
Toluene	0.0477	0.00600	0.0500	0	95.4	80	120			
Ethylbenzene	0.0485	0.00600	0.0500	0	97.0	80	120			
Xylenes, Total	0.142	0.00900	0.150	0	94.5	80	120			
Surr: a,a,a-Trifluorotoluene	196		200.0		98.2	87	113			

Sample ID: ICV-130524		Batch ID: R66600		TestNo: SW8021B		Units: mg/L					
SampType: ICV		Run ID: GC8_130523B		Analysis Date: 5/24/2013 8:58:45 AM		Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0913	0.00200	0.100	0	91.3	80	120			
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Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305234
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_130523B

Sample ID: ICV-130524	Batch ID: R66600	TestNo: SW8021B	Units: mg/L							
SampType: ICV	Run ID: GC8_130523B	Analysis Date: 5/24/2013 8:58:45 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	0.0946	0.00600	0.100	0	94.6	80	120			
Ethylbenzene	0.0980	0.00600	0.100	0	98.0	80	120			
Xylenes, Total	0.290	0.00900	0.300	0	96.8	80	120			
Surr: a,a,a-Trifluorotoluene	191		200.0		95.6	87	113			

Sample ID: CCV1-130524	Batch ID: R66600	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130523B	Analysis Date: 5/24/2013 11:04:11 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0515	0.00200	0.0500	0	103	80	120			
Toluene	0.0527	0.00600	0.0500	0	105	80	120			
Ethylbenzene	0.0532	0.00600	0.0500	0	106	80	120			
Xylenes, Total	0.156	0.00900	0.150	0	104	80	120			
Surr: a,a,a-Trifluorotoluene	206		200.0		103	87	113			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305234
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130524A

The QC data in batch 57619 applies to the following samples: 1305234-01B, 1305234-02B, 1305234-03B, 1305234-04B, 1305234-05B, 1305234-06B, 1305234-07B, 1305234-08B, 1305234-09B, 1305234-10B

Sample ID: LCS-57619	Batch ID: 57619	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC2_130524A	Analysis Date: 5/24/2013 8:29:56 AM	Prep Date: 5/24/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.6	1.00	10.00	0	106	90	110			
Sulfate	31.0	3.00	30.00	0	103	90	110			

Sample ID: LCSD-57619	Batch ID: 57619	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC2_130524A	Analysis Date: 5/24/2013 8:44:31 AM	Prep Date: 5/24/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.6	1.00	10.00	0	106	90	110	0.223	20	
Sulfate	30.9	3.00	30.00	0	103	90	110	0.279	20	

Sample ID: MB-57619	Batch ID: 57619	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC2_130524A	Analysis Date: 5/24/2013 8:59:05 AM	Prep Date: 5/24/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID: 1305234-03B MS	Batch ID: 57619	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_130524A	Analysis Date: 5/24/2013 12:53:44 PM	Prep Date: 5/24/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	494	10.0	200.0	317.9	87.9	90	110			S
Sulfate	1480	30.0	200.0	1266	108	90	110			

Sample ID: 1305234-03B MSD	Batch ID: 57619	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_130524A	Analysis Date: 5/24/2013 1:08:19 PM	Prep Date: 5/24/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	496	10.0	200.0	317.9	89.0	90	110	0.432	20	S
Sulfate	1490	30.0	200.0	1266	111	90	110	0.284	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305234
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130524A

Sample ID: ICV-130524	Batch ID: R66602	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_130524A	Analysis Date: 5/24/2013 8:10:37 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	26.8	1.00	25.00	0	107	90	110			
Sulfate	80.2	3.00	75.00	0	107	90	110			

Sample ID: CCV1-130524	Batch ID: R66602	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130524A	Analysis Date: 5/24/2013 10:55:41 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.6	1.00	10.00	0	106	90	110			
Sulfate	32.4	3.00	30.00	0	108	90	110			

Sample ID: CCV2-130524	Batch ID: R66602	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130524A	Analysis Date: 5/24/2013 1:37:28 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.2	1.00	10.00	0	102	90	110			
Sulfate	30.7	3.00	30.00	0	102	90	110			

Sample ID: CCV3-130524	Batch ID: R66602	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130524A	Analysis Date: 5/24/2013 4:29:17 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110			
Sulfate	31.0	3.00	30.00	0	103	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305234
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: WC_130528C

The QC data in batch 57660 applies to the following samples: 1305234-01B, 1305234-02B, 1305234-03B, 1305234-04B, 1305234-05B, 1305234-06B, 1305234-07B, 1305234-08B, 1305234-09B, 1305234-10B

Sample ID: LCS-57660	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 730 10.0 745.6 0 97.9 90 113

Sample ID: MB-57660	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera ND 10.0

Sample ID: 1305234-01B-DUP	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3770 50.0 0 3770 0.133 5

Sample ID: 1305234-02B-DUP	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 5640 50.0 0 5545 1.61 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified



June 03, 2013

Coty Woolf
Larson & Associates
507 N. Marienfeld #200
Midland, TX 79701
TEL: (432) 687-0901
FAX (432) 687-0456
RE: Frontier ABO

Order No.: 1305248

Dear Coty Woolf:

DHL Analytical, Inc. received 14 sample(s) on 5/24/2013 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

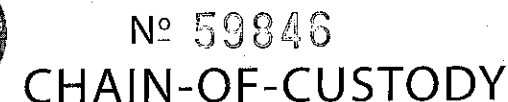
John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-13-10



Table of Contents

Miscellaneous Documents	3
CaseNarrative 1305248	9
WorkOrderSampleSummary 1305248	10
PrepDatesReport 1305248	11
AnalyticalDatesReport 1305248	13
Analytical Report 1305248	15
AnalyticalQCSummaryReport 1305248	29



CLIENT PROJECT #: 6-0141 COLLECTOR: K. Brooks

FIELD NOTES

[illegible]☐ HAND DELIVERED



WWW.LSO.COM
Questions? Call 800-800-8984



Airbill No. 43387787

43387787

1. To: Print Name (Person) _____ Phone (Important) _____ Company Name _____ Street Address (No P.O. Box or P.O. Box Zip Code Deliveries) _____ Suite / Floor _____ City _____ State _____ Zip _____		2. From: Print Name (Person) _____ Phone (Important) _____ Company Name _____ Street Address _____ Suite / Floor _____ City _____ State _____ Zip _____	
3. Service: ☐ By 10:30am Delivery (Noon to select zip codes.) ☐ By 8:30am Delivery (Most Cities) (Extra Charge, No Signature Obtained) ☒ Saturday Delivery - By 12 Noon (Extra Charge) ☐ Other _____ ☒ Deliver Without Delivery Signature (See Limits of Liability below) Release Signature _____ L _____ x W _____ x H _____		4. Package: Weight: _____ Your Company's Billing Reference Information _____ Ship Date: (mm/dd/yy) _____ 5. Payment: _____	
		FOR COURIER USE ONLY Courier Number _____ Pick-up Location _____ Date: _____ Time: _____ City Code: _____ AMS	

LIMIT OF LIABILITY: We are not responsible for claims in excess of \$100 for any reason unless you: 1) declare a greater value (not to exceed \$25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES AND RESIDENTIAL DELIVERIES. DELIVERY COMMITMENTS MAY VARY. ADDITIONAL FEES MAY APPLY.

CUSTODY SEAL

DATE

5-23-13

SIGNATURE

RW Brook

QEC

Quality Environmental Containers
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WWW.LSO.COM
Questions? Call 800-800-8984

Airbill No. 47376894



47376894

1. To: Print Name (Person) Phone (Important) 512-388-8722		2. From: Print Name (Person) Phone (Important) 432-687-0901	
Company Name DAL ANALYTICAL		Company Name LARSON & ASSOCIATES	
Street Address (No P.O. Box or P.O. Box Zip Code Deliveries) 2300 DOUBLE CREEK DRIVE		Street Address 607 NORTH MARINEFIELD	
Suite / Floor ROUND ROCK TEXAS 78664		Suite / Floor 000	
City State Zip ROUND ROCK TEXAS 78664		City State Zip MIDLAND TX 79701	
3. Service: Visit www.lso.com for availability of services to your destination and enjoy added features by creating your shipping label online. ☒ By 10:30 am Delivery Check availability at www.lso.com ☐ By 8:30 am Delivery Check availability at www.lso.com ☐ By 3:00 pm Delivery ☐ Ground (next day to most cities) ☐ Deliver Without Delivery Signature (See Limits of Liability below) L _____ x W _____ x H _____ * Release Signature		4. Package: Weight: 6.0 Your Company's Billing Reference Information: 6-0141 Ship Date: (mm/dd/yy) 05 23 13 5. Payment:	
		FOR COURIER USE ONLY Courier Number: 3202 ☐ Check here if LSO Supplies are used with Ground Service. Pick-up Location: 10 Date: 5-13-13 Time: 1830 City Code: AUS	

LIMIT OF LIABILITY: We are not responsible for claims in excess of \$100 for any reason unless you: 1) declare a greater value (not to exceed \$25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 08:30 AM DELIVERIES. PRIORITY SERVICE PACKAGING PROVIDED BY LSO IS NOT INTENDED FOR USE ON GROUND SERVICE. OVERSIZE RATES MAY APPLY. DELIVERY COMMITMENTS MAY VARY. ADDITIONAL FEES MAY APPLY.

CUSTODY SEAL
DATE: 5-23-13
SIGNATURE: R.W. Brock

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900



WWW.LSO.COM
Questions? Call 800-800-8984

Airbill No. 47376893



47376893

1. To: Print Name (Person) _____ Phone (Important) <u>512-318-8222</u>		2. From: Print Name (Person) _____ Phone (Important) <u>432-687-0901</u>	
Company Name <u>ANALYTICAL</u>		Company Name <u>LARSON & ASSOCIATES</u>	
Street Address (No P.O. Box or P.O. Box Zip Code Deliveries) <u>2300 DOUBLE CREEK DRIVE</u>		Street Address <u>607 NORTH MARTENFELD</u>	
Suite / Floor <u>ROUND ROCK TEXAS</u>		Suite / Floor <u>200</u>	
City <u>ROUND ROCK</u>		City <u>MIDLAND</u>	
State <u>TX</u>		State <u>TX</u>	
Zip <u>78664</u>		Zip <u>79701</u>	
3. Service: Visit www.lso.com for availability of services to your destination and enjoy added features by creating your shipping label online.			
☒ By 10:30 am Delivery Check availability at www.lso.com			
☐ By 8:30 am Delivery (Extra charge, no signature obtained) Check availability at www.lso.com			
☐ By 3:00 pm Delivery			
☐ Ground (next day to most cities) Assumed 10:30 a.m. service unless otherwise noted.			
☐ Saturday Delivery (Extra charge, not available on Ground) Check availability at www.lso.com			
☐ Other _____			
☐ Deliver Without Delivery Signature (See Limits of Liability below)			
Release Signature _____			
L _____ x W _____ x H _____			
4. Package: Weight: <u>60</u>			
Your Company's Billing Reference Information <u>6-0141</u>			
Ship Date: (mm/dd/yy) <u>05/23/13</u>			
5. Payment:			
FOR COURIER USE ONLY			
Courier Number <u>3202</u>			
☐ Check here if LSO Supplies are used with Ground Service.			
Pick-up Location <u>10</u>			
Date: <u>5/23/13</u>			
Time: <u>1830</u>			
City Code: <u>AMS</u>			

LIMIT OF LIABILITY: We are not responsible for claims in excess of \$100 for any reason unless you: 1) declare a greater value (not to exceed \$25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 08:30 AM DELIVERIES. PRIORITY SERVICE PACKAGING PROVIDED BY LSO IS NOT INTENDED FOR USE ON GROUND SERVICE. OVERSIZE RATES MAY APPLY. DELIVERY COMMITMENTS MAY VARY. ADDITIONAL FEES MAY APPLY.

CUSTODY SEAL
DATE 5-23-13
SIGNATURE R.W. Bouch

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Sample Receipt Checklist

Client Name Larson & Associates

Date Received: 5/24/2013

Work Order Number 1305248

Received by JB

Checklist completed by: [Signature] 5/24/2013

Signature

Date

Reviewed by [Signature] 5/24/2013

Initials

Date

Carrier name LoneStar

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	1.3 °C 20291.80
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CLIENT: Larson & Associates
Project: Frontier ABO
Lab Order: 1305248

CASE NARRATIVE

Sample was analyzed using the methods outlined in the following references:

Method SW8021B - Volatile Organics by GC
Method E300 - Anions Analysis
Method M2540C - Total Dissolved Solids Analysis

LOG IN

The samples were received and log-in performed on 5/24/2013. A total of 13 samples were received and analyzed. The samples arrived in good condition and were properly packaged. The samples were collected in Mountain Standard Time. Samples MW-02-02 and MW-02-05 were shipped at ambient temperature as per project specs due to elevated mineral content.

VOLATILES ORGANICS BY GC ANALYSIS

For Volatile Organics by GC Analysis, the recovery of surrogate a,a,a-Trifluorotoluene for Sample MW-02-05 was below the method control limits, due to matrix and confirmed by reanalysis. This is flagged accordingly in the QC Summary Report. No further corrective action was taken.

For Volatile Organics by GC Analysis, Samples MW-22, MW-02-18 and MW-03-03 were diluted due to concentration of target compounds.

CLIENT: Larson & Associates
Project: Frontier ABO
Lab Order: 1305248**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1305248-01	MW-02-12		05/23/13 08:00 AM	5/24/2013
1305248-02	MW-22		05/23/13 08:45 AM	5/24/2013
1305248-03	MW-02-18		05/23/13 09:05 AM	5/24/2013
1305248-04	MW-03-03		05/23/13 09:30 AM	5/24/2013
1305248-05	MW-02-04		05/23/13 10:00 AM	5/24/2013
1305248-06	MW-03		05/23/13 10:30 AM	5/24/2013
1305248-07	MW-02-03		05/23/13 11:10 AM	5/24/2013
1305248-08	MW-02-02		05/23/13 12:30 PM	5/24/2013
1305248-09	MW-02-05		05/23/13 12:00 PM	5/24/2013
1305248-10	MW-05		05/22/13 02:45 PM	5/24/2013
1305248-11	MW-02-16		05/22/13 02:00 PM	5/24/2013
1305248-12	RINSATE-4		05/23/13 01:00 PM	5/24/2013
1305248-13	DUP-4		05/23/13	5/24/2013
1305248-14	TRIP BLANK		05/23/13 04:00 PM	5/24/2013

Lab Order: 1305248
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1305248-01A	MW-02-12	05/23/13 08:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-01B	MW-02-12	05/23/13 08:00 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-12	05/23/13 08:00 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-02A	MW-22	05/23/13 08:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-02B	MW-22	05/23/13 08:45 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-22	05/23/13 08:45 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-22	05/23/13 08:45 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-03A	MW-02-18	05/23/13 09:05 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-03B	MW-02-18	05/23/13 09:05 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-18	05/23/13 09:05 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-18	05/23/13 09:05 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-04A	MW-03-03	05/23/13 09:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-04B	MW-03-03	05/23/13 09:30 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-03-03	05/23/13 09:30 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-05A	MW-02-04	05/23/13 10:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-05B	MW-02-04	05/23/13 10:00 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-04	05/23/13 10:00 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-04	05/23/13 10:00 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-06A	MW-03	05/23/13 10:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
	MW-03	05/23/13 10:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-06B	MW-03	05/23/13 10:30 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-03	05/23/13 10:30 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-07A	MW-02-03	05/23/13 11:10 AM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-07B	MW-02-03	05/23/13 11:10 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-03	05/23/13 11:10 AM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-03	05/23/13 11:10 AM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-08A	MW-02-02	05/23/13 12:30 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
	MW-02-02	05/23/13 12:30 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635

Lab Order: 1305248
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1305248-08B	MW-02-02	05/23/13 12:30 PM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-02	05/23/13 12:30 PM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-09A	MW-02-05	05/23/13 12:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
	MW-02-05	05/23/13 12:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-09B	MW-02-05	05/23/13 12:00 PM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-05	05/23/13 12:00 PM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-10A	MW-05	05/22/13 02:45 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-10B	MW-05	05/22/13 02:45 PM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-05	05/22/13 02:45 PM	Aqueous	M2540C	TDS Preparation	05/28/13 05:03 PM	57660
1305248-11A	MW-02-16	05/22/13 02:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-11B	MW-02-16	05/22/13 02:00 PM	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	MW-02-16	05/22/13 02:00 PM	Aqueous	M2540C	TDS Preparation	05/29/13 05:20 PM	57689
1305248-12A	RINSATE-4	05/23/13 01:00 PM	Equip Blank	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-12B	RINSATE-4	05/23/13 01:00 PM	Equip Blank	E300	Anion Preparation	05/29/13 07:52 AM	57683
	RINSATE-4	05/23/13 01:00 PM	Equip Blank	M2540C	TDS Preparation	05/29/13 05:20 PM	57689
1305248-13A	DUP-4	05/23/13	Aqueous	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635
1305248-13B	DUP-4	05/23/13	Aqueous	E300	Anion Preparation	05/29/13 07:52 AM	57683
	DUP-4	05/23/13	Aqueous	M2540C	TDS Preparation	05/29/13 05:20 PM	57689
1305248-14A	TRIP BLANK	05/23/13 04:00 PM	Trip Blank	SW5030C	Purge and Trap Water GC	05/24/13 10:50 AM	57635

Lab Order: 1305248
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1305248-01A	MW-02-12	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 12:50 PM	GC8_130524A
1305248-01B	MW-02-12	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 09:44 AM	IC2_130529A
	MW-02-12	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-02A	MW-22	Aqueous	SW8021B	Volatile Organics by GC	57635	200	05/24/13 01:11 PM	GC8_130524A
1305248-02B	MW-22	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 09:59 AM	IC2_130529A
	MW-22	Aqueous	E300	Anions by IC method - Water	57683	10	05/29/13 01:08 PM	IC2_130529A
	MW-22	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-03A	MW-02-18	Aqueous	SW8021B	Volatile Organics by GC	57635	200	05/24/13 01:31 PM	GC8_130524A
1305248-03B	MW-02-18	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 10:14 AM	IC2_130529A
	MW-02-18	Aqueous	E300	Anions by IC method - Water	57683	10	05/29/13 01:23 PM	IC2_130529A
	MW-02-18	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-04A	MW-03-03	Aqueous	SW8021B	Volatile Organics by GC	57635	20	05/24/13 01:53 PM	GC8_130524A
1305248-04B	MW-03-03	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 10:28 AM	IC2_130529A
	MW-03-03	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-05A	MW-02-04	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 02:14 PM	GC8_130524A
1305248-05B	MW-02-04	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 10:43 AM	IC2_130529A
	MW-02-04	Aqueous	E300	Anions by IC method - Water	57683	10	05/29/13 01:38 PM	IC2_130529A
	MW-02-04	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-06A	MW-03	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 02:34 PM	GC8_130524A
	MW-03	Aqueous	SW8021B	Volatile Organics by GC	57635	20	05/24/13 03:05 PM	GC8_130524A
1305248-06B	MW-03	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 10:57 AM	IC2_130529A
	MW-03	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-07A	MW-02-03	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 03:26 PM	GC8_130524A
1305248-07B	MW-02-03	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 11:26 AM	IC2_130529A
	MW-02-03	Aqueous	E300	Anions by IC method - Water	57683	10	05/29/13 02:07 PM	IC2_130529A
	MW-02-03	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-08A	MW-02-02	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 03:47 PM	GC8_130524A
	MW-02-02	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 04:28 PM	GC8_130524A

Lab Order: 1305248
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1305248-08B	MW-02-02	Aqueous	E300	Anions by IC method - Water	57683	10000	05/29/13 11:41 AM	IC2_130529A
	MW-02-02	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-09A	MW-02-05	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 04:08 PM	GC8_130524A
	MW-02-05	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 04:48 PM	GC8_130524A
1305248-09B	MW-02-05	Aqueous	E300	Anions by IC method - Water	57683	10000	05/29/13 11:56 AM	IC2_130529A
	MW-02-05	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-10A	MW-05	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 05:32 PM	GC8_130524A
1305248-10B	MW-05	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 12:10 PM	IC2_130529A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	57660	1	05/28/13 05:03 PM	WC_130528C
1305248-11A	MW-02-16	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 05:53 PM	GC8_130524A
1305248-11B	MW-02-16	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 12:25 PM	IC2_130529A
	MW-02-16	Aqueous	M2540C	Total Dissolved Solids	57689	1	05/29/13 05:20 PM	WC_130529A
1305248-12A	RINSATE-4	Equip Blank	SW8021B	Volatile Organics by GC	57635	1	05/24/13 06:14 PM	GC8_130524A
1305248-12B	RINSATE-4	Equip Blank	E300	Anions by IC method - Water	57683	1	05/29/13 12:39 PM	IC2_130529A
	RINSATE-4	Equip Blank	M2540C	Total Dissolved Solids	57689	1	05/29/13 05:20 PM	WC_130529A
1305248-13A	DUP-4	Aqueous	SW8021B	Volatile Organics by GC	57635	1	05/24/13 06:35 PM	GC8_130524A
1305248-13B	DUP-4	Aqueous	E300	Anions by IC method - Water	57683	100	05/29/13 12:54 PM	IC2_130529A
	DUP-4	Aqueous	M2540C	Total Dissolved Solids	57689	1	05/29/13 05:20 PM	WC_130529A
1305248-14A	TRIP BLANK	Trip Blank	SW8021B	Volatile Organics by GC	57635	1	05/24/13 06:56 PM	GC8_130524A

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-02-12
Lab ID: 1305248-01
Collection Date: 05/23/13 08:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: DEW
Benzene	0.00172	0.000800	0.00200	J	mg/L	1	05/24/13 12:50 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 12:50 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 12:50 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 12:50 PM
Surr: a,a,a-Trifluorotoluene	95.5	0	87-113		%REC	1	05/24/13 12:50 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: DEW
Chloride	117	30.0	100		mg/L	100	05/29/13 09:44 AM
Sulfate	1850	100	300		mg/L	100	05/29/13 09:44 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3370	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-22
Lab ID: 1305248-02
Collection Date: 05/23/13 08:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	10.2	0.160	0.400		mg/L	200	05/24/13 01:11 PM
Ethylbenzene	ND	0.400	1.20		mg/L	200	05/24/13 01:11 PM
Toluene	ND	0.400	1.20		mg/L	200	05/24/13 01:11 PM
Xylenes, Total	ND	0.600	1.80		mg/L	200	05/24/13 01:11 PM
Surr: a,a,a-Trifluorotoluene	103	0	87-113		%REC	200	05/24/13 01:11 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: DEW	
Chloride	76.3	3.00	10.0		mg/L	10	05/29/13 01:08 PM
Sulfate	1790	100	300		mg/L	100	05/29/13 09:59 AM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3450	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-02-18
Lab ID: 1305248-03
Collection Date: 05/23/13 09:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B		Analyst: DEW			
Benzene	19.2	0.160	0.400		mg/L	200	05/24/13 01:31 PM
Ethylbenzene	ND	0.400	1.20		mg/L	200	05/24/13 01:31 PM
Toluene	ND	0.400	1.20		mg/L	200	05/24/13 01:31 PM
Xylenes, Total	ND	0.600	1.80		mg/L	200	05/24/13 01:31 PM
Surr: a,a,a-Trifluorotoluene	102	0	87-113		%REC	200	05/24/13 01:31 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: DEW			
Chloride	85.1	3.00	10.0		mg/L	10	05/29/13 01:23 PM
Sulfate	1880	100	300		mg/L	100	05/29/13 10:14 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	3630	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-03-03
Lab ID: 1305248-04
Collection Date: 05/23/13 09:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	2.36	0.0160	0.0400		mg/L	20	05/24/13 01:53 PM
Ethylbenzene	ND	0.0400	0.120		mg/L	20	05/24/13 01:53 PM
Toluene	ND	0.0400	0.120		mg/L	20	05/24/13 01:53 PM
Xylenes, Total	0.0625	0.0600	0.180	J	mg/L	20	05/24/13 01:53 PM
Surr: a,a,a-Trifluorotoluene	98.4	0	87-113		%REC	20	05/24/13 01:53 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: DEW	
Chloride	212	30.0	100		mg/L	100	05/29/13 10:28 AM
Sulfate	1110	100	300		mg/L	100	05/29/13 10:28 AM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	2640	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-02-04
Lab ID: 1305248-05
Collection Date: 05/23/13 10:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: DEW
Benzene	0.00447	0.000800	0.00200		mg/L	1	05/24/13 02:14 PM
Ethylbenzene	0.00212	0.00200	0.00600	J	mg/L	1	05/24/13 02:14 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 02:14 PM
Xylenes, Total	0.00301	0.00300	0.00900	J	mg/L	1	05/24/13 02:14 PM
Surr: a,a,a-Trifluorotoluene	95.6	0	87-113		%REC	1	05/24/13 02:14 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: DEW
Chloride	81.2	3.00	10.0		mg/L	10	05/29/13 01:38 PM
Sulfate	1690	100	300		mg/L	100	05/29/13 10:43 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2920	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-03
Lab ID: 1305248-06
Collection Date: 05/23/13 10:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	1.30	0.0160	0.0400		mg/L	20	05/24/13 03:05 PM
Ethylbenzene	0.318	0.0400	0.120		mg/L	20	05/24/13 03:05 PM
Toluene	0.00501	0.00200	0.00600	J	mg/L	1	05/24/13 02:34 PM
Xylenes, Total	0.271	0.00300	0.00900		mg/L	1	05/24/13 02:34 PM
Surr: a,a,a-Trifluorotoluene	94.1	0	87-113		%REC	20	05/24/13 03:05 PM
Surr: a,a,a-Trifluorotoluene	98.5	0	87-113		%REC	1	05/24/13 02:34 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: DEW	
Chloride	140	30.0	100		mg/L	100	05/29/13 10:57 AM
Sulfate	1680	100	300		mg/L	100	05/29/13 10:57 AM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3190	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-02-03
Lab ID: 1305248-07
Collection Date: 05/23/13 11:10 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/24/13 03:26 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 03:26 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 03:26 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 03:26 PM
Surr: a,a,a-Trifluorotoluene	99.6	0	87-113		%REC	1	05/24/13 03:26 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: DEW
Chloride	68.2	3.00	10.0		mg/L	10	05/29/13 02:07 PM
Sulfate	1930	100	300		mg/L	100	05/29/13 11:26 AM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3120	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-02-02
Lab ID: 1305248-08
Collection Date: 05/23/13 12:30 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B		Analyst: DEW			
Benzene	0.000814	0.000800	0.00200	J	mg/L	1	05/24/13 04:28 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 04:28 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 04:28 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 04:28 PM
Surr: a,a,a-Trifluorotoluene	100	0	87-113		%REC	1	05/24/13 04:28 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: DEW			
Chloride	10800	3000	10000		mg/L	10000	05/29/13 11:41 AM
Sulfate	344000	10000	30000		mg/L	10000	05/29/13 11:41 AM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	507000	1000	1000		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-02-05
Lab ID: 1305248-09
Collection Date: 05/23/13 12:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B				Analyst: DEW	
Benzene	ND	0.000800	0.00200		mg/L	1	05/24/13 04:08 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 04:08 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 04:08 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 04:08 PM
Surr: a,a,a-Trifluorotoluene	72.5	0	87-113	S	%REC	1	05/24/13 04:08 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: DEW	
Chloride	5840	3000	10000	J	mg/L	10000	05/29/13 11:56 AM
Sulfate	355000	10000	30000		mg/L	10000	05/29/13 11:56 AM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	533000	1000	1000		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-05
Lab ID: 1305248-10
Collection Date: 05/22/13 02:45 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	0.00211	0.000800	0.00200		mg/L	1	05/24/13 05:32 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 05:32 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 05:32 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 05:32 PM
Surr: a,a,a-Trifluorotoluene	98.7	0	87-113		%REC	1	05/24/13 05:32 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: DEW
Chloride	153	30.0	100		mg/L	100	05/29/13 12:10 PM
Sulfate	1840	100	300		mg/L	100	05/29/13 12:10 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3440	10.0	10.0		mg/L	1	05/28/13 05:03 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: MW-02-16
Lab ID: 1305248-11
Collection Date: 05/22/13 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: DEW
Benzene	0.138	0.000800	0.00200		mg/L	1	05/24/13 05:53 PM
Ethylbenzene	0.00202	0.00200	0.00600	J	mg/L	1	05/24/13 05:53 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 05:53 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 05:53 PM
Surr: a,a,a-Trifluorotoluene	99.0	0	87-113		%REC	1	05/24/13 05:53 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: DEW
Chloride	202	30.0	100		mg/L	100	05/29/13 12:25 PM
Sulfate	1970	100	300		mg/L	100	05/29/13 12:25 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3850	10.0	10.0		mg/L	1	05/29/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: RINSATE-4
Lab ID: 1305248-12
Collection Date: 05/23/13 01:00 PM
Matrix: EQUIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B					Analyst: DEW
Benzene	ND	0.000800	0.00200		mg/L	1	05/24/13 06:14 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 06:14 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 06:14 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 06:14 PM
Surr: a,a,a-Trifluorotoluene	97.1	0	87-113		%REC	1	05/24/13 06:14 PM
ANIONS BY IC METHOD - WATER		E300					Analyst: DEW
Chloride	3.46	0.300	1.00		mg/L	1	05/29/13 12:39 PM
Sulfate	23.8	1.00	3.00		mg/L	1	05/29/13 12:39 PM
TOTAL DISSOLVED SOLIDS		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	94.0	10.0	10.0		mg/L	1	05/29/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: DUP-4
Lab ID: 1305248-13
Collection Date: 05/23/13
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: DEW
Benzene	0.00111	0.000800	0.00200	J	mg/L	1	05/24/13 06:35 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 06:35 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 06:35 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 06:35 PM
Surr: a,a,a-Trifluorotoluene	97.5	0	87-113		%REC	1	05/24/13 06:35 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: DEW
Chloride	122	30.0	100		mg/L	100	05/29/13 12:54 PM
Sulfate	1870	100	300		mg/L	100	05/29/13 12:54 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3390	10.0	10.0		mg/L	1	05/29/13 05:20 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.**Date:** 03-Jun-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1305248

Client Sample ID: TRIP BLANK
Lab ID: 1305248-14
Collection Date: 05/23/13 04:00 PM
Matrix: TRIP BLANK

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: DEW	
Benzene	ND	0.000800	0.00200		mg/L	1	05/24/13 06:56 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	05/24/13 06:56 PM
Toluene	ND	0.00200	0.00600		mg/L	1	05/24/13 06:56 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	05/24/13 06:56 PM
Surr: a,a,a-Trifluorotoluene	100	0	87-113		%REC	1	05/24/13 06:56 PM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Larson & Associates

Work Order: 1305248

Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_130524A

The QC data in batch 57635 applies to the following samples: 1305248-01A, 1305248-02A, 1305248-03A, 1305248-04A, 1305248-05A, 1305248-06A, 1305248-07A, 1305248-08A, 1305248-09A, 1305248-10A, 1305248-11A, 1305248-12A, 1305248-13A, 1305248-14A

Sample ID: LCS-57635	Batch ID: 57635	TestNo: SW8021B	Units: mg/L
SampType: LCS	Run ID: GC8_130524A	Analysis Date: 5/24/2013 12:09:02 PM	Prep Date: 5/24/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0475	0.00200	0.0500	0	95.0	81	125			
Toluene	0.0512	0.00600	0.0500	0	102	84	123			
Ethylbenzene	0.0527	0.00600	0.0500	0	105	83	119			
Xylenes, Total	0.154	0.00900	0.150	0	103	81	117			
Surr: a,a,a-Trifluorotoluene	197		200.0		98.3	87	113			

Sample ID: MB-57635	Batch ID: 57635	TestNo: SW8021B	Units: mg/L
SampType: MBLK	Run ID: GC8_130524A	Analysis Date: 5/24/2013 12:30:04 PM	Prep Date: 5/24/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.00200								
Toluene	ND	0.00600								
Ethylbenzene	ND	0.00600								
Xylenes, Total	ND	0.00900								
Surr: a,a,a-Trifluorotoluene	202		200.0		101	87	113			

Sample ID: 1305248-01AMS	Batch ID: 57635	TestNo: SW8021B	Units: mg/L
SampType: MS	Run ID: GC8_130524A	Analysis Date: 5/24/2013 7:17:07 PM	Prep Date: 5/24/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0501	0.00200	0.0500	0.00172	96.7	81	125			
Toluene	0.0504	0.00600	0.0500	0	101	84	123			
Ethylbenzene	0.0516	0.00600	0.0500	0	103	83	119			
Xylenes, Total	0.151	0.00900	0.150	0	101	81	117			
Surr: a,a,a-Trifluorotoluene	191		200.0		95.4	87	113			

Sample ID: 1305248-01AMSD	Batch ID: 57635	TestNo: SW8021B	Units: mg/L
SampType: MSD	Run ID: GC8_130524A	Analysis Date: 5/24/2013 7:37:41 PM	Prep Date: 5/24/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0509	0.00200	0.0500	0.00172	98.3	81	125	1.61	20	
Toluene	0.0515	0.00600	0.0500	0	103	84	123	2.15	20	
Ethylbenzene	0.0528	0.00600	0.0500	0	106	83	119	2.18	20	
Xylenes, Total	0.153	0.00900	0.150	0	102	81	117	1.57	20	
Surr: a,a,a-Trifluorotoluene	198		200.0		98.8	87	113	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305248
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_130524A

Sample ID: ICV-130524	Batch ID: R66605	TestNo: SW8021B	Units: mg/L							
SampType: ICV	Run ID: GC8_130524A	Analysis Date: 5/24/2013 11:47:42 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0944	0.00200	0.100	0	94.4	80	120			
Toluene	0.0970	0.00600	0.100	0	97.0	80	120			
Ethylbenzene	0.0996	0.00600	0.100	0	99.6	80	120			
Xylenes, Total	0.294	0.00900	0.300	0	98.0	80	120			
Surr: a,a,a-Trifluorotoluene	197		200.0		98.5	87	113			

Sample ID: CCV1-130524	Batch ID: R66605	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130524A	Analysis Date: 5/24/2013 5:11:18 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0476	0.00200	0.0500	0	95.1	80	120			
Toluene	0.0481	0.00600	0.0500	0	96.2	80	120			
Ethylbenzene	0.0496	0.00600	0.0500	0	99.3	80	120			
Xylenes, Total	0.146	0.00900	0.150	0	97.5	80	120			
Surr: a,a,a-Trifluorotoluene	193		200.0		96.6	87	113			

Sample ID: CCV2-130524	Batch ID: R66605	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_130524A	Analysis Date: 5/24/2013 7:58:14 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0509	0.00200	0.0500	0	102	80	120			
Toluene	0.0510	0.00600	0.0500	0	102	80	120			
Ethylbenzene	0.0517	0.00600	0.0500	0	103	80	120			
Xylenes, Total	0.153	0.00900	0.150	0	102	80	120			
Surr: a,a,a-Trifluorotoluene	199		200.0		99.3	87	113			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305248
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130529A

The QC data in batch 57683 applies to the following samples: 1305248-01B, 1305248-02B, 1305248-03B, 1305248-04B, 1305248-05B, 1305248-06B, 1305248-07B, 1305248-08B, 1305248-09B, 1305248-10B, 1305248-11B, 1305248-12B, 1305248-13B

Sample ID: LCS-57683	Batch ID: 57683	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC2_130529A	Analysis Date: 5/29/2013 8:46:34 AM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

Sample ID: LCSD-57683	Batch ID: 57683	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC2_130529A	Analysis Date: 5/29/2013 9:01:08 AM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110	0.562	20	
Sulfate	31.1	3.00	30.00	0	104	90	110	0.656	20	

Sample ID: MB-57683	Batch ID: 57683	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC2_130529A	Analysis Date: 5/29/2013 9:15:42 AM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID: 1305248-01BMS	Batch ID: 57683	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_130529A	Analysis Date: 5/29/2013 6:06:59 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2050	100	2000	117.3	96.8	90	110			
Sulfate	3790	300	2000	1852	97.0	90	110			

Sample ID: 1305248-01BMSD	Batch ID: 57683	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_130529A	Analysis Date: 5/29/2013 6:21:33 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2060	100	2000	117.3	97.1	90	110	0.350	20	
Sulfate	3800	300	2000	1852	97.3	90	110	0.135	20	

Sample ID: 1305248-06BMS	Batch ID: 57683	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_130529A	Analysis Date: 5/29/2013 6:36:08 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2090	100	2000	139.6	97.7	90	110			
Sulfate	3650	300	2000	1684	98.5	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305248
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130529A

Sample ID: 1305248-06BMSD	Batch ID: 57683	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_130529A	Analysis Date: 5/29/2013 6:50:42 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2070	100	2000	139.6	96.4	90	110	1.34	20	
Sulfate	3660	300	2000	1684	99.0	90	110	0.320	20	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305248
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_130529A

Sample ID: ICV-130529	Batch ID: R66654	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_130529A	Analysis Date: 5/29/2013 8:31:59 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	26.1	1.00	25.00	0	104	90	110			
Sulfate	80.3	3.00	75.00	0	107	90	110			

Sample ID: CCV1-130529	Batch ID: R66654	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130529A	Analysis Date: 5/29/2013 11:12:18 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

Sample ID: CCV2-130529	Batch ID: R66654	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130529A	Analysis Date: 5/29/2013 1:52:36 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.3	1.00	10.00	0	103	90	110			
Sulfate	31.3	3.00	30.00	0	104	90	110			

Sample ID: CCV3-130529	Batch ID: R66654	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_130529A	Analysis Date: 5/29/2013 7:05:16 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.5	1.00	10.00	0	105	90	110			
Sulfate	31.0	3.00	30.00	0	103	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305248
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: WC_130528C

The QC data in batch 57660 applies to the following samples: 1305248-01B, 1305248-02B, 1305248-03B, 1305248-04B, 1305248-05B, 1305248-06B, 1305248-07B, 1305248-08B, 1305248-09B, 1305248-10B

Sample ID: LCS-57660	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 730 10.0 745.6 0 97.9 90 113

Sample ID: MB-57660	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera ND 10.0

Sample ID: 1305234-01B-DUP	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3770 50.0 0 3770 0.133 5

Sample ID: 1305234-02B-DUP	Batch ID: 57660	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130528C	Analysis Date: 5/28/2013 5:03:00 PM	Prep Date: 5/28/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 5640 50.0 0 5545 1.61 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1305248
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: WC_130529A

The QC data in batch 57689 applies to the following samples: 1305248-11B, 1305248-12B, 1305248-13B

Sample ID: LCS-57689	Batch ID: 57689	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_130529A	Analysis Date: 5/29/2013 5:20:00 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	790	10.0	745.6	0	106	90	113
--	-----	------	-------	---	-----	----	-----

Sample ID: MB-57689	Batch ID: 57689	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_130529A	Analysis Date: 5/29/2013 5:20:00 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	ND	10.0
--	----	------

Sample ID: 1305262-01C-DUP	Batch ID: 57689	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130529A	Analysis Date: 5/29/2013 5:20:00 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	3040	10.0	0	3011				0.827	5
--	------	------	---	------	--	--	--	-------	---

Sample ID: 1305262-02C-DUP	Batch ID: 57689	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_130529A	Analysis Date: 5/29/2013 5:20:00 PM	Prep Date: 5/29/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	2200	10.0	0	2190				0.456	5
--	------	------	---	------	--	--	--	-------	---

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified



November 22, 2013

Coty Woolf
Larson & Associates
507 N. Marienfeld #200
Midland, TX 79701
TEL: (432) 687-0901
FAX (432) 687-0456
RE: Frontier ABO

Order No.: 1310178

Dear Coty Woolf:

DHL Analytical, Inc. received 29 sample(s) on 10/18/2013 for the analyses presented in the following report.

Revision Number 1 for Work Order 1310178: This revision consists of correcting the sample identification from MW-18 to MW-2-18, per the client's request. Please replace the original report with this revised report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-13-11



Table of Contents

Miscellaneous Documents	3
CaseNarrative 1310178	10
WorkOrderSampleSummary 1310178	12
PrepDatesReport 1310178	13
AnalyticalDatesReport 1310178	23
Analytical Report 1310178	33
AnalyticalQCSummaryReport 1310178	62

Larson &
ssociates, Inc.
Environmental Consultants

DATE: 10-17-17 PAGE 1 OF 3
PO #: _____ LAB WORK ORDER #: 1310178
PROJECT LOCATION OR NAME: Empire 960
LAI PROJECT #: 6-0141 COLLECTOR: LD

[illegible]

RELINQUISHED BY:(Signature) <i>[Signature]</i>	DATE/TIME 10-17-13	RECEIVED BY: (Signature) <i>[Signature]</i>
RELINQUISHED BY:(Signature) <i>[Signature]</i>	DATE/TIME (06-81-83)	RECEIVED BY: (Signature) <i>[Signature]</i>
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)

☐ HAND DELIVERED

Larson & Associates, Inc.
Environmental Consultants

Data Reported to:

DATE: 10-17-13 PAGE 2 OF 3
PO #: _____ LAB WORK ORDER #: 1310178
PROJECT LOCATION OR NAME: empire 960
LAI PROJECT #: 6-0141 COLLECTOR: LD

[illegible]

Larson & Associates, Inc.
Environmental Consultants

DATE: 10-17-13 PAGE 3 OF 3
PO #: _____ LAB WORK ORDER #: 1310178
PROJECT LOCATION OR NAME: Empire 660
LAI PROJECT #: G-0141 COLLECTOR: LD

[illegible]☐ HAND DELIVERED

FedEx *NEW Package*
 Express *US Airbill*

 FedEx Tracking Number **8034 5083 1258**

 Form ID No. **0200**

1 From **10/17/13**

Date **10/17/13**

Sender's Name **Lyle Davenport** Phone **8302796318**

Company **PERSON & ASS.**

Address **507 N Marionfield Ste 200**

City **Midland** State **TX** ZIP **79701**

2 Your Internal Billing Reference

3 To Recipient's Name **DHL Analytical** Phone **512 388 8222**

Company

Address **2300 Double Creek Dr**

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address **Round Rock** State **TX** ZIP **78664**

Use this line for the HOLD location address or for continuation of your shipping address.

☐ **HOLD Weekday**
 FedEx location address
 REQUIRED. NOT available for
 FedEx First Overnight.

☐ **HOLD Saturday**
 FedEx location address
 REQUIRED. Available ONLY for
 FedEx Priority Overnight and
 FedEx 2Day to select locations.

4 Express Package Service

*To most locations.

NOTE: Service order has changed. Please select carefully.

 Packages up to 150 lbs.
 For packages over 150 lbs., use the new
 FedEx Express Freight US Airbill.

Next Business Day

☒ **FedEx First Overnight**
 Earliest next business morning delivery to select
 locations. Friday shipments will be delivered on
 Monday unless SATURDAY Delivery is selected.

☐ **FedEx Priority Overnight**
 Next business morning. *Friday shipments will be
 delivered on Monday unless SATURDAY Delivery
 is selected.

☐ **FedEx Standard Overnight**
 Next business afternoon. *
 Saturday Delivery NOT available.

2 or 3 Business Days

☐ **FedEx 2Day A.M.**
 Second business morning. *
 Saturday Delivery NOT available.

☐ **FedEx 2Day**
 Second business afternoon. *Thursday shipments
 will be delivered on Monday unless SATURDAY
 Delivery is selected.

☐ **FedEx Express Saver**
 Third business day. *
 Saturday Delivery NOT available.

5 Packaging

*Declared value limit \$500.

☐ **FedEx Envelope***

☐ **FedEx Pak***

☐ **FedEx Box**

☐ **FedEx Tube**

☒ **Other**

6 Special Handling and Delivery Signature Options

☐ **SATURDAY Delivery**
 NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ **No Signature Required**
 Package may be left without
 obtaining a signature for delivery.

☐ **Direct Signature**
 Someone at recipient's address
 may sign for delivery. *Fee applies.*

☐ **Indirect Signature**
 If no one is available at recipient's
 address, someone at a neighboring
 address may sign for delivery. For
 residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

☒ **No** ☐ **Yes** ☐ **Yes**
 One box must be checked. As per attached Shipper's Declaration. Shipper's Declaration not required.

☐ **Dry Ice**
 Dry ice, 9, UN 1845 x kg

☐ **Cargo Aircraft Only**

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

 Obtain recip. Acct. No. ☐

☐ **Sender**
 Acct. No. in Section
 1 will be billed.

☐ **Recipient**

☐ **Third Party**

☐ **Credit Card**

☐ **Cash/Check**

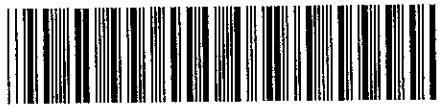
Total Packages

Total Weight

lbs.

Credit Card Auth.

*Our liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.

644


8034 5083 1258

FedEx
Tracking
Number

8726 7389 7247

Form
ID No.

0200

Recepient's Name

1 From

Date

Sender's
Name

Phone

Company

Address

Dept./Floor/Suite/Room

City

State

ZIP

2 Your Internal Billing Reference

3 To

Recipient's
Name

Phone

Company

Address

We cannot deliver to P.O. boxes or P.D. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City

State

ZIP

HOLD Weekday
FedEx location address
REQUIRED. NOT available for
FedEx First Overnight.☐HOLD Saturday
FedEx location address
REQUIRED. Available ONLY for
FedEx Priority Overnight and
FedEx 2Day to select locations.☐

8726 7389 7247

4a Express Package Service

* To most locations.

Packages up to 150 lbs.

☐ FedEx Priority Overnight

Next business morning. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight

Next business afternoon. * Saturday Delivery NOT available.

☒ FedEx First Overnight
Earliest next business morning delivery to select locations.*☐ FedEx 2Day

Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver

Third business day. * Saturday Delivery NOT available.

4b Express Freight Service

** To most locations.

Packages over 150 lbs.

☐ FedEx 1Day Freight

Next business day. ** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 1Day Freight Booking No.

☐ FedEx 2Day Freight

Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx 3Day Freight

Third business day. ** Saturday Delivery NOT available.

5 Packaging

* Declared value limit \$500.

☐ FedEx Envelope*☐ FedEx Pak*
Includes FedEx Small Pak and
FedEx Large Pak.☐ FedEx Box☐ FedEx Tube☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery

NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.

☐ No Signature Required

Package may be left without obtaining a signature for delivery.

☐ Direct Signature

Someone at recipient's address may sign for delivery. Fee applies.

☐ Indirect Signature
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

☒ No☐ Yes

As per attached Shipper's Declaration.

☒ Yes
Shipper's Declaration not required.☐ Dry Ice

Dry ice, 9, UN 1845

☐ Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip.
Acct. No. ☐☒ Sender
Acct. No. in Section 1 will be billed.☐ Recipient☐ Third Party☐ Credit Card☐ Cash/Check

Total Packages

Total Weight

Total Declared Value¹

Credit Card Auth.

1. Our liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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fedex.com 1800.GoFedEx 1800.463.3339

FedEx NEW Package
Express **US Airbill**

FedEx
Tracking
Number

8017 7768 3012

Form
ID No.

0200

1 From

Date

Sender's
Name

Company

Address

City

State

ZIP

2 Your Internal Billing Reference

3 To

Recipient's
Name

Company

Address

Address

City

State

ZIP

4 Express Package Service

* To most locations.

NOTE: Service order has changed. Please select carefully.

Next Business Day

☒ **FedEx First Overnight**
Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ **FedEx Priority Overnight**
Next business morning. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ **FedEx Standard Overnight**
Next business afternoon. * Saturday Delivery NOT available.

2 or 3 Business Days

☐ **FedEx 2Day A.M.**
Second business morning. * Saturday Delivery NOT available.

☐ **FedEx 2Day**
Second business afternoon. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ **FedEx Express Saver**
Third business day. * Saturday Delivery NOT available.

5 Packaging * Declared value limit \$500.

☐ **FedEx Envelope***

☐ **FedEx Pak***

☐ **FedEx Box**

☐ **FedEx Tube**

☒ **Other**

6 Special Handling and Delivery Signature Options

☐ **SATURDAY Delivery**
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ **No Signature Required**
Package may be left without obtaining a signature for delivery.

☐ **Direct Signature**
Someone at recipient's address may sign for delivery. *Fee applies.*

☐ **Indirect Signature**
If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *For residential deliveries only. Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ **No**

☐ **Yes**
As per attached Shipper's Declaration.

☐ **Yes**
Shipper's Declaration not required.

☐ **Dry Ice**
Dry ice, 5, UN 1845 x kg

☐ **Cargo Aircraft Only**

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

7 Payment Bill to:

Enter FedEx Acct. No. or Credit Card No. below.

Obtain recip.
Acct. No. ☐

☒ **Sender**
Acct. No. in Section 7 will be billed.

☐ **Recipient**

☐ **Third Party**

☐ **Credit Card**

☐ **Cash/Check**

Total Packages

Total Weight

lbs.

Credit Card Auth.

*Our liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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8017 7768 3012

Sample Receipt Checklist

Client Name Larson & Associates

Date Received: 10/18/2013

Work Order Number 1310178

Received by JB

Checklist completed by:

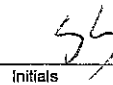


10/18/2013

Signature

Date

Reviewed by



10/18/2013

Initials

Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	2.5 °C, 1.0, 1.5
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH<2 acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☒ LOT #
	Adjusted? _____	Checked by _____	

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CLIENT: Larson & Associates
Project: Frontier ABO
Lab Order: 1310178

CASE NARRATIVE

Sample was analyzed using the methods outlined in the following references:

Method SW8021B - Volatile Organics by GC
Method SW6020A - Metals Analysis
Method SW7470A - Mercury Analysis
Method E300 - Anions Analysis
Method M2320B - Alkalinity Analysis
Method M2540C - Total Dissolved Solids Analysis

LOG IN

The samples were received and log-in performed on 10/18/2013. A total of 29 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

ANIONS ANALYSIS

For Anions Analysis, the recovery of Chloride for the Matrix Spike and Matrix Spike Duplicate (1310178-02, 13101778-17 MS/MSD) was slightly below the method control limits. Additionally, the recoveries of Chloride and Sulfate for the Matrix Spike and Matrix Spike Duplicate (1310178-25 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary Report. These anions were within method control limits in the associated LCS. The reference sample selected for the QC Sample was from this work order. No further corrective action was taken.

TOTAL DISSOLVED SOLIDS ANALYSIS

For Total Dissolved Solids Analysis, the RPD of the Sample Duplicate (1310178-29 Dup) was slightly above the method control limit. This is flagged accordingly in the QC Summary Report. The associated LCS was within method control limits. No further corrective action was taken.

METALS ANALYSIS

For Metals Analysis, performed on 10/21/2013, the recovery of Sodium for the Continuing Calibration Verification (CCV1-131021) was below the method control limits. This is flagged accordingly in the QC Summary Report. The associated samples are batch QC only, no field samples were affected. No further corrective action was taken.

For Metals Analysis, performed on 10/21/2013 and 10/28/2013, the recovery of Potassium for the Low

CLIENT: Larson & Associates
Project: Frontier ABO
Lab Order: 1310178

CASE NARRATIVE

Level Calibration Verification (LCVL1-131021, LCVL2-131028) was above the method control limits. These are flagged accordingly in the QC Summary Report. This analyte was detected in the associated samples at greater than 10x the amount detected in the LCVLs. No further corrective action was taken.

For Metals Analysis, performed on 10/21/2013 and 10/22/2013, the recoveries of several analytes for the Matrix Spike and Matrix Spike Duplicate (1310178-09, 1310178-24 MS/MSD) were outside of the method control limits. Additionally, the RPD of Selenium of the for the Matrix Spike Duplicate (1310178-24 MSD) was above the method control limit. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated LCS. No further corrective action was taken.

For Metals Analysis, the recovery of Silver for the Post Digestion Spike (1310178-09 PDS) was marginally below the method control limits. This is flagged accordingly in the QC Summary Report. This analyte is within method control limits in the associated Serial Dilution. No further corrective action was taken.

For Metals Analysis, the response factor of various Internal Standards for three samples, bracketing and Batch QC samples were outside of the specifications for method SW6020A, due to matrix interference. No further corrective action was taken.

CLIENT: Larson & Associates
Project: Frontier ABO
Lab Order: 1310178

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1310178-01	MW-17		10/15/13 01:05 PM	10/18/2013
1310178-02	MW-18		10/15/13 11:25 AM	10/18/2013
1310178-03	MW-16		10/15/13 02:00 PM	10/18/2013
1310178-04	EB-03		10/15/13 08:00 AM	10/18/2013
1310178-05	EB-02		10/15/13 09:50 AM	10/18/2013
1310178-06	EB-04		10/15/13 10:25 AM	10/18/2013
1310178-07	EB-05		10/15/13 10:55 AM	10/18/2013
1310178-08	MW-14		10/15/13 08:30 AM	10/18/2013
1310178-09	P-01		10/15/13 11:05 AM	10/18/2013
1310178-10	MW-15		10/15/13 12:15 PM	10/18/2013
1310178-11	P-02		10/16/13 08:57 AM	10/18/2013
1310178-12	MW-08		10/16/13 02:20 PM	10/18/2013
1310178-13	MW-2-16		10/16/13 01:41 PM	10/18/2013
1310178-14	MW-2-12		10/16/13 02:40 PM	10/18/2013
1310178-15	MW-23		10/16/13 08:35 AM	10/18/2013
1310178-16	MW-02-05		10/16/13 02:37 PM	10/18/2013
1310178-17	MW-2-15		10/16/13 02:05 PM	10/18/2013
1310178-18	MW-02-02		10/16/13 02:18 PM	10/18/2013
1310178-19	MW-02-04		10/16/13 02:47 PM	10/18/2013
1310178-20	MW-13		10/16/13 08:12 AM	10/18/2013
1310178-21	MW-12		10/16/13 10:15 AM	10/18/2013
1310178-22	MW-22		10/16/13 11:15 AM	10/18/2013
1310178-23	MW-05		10/16/13 01:25 PM	10/18/2013
1310178-24	MW-02-03		10/16/13 09:36 AM	10/18/2013
1310178-25	MW-03-03		10/16/13 11:45 AM	10/18/2013
1310178-26	MW-3		10/16/13 09:50 AM	10/18/2013
1310178-27	MW-2-18		10/16/13 10:55 AM	10/18/2013
1310178-28	MW-7		10/17/13 08:30 AM	10/18/2013
1310178-29	MW-2		10/17/13 08:45 AM	10/18/2013

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-01A	MW-17	10/15/13 01:05 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-01B	MW-17	10/15/13 01:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-17	10/15/13 01:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-17	10/15/13 01:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-17	10/15/13 01:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-01D	MW-17	10/15/13 01:05 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-17	10/15/13 01:05 PM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-17	10/15/13 01:05 PM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-17	10/15/13 01:05 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-02A	MW-18	10/15/13 11:25 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-02B	MW-18	10/15/13 11:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-18	10/15/13 11:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-18	10/15/13 11:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-18	10/15/13 11:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-02D	MW-18	10/15/13 11:25 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-18	10/15/13 11:25 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-18	10/15/13 11:25 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-03A	MW-16	10/15/13 02:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-03B	MW-16	10/15/13 02:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-16	10/15/13 02:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-16	10/15/13 02:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-16	10/15/13 02:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-03D	MW-16	10/15/13 02:00 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-16	10/15/13 02:00 PM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-16	10/15/13 02:00 PM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-16	10/15/13 02:00 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-04A	EB-03	10/15/13 08:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-04B	EB-03	10/15/13 08:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-04B	EB-03	10/15/13 08:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-03	10/15/13 08:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-04D	EB-03	10/15/13 08:00 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	EB-03	10/15/13 08:00 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	EB-03	10/15/13 08:00 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-05A	EB-02	10/15/13 09:50 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-05B	EB-02	10/15/13 09:50 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-02	10/15/13 09:50 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-02	10/15/13 09:50 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-02	10/15/13 09:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-05D	EB-02	10/15/13 09:50 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	EB-02	10/15/13 09:50 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	EB-02	10/15/13 09:50 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	EB-02	10/15/13 09:50 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-06A	EB-04	10/15/13 10:25 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-06B	EB-04	10/15/13 10:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-04	10/15/13 10:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-04	10/15/13 10:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-04	10/15/13 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-06D	EB-04	10/15/13 10:25 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	EB-04	10/15/13 10:25 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	EB-04	10/15/13 10:25 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	EB-04	10/15/13 10:25 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-07A	EB-05	10/15/13 10:55 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-07B	EB-05	10/15/13 10:55 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-05	10/15/13 10:55 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-05	10/15/13 10:55 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	EB-05	10/15/13 10:55 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-07D	EB-05	10/15/13 10:55 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	EB-05	10/15/13 10:55 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	EB-05	10/15/13 10:55 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	EB-05	10/15/13 10:55 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-08A	MW-14	10/15/13 08:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-08B	MW-14	10/15/13 08:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-14	10/15/13 08:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-14	10/15/13 08:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-14	10/15/13 08:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-08D	MW-14	10/15/13 08:30 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-14	10/15/13 08:30 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-14	10/15/13 08:30 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-14	10/15/13 08:30 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-09A	P-01	10/15/13 11:05 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-09B	P-01	10/15/13 11:05 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	P-01	10/15/13 11:05 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	P-01	10/15/13 11:05 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
	P-01	10/15/13 11:05 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
1310178-09D	P-01	10/15/13 11:05 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	P-01	10/15/13 11:05 AM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	P-01	10/15/13 11:05 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
	P-01	10/15/13 11:05 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-10A	MW-15	10/15/13 12:15 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-10B	MW-15	10/15/13 12:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-15	10/15/13 12:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-15	10/15/13 12:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-15	10/15/13 12:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-10D	MW-15	10/15/13 12:15 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-15	10/15/13 12:15 PM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-10D	MW-15	10/15/13 12:15 PM	Aqueous	E300	Anion Preparation	10/18/13 10:30 AM	60032
	MW-15	10/15/13 12:15 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-11A	P-02	10/16/13 08:57 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-11B	P-02	10/16/13 08:57 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	P-02	10/16/13 08:57 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	P-02	10/16/13 08:57 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	P-02	10/16/13 08:57 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-11D	P-02	10/16/13 08:57 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	P-02	10/16/13 08:57 AM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	P-02	10/16/13 08:57 AM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	P-02	10/16/13 08:57 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-12A	MW-08	10/16/13 02:20 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-12B	MW-08	10/16/13 02:20 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-08	10/16/13 02:20 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-08	10/16/13 02:20 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-08	10/16/13 02:20 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-12D	MW-08	10/16/13 02:20 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-08	10/16/13 02:20 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-08	10/16/13 02:20 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-08	10/16/13 02:20 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-13A	MW-2-16	10/16/13 01:41 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
	MW-2-16	10/16/13 01:41 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-13B	MW-2-16	10/16/13 01:41 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-2-16	10/16/13 01:41 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-2-16	10/16/13 01:41 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-2-16	10/16/13 01:41 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-13D	MW-2-16	10/16/13 01:41 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-2-16	10/16/13 01:41 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-13D	MW-2-16	10/16/13 01:41 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-2-16	10/16/13 01:41 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-14A	MW-2-12	10/16/13 02:40 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-14B	MW-2-12	10/16/13 02:40 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-2-12	10/16/13 02:40 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-2-12	10/16/13 02:40 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-2-12	10/16/13 02:40 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-14D	MW-2-12	10/16/13 02:40 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-2-12	10/16/13 02:40 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-2-12	10/16/13 02:40 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-2-12	10/16/13 02:40 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-15A	MW-23	10/16/13 08:35 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-15B	MW-23	10/16/13 08:35 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-23	10/16/13 08:35 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-23	10/16/13 08:35 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-23	10/16/13 08:35 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-15D	MW-23	10/16/13 08:35 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-23	10/16/13 08:35 AM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-23	10/16/13 08:35 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-16A	MW-02-05	10/16/13 02:37 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
	MW-02-05	10/16/13 02:37 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-16B	MW-02-05	10/16/13 02:37 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-02-05	10/16/13 02:37 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-02-05	10/16/13 02:37 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-02-05	10/16/13 02:37 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:47 AM	60044
	MW-02-05	10/16/13 02:37 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 08:15 AM	60066
1310178-16D	MW-02-05	10/16/13 02:37 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-02-05	10/16/13 02:37 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-16D	MW-02-05	10/16/13 02:37 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-02-05	10/16/13 02:37 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-02-05	10/16/13 02:37 PM	Aqueous	M2540C	TDS Preparation	10/23/13 05:35 PM	60092
1310178-17A	MW-2-15	10/16/13 02:05 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-17B	MW-2-15	10/16/13 02:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-2-15	10/16/13 02:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-2-15	10/16/13 02:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-17D	MW-2-15	10/16/13 02:05 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-2-15	10/16/13 02:05 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-2-15	10/16/13 02:05 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-18A	MW-02-02	10/16/13 02:18 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
	MW-02-02	10/16/13 02:18 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-18B	MW-02-02	10/16/13 02:18 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-02-02	10/16/13 02:18 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-02-02	10/16/13 02:18 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-02-02	10/16/13 02:18 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-18D	MW-02-02	10/16/13 02:18 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-02-02	10/16/13 02:18 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-02-02	10/16/13 02:18 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-02-02	10/16/13 02:18 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-02-02	10/16/13 02:18 PM	Aqueous	M2540C	TDS Preparation	10/23/13 05:35 PM	60092
1310178-19A	MW-02-04	10/16/13 02:47 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-19B	MW-02-04	10/16/13 02:47 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-02-04	10/16/13 02:47 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-02-04	10/16/13 02:47 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-19D	MW-02-04	10/16/13 02:47 PM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-02-04	10/16/13 02:47 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-02-04	10/16/13 02:47 PM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-19D	MW-02-04	10/16/13 02:47 PM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-20A	MW-13	10/16/13 08:12 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
	MW-13	10/16/13 08:12 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/22/13 08:37 AM	60068
1310178-20B	MW-13	10/16/13 08:12 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-13	10/16/13 08:12 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-13	10/16/13 08:12 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-20D	MW-13	10/16/13 08:12 AM	Aqueous	M2320 B	Alkalinity Preparation	10/21/13 10:00 AM	60049
	MW-13	10/16/13 08:12 AM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-13	10/16/13 08:12 AM	Aqueous	E300	Anion Preparation	10/21/13 08:33 AM	60037
	MW-13	10/16/13 08:12 AM	Aqueous	M2540C	TDS Preparation	10/21/13 05:00 PM	60041
1310178-21A	MW-12	10/16/13 10:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
	MW-12	10/16/13 10:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-21B	MW-12	10/16/13 10:15 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-12	10/16/13 10:15 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-12	10/16/13 10:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-21D	MW-12	10/16/13 10:15 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-12	10/16/13 10:15 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-12	10/16/13 10:15 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-12	10/16/13 10:15 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-22A	MW-22	10/16/13 11:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-22B	MW-22	10/16/13 11:15 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-22	10/16/13 11:15 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-22	10/16/13 11:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-22D	MW-22	10/16/13 11:15 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-22	10/16/13 11:15 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-22	10/16/13 11:15 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-22	10/16/13 11:15 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-23A	MW-05	10/16/13 01:25 PM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-23B	MW-05	10/16/13 01:25 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-05	10/16/13 01:25 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-05	10/16/13 01:25 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-23D	MW-05	10/16/13 01:25 PM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-05	10/16/13 01:25 PM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-05	10/16/13 01:25 PM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-05	10/16/13 01:25 PM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-24A	MW-02-03	10/16/13 09:36 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-24B	MW-02-03	10/16/13 09:36 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-02-03	10/16/13 09:36 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-02-03	10/16/13 09:36 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-24D	MW-02-03	10/16/13 09:36 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-02-03	10/16/13 09:36 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-02-03	10/16/13 09:36 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-02-03	10/16/13 09:36 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-25A	MW-03-03	10/16/13 11:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-25B	MW-03-03	10/16/13 11:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-03-03	10/16/13 11:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-03-03	10/16/13 11:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-25D	MW-03-03	10/16/13 11:45 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-03-03	10/16/13 11:45 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-03-03	10/16/13 11:45 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-26A	MW-3	10/16/13 09:50 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
	MW-3	10/16/13 09:50 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-26B	MW-3	10/16/13 09:50 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-3	10/16/13 09:50 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-3	10/16/13 09:50 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-26D	MW-3	10/16/13 09:50 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-26D	MW-3	10/16/13 09:50 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-3	10/16/13 09:50 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-3	10/16/13 09:50 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-3	10/16/13 09:50 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-27A	MW-2-18	10/16/13 10:55 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
	MW-2-18	10/16/13 10:55 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
	MW-2-18	10/16/13 10:55 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-27B	MW-2-18	10/16/13 10:55 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-2-18	10/16/13 10:55 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-2-18	10/16/13 10:55 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-2-18	10/16/13 10:55 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-27D	MW-2-18	10/16/13 10:55 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-2-18	10/16/13 10:55 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-2-18	10/16/13 10:55 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-2-18	10/16/13 10:55 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-2-18	10/16/13 10:55 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-28A	MW-7	10/17/13 08:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-28B	MW-7	10/17/13 08:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-7	10/17/13 08:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-7	10/17/13 08:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-7	10/17/13 08:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-7	10/17/13 08:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-28D	MW-7	10/17/13 08:30 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-7	10/17/13 08:30 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-7	10/17/13 08:30 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-7	10/17/13 08:30 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060
1310178-29A	MW-2	10/17/13 08:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	10/23/13 09:37 AM	60096
1310178-29B	MW-2	10/17/13 08:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1310178-29B	MW-2	10/17/13 08:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	10/21/13 09:48 AM	60045
	MW-2	10/17/13 08:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	10/22/13 10:13 AM	60075
1310178-29D	MW-2	10/17/13 08:45 AM	Aqueous	M2320 B	Alkalinity Preparation	10/22/13 10:30 AM	60079
	MW-2	10/17/13 08:45 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-2	10/17/13 08:45 AM	Aqueous	E300	Anion Preparation	10/21/13 08:34 AM	60038
	MW-2	10/17/13 08:45 AM	Aqueous	M2540C	TDS Preparation	10/22/13 05:25 PM	60060

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-01A	MW-17	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 11:34 AM	GC8_131022A
1310178-01B	MW-17	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 01:12 PM	ICP-MS2_131025A
	MW-17	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 01:18 PM	ICP-MS3_131021A
	MW-17	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 02:12 PM	ICP-MS3_131022A
	MW-17	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:02 PM	CETAC_HG_131023B
1310178-01D	MW-17	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 10:16 AM	TITRATOR_131021A
	MW-17	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 11:12 AM	IC_131018A
	MW-17	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 10:57 AM	IC_131018A
	MW-17	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-02A	MW-18	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 01:15 PM	GC8_131022A
1310178-02B	MW-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 01:18 PM	ICP-MS2_131025A
	MW-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 01:23 PM	ICP-MS3_131021A
	MW-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 02:18 PM	ICP-MS3_131022A
	MW-18	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:04 PM	CETAC_HG_131023B
1310178-02D	MW-18	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 10:28 AM	TITRATOR_131021A
	MW-18	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 11:26 AM	IC_131018A
	MW-18	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-03A	MW-16	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 10:14 AM	GC8_131022A
1310178-03B	MW-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 01:24 PM	ICP-MS2_131025A
	MW-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 01:30 PM	ICP-MS3_131021A
	MW-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 02:24 PM	ICP-MS3_131022A
	MW-16	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 01:40 PM	CETAC_HG_131023B
1310178-03D	MW-16	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 10:32 AM	TITRATOR_131021A
	MW-16	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 11:41 AM	IC_131018A
	MW-16	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 01:05 PM	IC_131018A
	MW-16	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-04A	EB-03	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 11:55 AM	GC8_131022A
1310178-04B	EB-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 01:36 PM	ICP-MS3_131021A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-04B	EB-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	50	10/22/13 02:30 PM	ICP-MS3_131022A
	EB-03	Aqueous	SW7470A	Mercury Filtered (0.45μ)	60066	1	10/23/13 02:06 PM	CETAC_HG_131023B
1310178-04D	EB-03	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 10:46 AM	TITRATOR_131021A
	EB-03	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 11:56 AM	IC_131018A
	EB-03	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-05A	EB-02	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 02:39 PM	GC8_131022A
1310178-05B	EB-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/25/13 01:30 PM	ICP-MS2_131025A
	EB-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/21/13 01:42 PM	ICP-MS3_131021A
	EB-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	50	10/22/13 02:36 PM	ICP-MS3_131022A
	EB-02	Aqueous	SW7470A	Mercury Filtered (0.45μ)	60066	1	10/23/13 02:13 PM	CETAC_HG_131023B
1310178-05D	EB-02	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 10:54 AM	TITRATOR_131021A
	EB-02	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 01:20 PM	IC_131018A
	EB-02	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 01:34 PM	IC_131018A
	EB-02	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-06A	EB-04	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 02:59 PM	GC8_131022A
1310178-06B	EB-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/25/13 01:36 PM	ICP-MS2_131025A
	EB-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/21/13 01:48 PM	ICP-MS3_131021A
	EB-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	50	10/22/13 02:42 PM	ICP-MS3_131022A
	EB-04	Aqueous	SW7470A	Mercury Filtered (0.45μ)	60066	1	10/23/13 02:15 PM	CETAC_HG_131023B
1310178-06D	EB-04	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 10:59 AM	TITRATOR_131021A
	EB-04	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 02:03 PM	IC_131018A
	EB-04	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 01:49 PM	IC_131018A
	EB-04	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-07A	EB-05	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 03:20 PM	GC8_131022A
1310178-07B	EB-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/25/13 01:42 PM	ICP-MS2_131025A
	EB-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/21/13 01:54 PM	ICP-MS3_131021A
	EB-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	50	10/22/13 02:48 PM	ICP-MS3_131022A
	EB-05	Aqueous	SW7470A	Mercury Filtered (0.45μ)	60066	1	10/23/13 02:17 PM	CETAC_HG_131023B

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-07D	EB-05	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 11:07 AM	TITRATOR_131021A
	EB-05	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 02:33 PM	IC_131018A
	EB-05	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 02:18 PM	IC_131018A
	EB-05	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-08A	MW-14	Aqueous	SW8021B	Volatile Organics by GC	60068	5	10/22/13 10:34 AM	GC8_131022A
1310178-08B	MW-14	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	50	10/22/13 02:54 PM	ICP-MS3_131022A
	MW-14	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/25/13 01:47 PM	ICP-MS2_131025A
	MW-14	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/21/13 02:00 PM	ICP-MS3_131021A
	MW-14	Aqueous	SW7470A	Mercury Filtered (0.45μ)	60066	1	10/23/13 02:19 PM	CETAC_HG_131023B
1310178-08D	MW-14	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 11:20 AM	TITRATOR_131021A
	MW-14	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 02:47 PM	IC_131018A
	MW-14	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 03:04 PM	IC_131018A
	MW-14	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-09A	P-01	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 03:40 PM	GC8_131022A
1310178-09B	P-01	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	50	10/22/13 02:00 PM	ICP-MS3_131022A
	P-01	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/21/13 01:05 PM	ICP-MS3_131021A
	P-01	Aqueous	SW7470A	Mercury Filtered (0.45μ)	60066	1	10/23/13 02:21 PM	CETAC_HG_131023B
1310178-09D	P-01	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 11:29 AM	TITRATOR_131021A
	P-01	Aqueous	E300	Anions by IC method - Water	60032	10	10/18/13 03:19 PM	IC_131018A
	P-01	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 03:50 PM	IC_131018A
	P-01	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-10A	MW-15	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 04:00 PM	GC8_131022A
1310178-10B	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	500	10/22/13 03:00 PM	ICP-MS3_131022A
	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/21/13 02:06 PM	ICP-MS3_131021A
	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45μ)	60044	1	10/25/13 05:42 PM	ICP-MS2_131025A
	MW-15	Aqueous	SW7470A	Mercury Filtered (0.45μ)	60066	1	10/23/13 02:23 PM	CETAC_HG_131023B
1310178-10D	MW-15	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 11:34 AM	TITRATOR_131021A
	MW-15	Aqueous	E300	Anions by IC method - Water	60032	100	10/18/13 04:04 PM	IC_131018A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-10D	MW-15	Aqueous	E300	Anions by IC method - Water	60032	1000	10/18/13 04:21 PM	IC_131018A
	MW-15	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-11A	P-02	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 12:15 PM	GC8_131022A
1310178-11B	P-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 01:53 PM	ICP-MS2_131025A
	P-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 03:36 PM	ICP-MS3_131021A
	P-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 03:55 PM	ICP-MS3_131022A
	P-02	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:25 PM	CETAC_HG_131023B
1310178-11D	P-02	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 11:43 AM	TITRATOR_131021A
	P-02	Aqueous	E300	Anions by IC method - Water	60037	10	10/21/13 09:50 AM	IC_131021A
	P-02	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 10:05 AM	IC_131021A
	P-02	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-12A	MW-08	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 12:35 PM	GC8_131022A
1310178-12B	MW-08	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 04:01 PM	ICP-MS3_131022A
	MW-08	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 03:42 PM	ICP-MS3_131021A
	MW-08	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 01:59 PM	ICP-MS2_131025A
	MW-08	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:27 PM	CETAC_HG_131023B
1310178-12D	MW-08	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 11:54 AM	TITRATOR_131021A
	MW-08	Aqueous	E300	Anions by IC method - Water	60037	10	10/21/13 10:20 AM	IC_131021A
	MW-08	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 10:35 AM	IC_131021A
	MW-08	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-13A	MW-2-16	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 05:18 PM	GC8_131022A
	MW-2-16	Aqueous	SW8021B	Volatile Organics by GC	60068	5	10/22/13 07:01 PM	GC8_131022A
1310178-13B	MW-2-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 03:48 PM	ICP-MS3_131021A
	MW-2-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 04:07 PM	ICP-MS3_131022A
	MW-2-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 02:05 PM	ICP-MS2_131025A
	MW-2-16	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:29 PM	CETAC_HG_131023B
1310178-13D	MW-2-16	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 12:06 PM	TITRATOR_131021A
	MW-2-16	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 11:04 AM	IC_131021A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-13D	MW-2-16	Aqueous	E300	Anions by IC method - Water	60037	10	10/21/13 10:49 AM	IC_131021A
	MW-2-16	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-14A	MW-2-12	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 12:55 PM	GC8_131022A
1310178-14B	MW-2-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 03:16 PM	ICP-MS2_131025A
	MW-2-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 03:54 PM	ICP-MS3_131021A
	MW-2-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 04:13 PM	ICP-MS3_131022A
	MW-2-12	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:31 PM	CETAC_HG_131023B
1310178-14D	MW-2-12	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 12:17 PM	TITRATOR_131021A
	MW-2-12	Aqueous	E300	Anions by IC method - Water	60037	10	10/21/13 11:18 AM	IC_131021A
	MW-2-12	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 11:49 AM	IC_131021A
	MW-2-12	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-15A	MW-23	Aqueous	SW8021B	Volatile Organics by GC	60096	1	10/23/13 11:32 AM	GC8_131023A
1310178-15B	MW-23	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/25/13 03:22 PM	ICP-MS2_131025A
	MW-23	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 04:00 PM	ICP-MS3_131021A
	MW-23	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	50	10/22/13 04:19 PM	ICP-MS3_131022A
	MW-23	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:37 PM	CETAC_HG_131023B
1310178-15D	MW-23	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 12:21 PM	TITRATOR_131021A
	MW-23	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 12:03 PM	IC_131021A
	MW-23	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-16A	MW-02-05	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 04:20 PM	GC8_131022A
	MW-02-05	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 06:21 PM	GC8_131022A
1310178-16B	MW-02-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	5000	10/28/13 01:09 PM	ICP-MS3_131028A
	MW-02-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	10	10/25/13 05:48 PM	ICP-MS2_131025A
	MW-02-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1	10/21/13 04:06 PM	ICP-MS3_131021A
	MW-02-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60044	1000	10/22/13 04:25 PM	ICP-MS3_131022A
	MW-02-05	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60066	1	10/23/13 02:39 PM	CETAC_HG_131023B
1310178-16D	MW-02-05	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 02:29 PM	TITRATOR_131021A
	MW-02-05	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 12:35 PM	TITRATOR_131021A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-16D	MW-02-05	Aqueous	E300	Anions by IC method - Water	60037	1000	10/21/13 12:18 PM	IC_131021A
	MW-02-05	Aqueous	E300	Anions by IC method - Water	60037	5000	10/21/13 12:33 PM	IC_131021A
	MW-02-05	Aqueous	M2540C	Total Dissolved Solids	60092	1	10/24/13 09:20 AM	WC_131023A
1310178-17A	MW-2-15	Aqueous	SW8021B	Volatile Organics by GC	60068	10	10/22/13 10:54 AM	GC8_131022A
1310178-17B	MW-2-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 03:27 PM	ICP-MS2_131025A
	MW-2-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:07 PM	ICP-MS3_131022A
	MW-2-15	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:26 PM	CETAC_HG_131025A
1310178-17D	MW-2-15	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 12:45 PM	TITRATOR_131021A
	MW-2-15	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 12:47 PM	IC_131021A
	MW-2-15	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-18A	MW-02-02	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 04:39 PM	GC8_131022A
	MW-02-02	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 06:41 PM	GC8_131022A
1310178-18B	MW-02-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	10	10/25/13 05:54 PM	ICP-MS2_131025A
	MW-02-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1000	10/22/13 06:13 PM	ICP-MS3_131022A
	MW-02-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	5000	10/25/13 01:40 PM	ICP-MS3_131025A
	MW-02-02	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:28 PM	CETAC_HG_131025A
1310178-18D	MW-02-02	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 01:52 PM	TITRATOR_131021A
	MW-02-02	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 02:34 PM	TITRATOR_131021A
	MW-02-02	Aqueous	E300	Anions by IC method - Water	60037	1000	10/21/13 01:02 PM	IC_131021A
	MW-02-02	Aqueous	E300	Anions by IC method - Water	60037	5000	10/21/13 01:28 PM	IC_131021A
	MW-02-02	Aqueous	M2540C	Total Dissolved Solids	60092	1	10/24/13 09:20 AM	WC_131023A
1310178-19A	MW-02-04	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 04:58 PM	GC8_131022A
1310178-19B	MW-02-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 03:33 PM	ICP-MS2_131025A
	MW-02-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:20 PM	ICP-MS3_131022A
	MW-02-04	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:30 PM	CETAC_HG_131025A
1310178-19D	MW-02-04	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 01:59 PM	TITRATOR_131021A
	MW-02-04	Aqueous	E300	Anions by IC method - Water	60037	10	10/21/13 02:12 PM	IC_131021A
	MW-02-04	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 02:43 PM	IC_131021A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-19D	MW-02-04	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-20A	MW-13	Aqueous	SW8021B	Volatile Organics by GC	60068	20	10/22/13 11:14 AM	GC8_131022A
	MW-13	Aqueous	SW8021B	Volatile Organics by GC	60068	1	10/22/13 05:37 PM	GC8_131022A
1310178-20B	MW-13	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 03:39 PM	ICP-MS2_131025A
	MW-13	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:26 PM	ICP-MS3_131022A
	MW-13	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:32 PM	CETAC_HG_131025A
1310178-20D	MW-13	Aqueous	M2320 B	Alkalinity	60049	1	10/21/13 02:07 PM	TITRATOR_131021A
	MW-13	Aqueous	E300	Anions by IC method - Water	60037	100	10/21/13 03:12 PM	IC_131021A
	MW-13	Aqueous	E300	Anions by IC method - Water	60037	10	10/21/13 02:57 PM	IC_131021A
	MW-13	Aqueous	M2540C	Total Dissolved Solids	60041	1	10/22/13 08:55 AM	WC_131021B
1310178-21A	MW-12	Aqueous	SW8021B	Volatile Organics by GC	60096	1	10/23/13 11:52 AM	GC8_131023A
	MW-12	Aqueous	SW8021B	Volatile Organics by GC	60096	10	10/23/13 03:52 PM	GC8_131023A
1310178-21B	MW-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 03:45 PM	ICP-MS2_131025A
	MW-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:32 PM	ICP-MS3_131022A
	MW-12	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:34 PM	CETAC_HG_131025A
1310178-21D	MW-12	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 11:03 AM	TITRATOR_131022A
	MW-12	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 09:48 AM	IC2_131021A
	MW-12	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 11:30 AM	IC2_131021A
	MW-12	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-22A	MW-22	Aqueous	SW8021B	Volatile Organics by GC	60096	100	10/23/13 12:11 PM	GC8_131023A
1310178-22B	MW-22	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 03:51 PM	ICP-MS2_131025A
	MW-22	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:38 PM	ICP-MS3_131022A
	MW-22	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:36 PM	CETAC_HG_131025A
1310178-22D	MW-22	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 11:23 AM	TITRATOR_131022A
	MW-22	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 10:17 AM	IC2_131021A
	MW-22	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 10:32 AM	IC2_131021A
	MW-22	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-23A	MW-05	Aqueous	SW8021B	Volatile Organics by GC	60096	1	10/23/13 12:31 PM	GC8_131023A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-23B	MW-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 03:57 PM	ICP-MS2_131025A
	MW-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:44 PM	ICP-MS3_131022A
	MW-05	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:38 PM	CETAC_HG_131025A
1310178-23D	MW-05	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 11:28 AM	TITRATOR_131022A
	MW-05	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 10:46 AM	IC2_131021A
	MW-05	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 11:01 AM	IC2_131021A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-24A	MW-02-03	Aqueous	SW8021B	Volatile Organics by GC	60096	1	10/23/13 12:50 PM	GC8_131023A
1310178-24B	MW-02-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 04:02 PM	ICP-MS2_131025A
	MW-02-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 05:55 PM	ICP-MS3_131022A
	MW-02-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:40 PM	CETAC_HG_131025A
1310178-24D	MW-02-03	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 11:32 AM	TITRATOR_131022A
	MW-02-03	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 11:16 AM	IC2_131021A
	MW-02-03	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 12:08 PM	IC2_131021A
	MW-02-03	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-25A	MW-03-03	Aqueous	SW8021B	Volatile Organics by GC	60096	20	10/23/13 01:10 PM	GC8_131023A
1310178-25B	MW-03-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 04:08 PM	ICP-MS2_131025A
	MW-03-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:50 PM	ICP-MS3_131022A
	MW-03-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:46 PM	CETAC_HG_131025A
1310178-25D	MW-03-03	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 11:36 AM	TITRATOR_131022A
	MW-03-03	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 12:23 PM	IC2_131021A
	MW-03-03	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-26A	MW-3	Aqueous	SW8021B	Volatile Organics by GC	60096	20	10/23/13 04:12 PM	GC8_131023A
	MW-3	Aqueous	SW8021B	Volatile Organics by GC	60096	10	10/23/13 01:29 PM	GC8_131023A
1310178-26B	MW-3	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 05:19 PM	ICP-MS2_131025A
	MW-3	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 06:56 PM	ICP-MS3_131022A
	MW-3	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:48 PM	CETAC_HG_131025A
1310178-26D	MW-3	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 11:41 AM	TITRATOR_131022A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-26D	MW-3	Aqueous	E300	Anions by IC method - Water	60038	1000	10/21/13 12:37 PM	IC2_131021A
	MW-3	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 01:41 PM	IC2_131021A
	MW-3	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 01:55 PM	IC2_131021A
	MW-3	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-27A	MW-2-18	Aqueous	SW8021B	Volatile Organics by GC	60096	1	10/23/13 01:48 PM	GC8_131023A
	MW-2-18	Aqueous	SW8021B	Volatile Organics by GC	60096	20	10/23/13 04:31 PM	GC8_131023A
	MW-2-18	Aqueous	SW8021B	Volatile Organics by GC	60096	200	10/23/13 06:05 PM	GC8_131023A
1310178-27B	MW-2-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/28/13 02:40 PM	ICP-MS3_131028A
	MW-2-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 05:25 PM	ICP-MS2_131025A
	MW-2-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 08:15 PM	ICP-MS3_131022A
	MW-2-18	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:50 PM	CETAC_HG_131025A
1310178-27D	MW-2-18	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 11:55 AM	TITRATOR_131022A
	MW-2-18	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 12:52 PM	IC2_131021A
	MW-2-18	Aqueous	E300	Anions by IC method - Water	60038	1000	10/21/13 01:07 PM	IC2_131021A
	MW-2-18	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 02:39 PM	IC2_131021A
	MW-2-18	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-28A	MW-7	Aqueous	SW8021B	Volatile Organics by GC	60096	100	10/23/13 02:08 PM	GC8_131023A
1310178-28B	MW-7	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	10	10/28/13 01:21 PM	ICP-MS3_131028A
	MW-7	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/28/13 01:15 PM	ICP-MS3_131028A
	MW-7	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 05:31 PM	ICP-MS2_131025A
	MW-7	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 08:21 PM	ICP-MS3_131022A
	MW-7	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:52 PM	CETAC_HG_131025A
1310178-28D	MW-7	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 12:15 PM	TITRATOR_131022A
	MW-7	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 01:21 PM	IC2_131021A
	MW-7	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 03:11 PM	IC2_131021A
	MW-7	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B
1310178-29A	MW-2	Aqueous	SW8021B	Volatile Organics by GC	60096	1	10/23/13 02:27 PM	GC8_131023A
1310178-29B	MW-2	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	1	10/25/13 05:37 PM	ICP-MS2_131025A

Lab Order: 1310178
Client: Larson & Associates
Project: Frontier ABO

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1310178-29B	MW-2	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	60045	50	10/22/13 08:27 PM	ICP-MS3_131022A
	MW-2	Aqueous	SW7470A	Mercury Filtered (0.45µ)	60075	1	10/25/13 02:54 PM	CETAC_HG_131025A
1310178-29D	MW-2	Aqueous	M2320 B	Alkalinity	60079	1	10/22/13 12:20 PM	TITRATOR_131022A
	MW-2	Aqueous	E300	Anions by IC method - Water	60038	10	10/21/13 03:40 PM	IC2_131021A
	MW-2	Aqueous	E300	Anions by IC method - Water	60038	100	10/21/13 03:57 PM	IC2_131021A
	MW-2	Aqueous	M2540C	Total Dissolved Solids	60060	1	10/23/13 08:55 AM	WC_131022B

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-17
Lab ID: 1310178-01
Collection Date: 10/15/13 01:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 11:34 AM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 11:34 AM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 11:34 AM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 11:34 AM
Surr: a,a,a-Trifluorotoluene	93.2	0	87-113		%REC	1	10/22/13 11:34 AM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:02 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00525	0.00200	0.00500		mg/L	1	10/21/13 01:18 PM
Barium	0.0229	0.00300	0.0100		mg/L	1	10/25/13 01:12 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 01:12 PM
Calcium	612	5.00	15.0		mg/L	50	10/22/13 02:12 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:18 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:12 PM
Magnesium	118	5.00	15.0		mg/L	50	10/22/13 02:12 PM
Potassium	9.29	0.100	0.300		mg/L	1	10/21/13 01:18 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:18 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 01:12 PM
Sodium	140	5.00	15.0		mg/L	50	10/22/13 02:12 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	170	3.00	10.0		mg/L	10	10/18/13 10:57 AM
Sulfate	1590	100	300		mg/L	100	10/18/13 11:12 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	334	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:16 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:16 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:16 AM
Alkalinity, Total (As CaCO ₃)	334	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:16 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2910	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-18
Lab ID: 1310178-02
Collection Date: 10/15/13 11:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
SW8021B				Analyst: AV			
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 01:15 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 01:15 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 01:15 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 01:15 PM
Surr: a,a,a-Trifluorotoluene	93.2	0	87-113		%REC	1	10/22/13 01:15 PM
MERCURY FILTERED (0.45µ)							
SW7470A				Analyst: LM			
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:04 PM
DISSOLVED METALS-ICPMS (0.45µ)							
SW6020A				Analyst: SW			
Arsenic	ND	0.00200	0.00500		mg/L	1	10/21/13 01:23 PM
Barium	0.0158	0.00300	0.0100		mg/L	1	10/25/13 01:18 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 01:18 PM
Calcium	724	5.00	15.0		mg/L	50	10/22/13 02:18 PM
Chromium	0.00731	0.00200	0.00500		mg/L	1	10/21/13 01:23 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:18 PM
Magnesium	136	5.00	15.0		mg/L	50	10/22/13 02:18 PM
Potassium	4.73	0.100	0.300		mg/L	1	10/21/13 01:23 PM
Selenium	0.00202	0.00200	0.00500	J	mg/L	1	10/21/13 01:23 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 01:18 PM
Sodium	69.4	5.00	15.0		mg/L	50	10/22/13 02:18 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: JBC			
Chloride	606	30.0	100		mg/L	100	10/18/13 11:26 AM
Sulfate	1470	100	300		mg/L	100	10/18/13 11:26 AM
ALKALINITY							
M2320 B				Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO ₃)	121	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:28 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:28 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:28 AM
Alkalinity, Total (As CaCO ₃)	121	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:28 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	3130	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-16
Lab ID: 1310178-03
Collection Date: 10/15/13 02:00 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 10:14 AM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 10:14 AM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 10:14 AM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 10:14 AM
Surr: a,a,a-Trifluorotoluene	95.0	0	87-113		%REC	1	10/22/13 10:14 AM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 01:40 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00242	0.00200	0.00500	J	mg/L	1	10/21/13 01:30 PM
Barium	0.0102	0.00300	0.0100		mg/L	1	10/21/13 01:30 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 01:30 PM
Calcium	540	5.00	15.0		mg/L	50	10/22/13 02:24 PM
Chromium	0.0128	0.00200	0.00500		mg/L	1	10/21/13 01:30 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:24 PM
Magnesium	250	5.00	15.0		mg/L	50	10/22/13 02:24 PM
Potassium	9.90	0.100	0.300		mg/L	1	10/21/13 01:30 PM
Selenium	0.00608	0.00200	0.00500		mg/L	1	10/21/13 01:30 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 01:30 PM
Sodium	238	5.00	15.0		mg/L	50	10/22/13 02:24 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	381	3.00	10.0		mg/L	10	10/18/13 11:41 AM
Sulfate	2230	100	300		mg/L	100	10/18/13 01:05 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	77.5	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:32 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:32 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:32 AM
Alkalinity, Total (As CaCO ₃)	77.5	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:32 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3820	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: EB-03
Lab ID: 1310178-04
Collection Date: 10/15/13 08:00 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.0982	0.000800	0.00200		mg/L	1	10/22/13 11:55 AM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 11:55 AM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 11:55 AM
Xylenes, Total	0.0173	0.00300	0.00900		mg/L	1	10/22/13 11:55 AM
Surr: a,a,a-Trifluorotoluene	89.7	0	87-113		%REC	1	10/22/13 11:55 AM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:06 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/21/13 01:36 PM
Barium	0.0269	0.00300	0.0100		mg/L	1	10/21/13 01:36 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 01:36 PM
Calcium	631	5.00	15.0		mg/L	50	10/22/13 02:30 PM
Chromium	0.00208	0.00200	0.00500	J	mg/L	1	10/21/13 01:36 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/21/13 01:36 PM
Magnesium	99.2	5.00	15.0		mg/L	50	10/22/13 02:30 PM
Potassium	4.31	0.100	0.300		mg/L	1	10/21/13 01:36 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:36 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 01:36 PM
Sodium	110	5.00	15.0		mg/L	50	10/22/13 02:30 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	110	3.00	10.0		mg/L	10	10/18/13 11:56 AM
Sulfate	1420	10.0	30.0		mg/L	10	10/18/13 11:56 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	700	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 10:46 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 10:46 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 10:46 AM
Alkalinity, Total (As CaCO ₃)	700	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 10:46 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2790	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: EB-02
Lab ID: 1310178-05
Collection Date: 10/15/13 09:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 02:39 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 02:39 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 02:39 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 02:39 PM
Surr: a,a,a-Trifluorotoluene	92.2	0	87-113		%REC	1	10/22/13 02:39 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:13 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/21/13 01:42 PM
Barium	0.0108	0.00300	0.0100		mg/L	1	10/21/13 01:42 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 01:42 PM
Calcium	550	5.00	15.0		mg/L	50	10/22/13 02:36 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:42 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:30 PM
Magnesium	263	5.00	15.0		mg/L	50	10/22/13 02:36 PM
Potassium	10.3	0.100	0.300		mg/L	1	10/21/13 01:42 PM
Selenium	0.00372	0.00200	0.00500	J	mg/L	1	10/21/13 01:42 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 01:42 PM
Sodium	151	5.00	15.0		mg/L	50	10/22/13 02:36 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	108	3.00	10.0		mg/L	10	10/18/13 01:20 PM
Sulfate	2200	100	300		mg/L	100	10/18/13 01:34 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	336	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:54 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:54 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:54 AM
Alkalinity, Total (As CaCO ₃)	336	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:54 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3340	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: EB-04
Lab ID: 1310178-06
Collection Date: 10/15/13 10:25 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
SW8021B				Analyst: AV			
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 02:59 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 02:59 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 02:59 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 02:59 PM
Surr: a,a,a-Trifluorotoluene	90.0	0	87-113		%REC	1	10/22/13 02:59 PM
MERCURY FILTERED (0.45µ)							
SW7470A				Analyst: LM			
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:15 PM
DISSOLVED METALS-ICPMS (0.45µ)							
SW6020A				Analyst: SW			
Arsenic	0.00322	0.00200	0.00500	J	mg/L	1	10/21/13 01:48 PM
Barium	0.0197	0.00300	0.0100		mg/L	1	10/21/13 01:48 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 01:48 PM
Calcium	607	5.00	15.0		mg/L	50	10/22/13 02:42 PM
Chromium	0.0577	0.00200	0.00500		mg/L	1	10/21/13 01:48 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:36 PM
Magnesium	138	5.00	15.0		mg/L	50	10/22/13 02:42 PM
Potassium	6.05	0.100	0.300		mg/L	1	10/21/13 01:48 PM
Selenium	0.00233	0.00200	0.00500	J	mg/L	1	10/21/13 01:48 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 01:48 PM
Sodium	143	5.00	15.0		mg/L	50	10/22/13 02:42 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: JBC			
Chloride	387	3.00	10.0		mg/L	10	10/18/13 01:49 PM
Sulfate	1750	100	300		mg/L	100	10/18/13 02:03 PM
ALKALINITY							
M2320 B				Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO ₃)	176	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:59 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:59 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:59 AM
Alkalinity, Total (As CaCO ₃)	176	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 10:59 AM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	3180	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: EB-05
Lab ID: 1310178-07
Collection Date: 10/15/13 10:55 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 03:20 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 03:20 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 03:20 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 03:20 PM
Surr: a,a,a-Trifluorotoluene	88.4	0	87-113		%REC	1	10/22/13 03:20 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:17 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.0119	0.00200	0.00500		mg/L	1	10/21/13 01:54 PM
Barium	0.0239	0.00300	0.0100		mg/L	1	10/21/13 01:54 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 01:54 PM
Calcium	635	5.00	15.0		mg/L	50	10/22/13 02:48 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:54 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:42 PM
Magnesium	53.8	5.00	15.0		mg/L	50	10/22/13 02:48 PM
Potassium	5.48	0.100	0.300		mg/L	1	10/21/13 01:54 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:54 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 01:54 PM
Sodium	66.5	5.00	15.0		mg/L	50	10/22/13 02:48 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	161	3.00	10.0		mg/L	10	10/18/13 02:18 PM
Sulfate	1440	100	300		mg/L	100	10/18/13 02:33 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	337	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:07 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:07 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:07 AM
Alkalinity, Total (As CaCO ₃)	337	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:07 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2550	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-14
Lab ID: 1310178-08
Collection Date: 10/15/13 08:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.0941	0.00400	0.0100		mg/L	5	10/22/13 10:34 AM
Ethylbenzene	ND	0.0100	0.0300		mg/L	5	10/22/13 10:34 AM
Toluene	ND	0.0100	0.0300		mg/L	5	10/22/13 10:34 AM
Xylenes, Total	ND	0.0150	0.0450		mg/L	5	10/22/13 10:34 AM
Surr: a,a,a-Trifluorotoluene	91.5	0	87-113		%REC	5	10/22/13 10:34 AM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:19 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00467	0.00200	0.00500	J	mg/L	1	10/21/13 02:00 PM
Barium	0.0212	0.00300	0.0100		mg/L	1	10/21/13 02:00 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 02:00 PM
Calcium	598	5.00	15.0		mg/L	50	10/22/13 02:54 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 02:00 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:47 PM
Magnesium	103	5.00	15.0		mg/L	50	10/22/13 02:54 PM
Potassium	4.81	0.100	0.300		mg/L	1	10/21/13 02:00 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 02:00 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 02:00 PM
Sodium	114	5.00	15.0		mg/L	50	10/22/13 02:54 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	105	3.00	10.0		mg/L	10	10/18/13 03:04 PM
Sulfate	1690	100	300		mg/L	100	10/18/13 02:47 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	505	25.0	50.0		mg/L @ pH 4.52	1	10/21/13 11:20 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/21/13 11:20 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/21/13 11:20 AM
Alkalinity, Total (As CaCO ₃)	505	25.0	50.0		mg/L @ pH 4.52	1	10/21/13 11:20 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2710	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: P-01
Lab ID: 1310178-09
Collection Date: 10/15/13 11:05 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 03:40 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 03:40 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 03:40 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 03:40 PM
Surr: a,a,a-Trifluorotoluene	90.6	0	87-113		%REC	1	10/22/13 03:40 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:21 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/21/13 01:05 PM
Barium	0.0183	0.00300	0.0100		mg/L	1	10/21/13 01:05 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 01:05 PM
Calcium	584	5.00	15.0		mg/L	50	10/22/13 02:00 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:05 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/21/13 01:05 PM
Magnesium	319	5.00	15.0		mg/L	50	10/22/13 02:00 PM
Potassium	4.67	0.100	0.300		mg/L	1	10/21/13 01:05 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 01:05 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 01:05 PM
Sodium	102	5.00	15.0		mg/L	50	10/22/13 02:00 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	251	3.00	10.0		mg/L	10	10/18/13 03:19 PM
Sulfate	2180	100	300		mg/L	100	10/18/13 03:50 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	378	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:29 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:29 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:29 AM
Alkalinity, Total (As CaCO ₃)	378	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:29 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3630	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-15
Lab ID: 1310178-10
Collection Date: 10/15/13 12:15 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 04:00 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 04:00 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 04:00 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 04:00 PM
Surr: a,a,a-Trifluorotoluene	92.7	0	87-113		%REC	1	10/22/13 04:00 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:23 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00574	0.00200	0.00500		mg/L	1	10/21/13 02:06 PM
Barium	0.0145	0.00300	0.0100		mg/L	1	10/25/13 05:42 PM
Cadmium	0.000323	0.000300	0.00100	J	mg/L	1	10/25/13 05:42 PM
Calcium	451	50.0	150		mg/L	500	10/22/13 03:00 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 02:06 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 05:42 PM
Magnesium	2810	50.0	150		mg/L	500	10/22/13 03:00 PM
Potassium	104	50.0	150	J	mg/L	500	10/22/13 03:00 PM
Selenium	0.0101	0.00200	0.00500		mg/L	1	10/21/13 02:06 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 05:42 PM
Sodium	3490	50.0	150		mg/L	500	10/22/13 03:00 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	1320	30.0	100		mg/L	100	10/18/13 04:04 PM
Sulfate	16400	1000	3000		mg/L	1000	10/18/13 04:21 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	423	25.0	50.0		mg/L @ pH 4.51	1	10/21/13 11:34 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.51	1	10/21/13 11:34 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.51	1	10/21/13 11:34 AM
Alkalinity, Total (As CaCO ₃)	423	25.0	50.0		mg/L @ pH 4.51	1	10/21/13 11:34 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	28500	200	200		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: P-02
Lab ID: 1310178-11
Collection Date: 10/16/13 08:57 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.122	0.000800	0.00200		mg/L	1	10/22/13 12:15 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 12:15 PM
Toluene	0.00816	0.00200	0.00600		mg/L	1	10/22/13 12:15 PM
Xylenes, Total	0.00343	0.00300	0.00900	J	mg/L	1	10/22/13 12:15 PM
Surr: a,a,a-Trifluorotoluene	92.3	0	87-113		%REC	1	10/22/13 12:15 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:25 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00318	0.00200	0.00500	J	mg/L	1	10/21/13 03:36 PM
Barium	0.0172	0.00300	0.0100		mg/L	1	10/21/13 03:36 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 03:36 PM
Calcium	584	5.00	15.0		mg/L	50	10/22/13 03:55 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:36 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:53 PM
Magnesium	202	5.00	15.0		mg/L	50	10/22/13 03:55 PM
Potassium	5.22	0.100	0.300		mg/L	1	10/25/13 01:53 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:36 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 03:36 PM
Sodium	43.8	5.00	15.0		mg/L	50	10/22/13 03:55 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	60.4	3.00	10.0		mg/L	10	10/21/13 09:50 AM
Sulfate	1750	100	300		mg/L	100	10/21/13 10:05 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	429	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:43 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:43 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:43 AM
Alkalinity, Total (As CaCO ₃)	429	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 11:43 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2880	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-08
Lab ID: 1310178-12
Collection Date: 10/16/13 02:20 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 12:35 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 12:35 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 12:35 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 12:35 PM
Surr: a,a,a-Trifluorotoluene	92.7	0	87-113		%REC	1	10/22/13 12:35 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:27 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00771	0.00200	0.00500		mg/L	1	10/21/13 03:42 PM
Barium	0.0226	0.00300	0.0100		mg/L	1	10/21/13 03:42 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 03:42 PM
Calcium	431	5.00	15.0		mg/L	50	10/22/13 04:01 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:42 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 01:59 PM
Magnesium	103	5.00	15.0		mg/L	50	10/22/13 04:01 PM
Potassium	8.37	0.100	0.300		mg/L	1	10/25/13 01:59 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:42 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 03:42 PM
Sodium	246	5.00	15.0		mg/L	50	10/22/13 04:01 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	235	3.00	10.0		mg/L	10	10/21/13 10:20 AM
Sulfate	1240	100	300		mg/L	100	10/21/13 10:35 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	479	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:54 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:54 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:54 AM
Alkalinity, Total (As CaCO ₃)	479	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 11:54 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2460	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-2-16
Lab ID: 1310178-13
Collection Date: 10/16/13 01:41 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.384	0.00400	0.0100		mg/L	5	10/22/13 07:01 PM
Ethylbenzene	0.00490	0.00200	0.00600	J	mg/L	1	10/22/13 05:18 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 05:18 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 05:18 PM
Surr: a,a,a-Trifluorotoluene	92.6	0	87-113		%REC	5	10/22/13 07:01 PM
Surr: a,a,a-Trifluorotoluene	93.7	0	87-113		%REC	1	10/22/13 05:18 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:29 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.0265	0.00200	0.00500		mg/L	1	10/21/13 03:48 PM
Barium	0.0252	0.00300	0.0100		mg/L	1	10/21/13 03:48 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 03:48 PM
Calcium	622	5.00	15.0		mg/L	50	10/22/13 04:07 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:48 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 02:05 PM
Magnesium	90.5	5.00	15.0		mg/L	50	10/22/13 04:07 PM
Potassium	19.8	0.100	0.300		mg/L	1	10/25/13 02:05 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:48 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 03:48 PM
Sodium	250	5.00	15.0		mg/L	50	10/22/13 04:07 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	163	3.00	10.0		mg/L	10	10/21/13 10:49 AM
Sulfate	1670	100	300		mg/L	100	10/21/13 11:04 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	557	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:06 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:06 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:06 PM
Alkalinity, Total (As CaCO ₃)	557	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:06 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3230	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-2-12
Lab ID: 1310178-14
Collection Date: 10/16/13 02:40 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 12:55 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 12:55 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 12:55 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 12:55 PM
Surr: a,a,a-Trifluorotoluene	90.7	0	87-113		%REC	1	10/22/13 12:55 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:31 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/21/13 03:54 PM
Barium	0.0150	0.00300	0.0100		mg/L	1	10/21/13 03:54 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 03:54 PM
Calcium	558	5.00	15.0		mg/L	50	10/22/13 04:13 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:54 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 03:16 PM
Magnesium	118	5.00	15.0		mg/L	50	10/22/13 04:13 PM
Potassium	9.30	0.100	0.300		mg/L	1	10/25/13 03:16 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 03:54 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 03:54 PM
Sodium	215	5.00	15.0		mg/L	50	10/22/13 04:13 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	124	3.00	10.0		mg/L	10	10/21/13 11:18 AM
Sulfate	1700	100	300		mg/L	100	10/21/13 11:49 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	508	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:17 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:17 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:17 PM
Alkalinity, Total (As CaCO ₃)	508	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:17 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3150	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-23
Lab ID: 1310178-15
Collection Date: 10/16/13 08:35 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
SW8021B				Analyst: AV			
Benzene	0.00599	0.000800	0.00200		mg/L	1	10/23/13 11:32 AM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/23/13 11:32 AM
Toluene	ND	0.00200	0.00600		mg/L	1	10/23/13 11:32 AM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/23/13 11:32 AM
Surr: a,a,a-Trifluorotoluene	94.8	0	87-113		%REC	1	10/23/13 11:32 AM
MERCURY FILTERED (0.45µ)							
SW7470A				Analyst: LM			
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:37 PM
DISSOLVED METALS-ICPMS (0.45µ)							
SW6020A				Analyst: SW			
Arsenic	0.00408	0.00200	0.00500	J	mg/L	1	10/21/13 04:00 PM
Barium	0.0158	0.00300	0.0100		mg/L	1	10/21/13 04:00 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/21/13 04:00 PM
Calcium	591	5.00	15.0		mg/L	50	10/22/13 04:19 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/21/13 04:00 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 03:22 PM
Magnesium	129	5.00	15.0		mg/L	50	10/22/13 04:19 PM
Potassium	6.36	0.100	0.300		mg/L	1	10/25/13 03:22 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/21/13 04:00 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/21/13 04:00 PM
Sodium	169	5.00	15.0		mg/L	50	10/22/13 04:19 PM
ANIONS BY IC METHOD - WATER							
E300				Analyst: JBC			
Chloride	333	30.0	100		mg/L	100	10/21/13 12:03 PM
Sulfate	1630	100	300		mg/L	100	10/21/13 12:03 PM
ALKALINITY							
M2320 B				Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO ₃)	548	50.0	100		mg/L @ pH 4.51	1	10/21/13 12:21 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	50.0	100		mg/L @ pH 4.51	1	10/21/13 12:21 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	50.0	100		mg/L @ pH 4.51	1	10/21/13 12:21 PM
Alkalinity, Total (As CaCO ₃)	548	50.0	100		mg/L @ pH 4.51	1	10/21/13 12:21 PM
TOTAL DISSOLVED SOLIDS							
M2540C				Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	3070	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-02-05
Lab ID: 1310178-16
Collection Date: 10/16/13 02:37 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B				Analyst: AV	
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 06:21 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 06:21 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 06:21 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 06:21 PM
Surr: a,a,a-Trifluorotoluene	81.7	0	87-113	S	%REC	1	10/22/13 06:21 PM
MERCURY FILTERED (0.45µ)		SW7470A				Analyst: LM	
Mercury	ND	0.0000800	0.000200		mg/L	1	10/23/13 02:39 PM
DISSOLVED METALS-ICPMS (0.45µ)		SW6020A				Analyst: SW	
Arsenic	0.0331	0.0200	0.0500	J	mg/L	10	10/25/13 05:48 PM
Barium	ND	0.0300	0.100		mg/L	10	10/25/13 05:48 PM
Cadmium	0.00522	0.00300	0.0100	J	mg/L	10	10/25/13 05:48 PM
Calcium	309	100	300		mg/L	1000	10/22/13 04:25 PM
Chromium	0.0343	0.0200	0.0500	J	mg/L	10	10/25/13 05:48 PM
Lead	0.00340	0.00300	0.0100	J	mg/L	10	10/25/13 05:48 PM
Magnesium	47200	500	1500		mg/L	5000	10/28/13 01:09 PM
Potassium	1470	100	300		mg/L	1000	10/22/13 04:25 PM
Selenium	ND	0.0200	0.0500		mg/L	10	10/25/13 05:48 PM
Silver	ND	0.0100	0.0200		mg/L	10	10/25/13 05:48 PM
Sodium	19200	100	300		mg/L	1000	10/22/13 04:25 PM
ANIONS BY IC METHOD - WATER		E300				Analyst: JBC	
Chloride	10400	300	1000		mg/L	1000	10/21/13 12:18 PM
Sulfate	237000	5000	15000		mg/L	5000	10/21/13 12:33 PM
ALKALINITY		M2320 B				Analyst: JBC	
Alkalinity, Bicarbonate (As CaCO ₃)	8990	250	500		mg/L @ pH 4.52	1	10/21/13 02:29 PM
Alkalinity, Carbonate (As CaCO ₃)	1550	250	500		mg/L @ pH 4.52	1	10/21/13 02:29 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	250	500		mg/L @ pH 4.52	1	10/21/13 02:29 PM
Alkalinity, Total (As CaCO ₃)	10500	250	500		mg/L @ pH 4.52	1	10/21/13 02:29 PM
TOTAL DISSOLVED SOLIDS		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	458000	5000	5000		mg/L	1	10/24/13 09:20 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-2-15
Lab ID: 1310178-17
Collection Date: 10/16/13 02:05 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.376	0.00800	0.0200		mg/L	10	10/22/13 10:54 AM
Ethylbenzene	ND	0.0200	0.0600		mg/L	10	10/22/13 10:54 AM
Toluene	ND	0.0200	0.0600		mg/L	10	10/22/13 10:54 AM
Xylenes, Total	ND	0.0300	0.0900		mg/L	10	10/22/13 10:54 AM
Surr: a,a,a-Trifluorotoluene	91.2	0	87-113		%REC	10	10/22/13 10:54 AM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:26 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.0563	0.00200	0.00500		mg/L	1	10/25/13 03:27 PM
Barium	0.0232	0.00300	0.0100		mg/L	1	10/25/13 03:27 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 03:27 PM
Calcium	750	5.00	15.0		mg/L	50	10/22/13 06:07 PM
Chromium	0.00446	0.00200	0.00500	J	mg/L	1	10/25/13 03:27 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 03:27 PM
Magnesium	93.9	5.00	15.0		mg/L	50	10/22/13 06:07 PM
Potassium	20.9	0.100	0.300		mg/L	1	10/25/13 03:27 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:27 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 03:27 PM
Sodium	340	5.00	15.0		mg/L	50	10/22/13 06:07 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	738	30.0	100		mg/L	100	10/21/13 12:47 PM
Sulfate	1630	100	300		mg/L	100	10/21/13 12:47 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	464	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:45 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:45 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:45 PM
Alkalinity, Total (As CaCO ₃)	464	12.5	25.0		mg/L @ pH 4.53	1	10/21/13 12:45 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3900	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-02-02
Lab ID: 1310178-18
Collection Date: 10/16/13 02:18 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		SW8021B		Analyst: AV			
Benzene	0.00104	0.000800	0.00200	J	mg/L	1	10/22/13 06:41 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 06:41 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 06:41 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 06:41 PM
Surr: a,a,a-Trifluorotoluene	90.4	0	87-113		%REC	1	10/22/13 06:41 PM
MERCURY FILTERED (0.45µ)		SW7470A		Analyst: LM			
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:28 PM
DISSOLVED METALS-ICPMS (0.45µ)		SW6020A		Analyst: SW			
Arsenic	0.0319	0.0200	0.0500	J	mg/L	10	10/25/13 05:54 PM
Barium	ND	0.0300	0.100		mg/L	10	10/25/13 05:54 PM
Cadmium	0.00441	0.00300	0.0100	J	mg/L	10	10/25/13 05:54 PM
Calcium	290	100	300	J	mg/L	1000	10/22/13 06:13 PM
Chromium	ND	0.0200	0.0500		mg/L	10	10/25/13 05:54 PM
Lead	ND	0.00300	0.0100		mg/L	10	10/25/13 05:54 PM
Magnesium	45900	500	1500		mg/L	5000	10/25/13 01:40 PM
Potassium	2070	100	300		mg/L	1000	10/22/13 06:13 PM
Selenium	ND	0.0200	0.0500		mg/L	10	10/25/13 05:54 PM
Silver	ND	0.0100	0.0200		mg/L	10	10/25/13 05:54 PM
Sodium	21800	100	300		mg/L	1000	10/22/13 06:13 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JBC			
Chloride	16400	300	1000		mg/L	1000	10/21/13 01:02 PM
Sulfate	223000	5000	15000		mg/L	5000	10/21/13 01:28 PM
ALKALINITY		M2320 B		Analyst: JBC			
Alkalinity, Bicarbonate (As CaCO ₃)	10300	250	500		mg/L @ pH 4.52	1	10/21/13 02:34 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	250	500		mg/L @ pH 4.52	1	10/21/13 02:34 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	250	500		mg/L @ pH 4.52	1	10/21/13 02:34 PM
Alkalinity, Total (As CaCO ₃)	10300	250	500		mg/L @ pH 4.52	1	10/21/13 02:34 PM
TOTAL DISSOLVED SOLIDS		M2540C		Analyst: JCG			
Total Dissolved Solids (Residue, Filterable)	440000	5000	5000		mg/L	1	10/24/13 09:20 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-02-04
Lab ID: 1310178-19
Collection Date: 10/16/13 02:47 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	ND	0.000800	0.00200		mg/L	1	10/22/13 04:58 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 04:58 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 04:58 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 04:58 PM
Surr: a,a,a-Trifluorotoluene	94.1	0	87-113		%REC	1	10/22/13 04:58 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:30 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00508	0.00200	0.00500		mg/L	1	10/25/13 03:33 PM
Barium	0.0216	0.00300	0.0100		mg/L	1	10/25/13 03:33 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 03:33 PM
Calcium	577	5.00	15.0		mg/L	50	10/22/13 06:20 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:33 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 03:33 PM
Magnesium	118	5.00	15.0		mg/L	50	10/22/13 06:20 PM
Potassium	12.0	0.100	0.300		mg/L	1	10/25/13 03:33 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:33 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 03:33 PM
Sodium	73.4	5.00	15.0		mg/L	50	10/22/13 06:20 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	93.4	3.00	10.0		mg/L	10	10/21/13 02:12 PM
Sulfate	1590	100	300		mg/L	100	10/21/13 02:43 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	324	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 01:59 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 01:59 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 01:59 PM
Alkalinity, Total (As CaCO ₃)	324	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 01:59 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2540	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-13
Lab ID: 1310178-20
Collection Date: 10/16/13 08:12 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.00186	0.000800	0.00200	J	mg/L	1	10/22/13 05:37 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/22/13 05:37 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/22/13 05:37 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/22/13 05:37 PM
Surr: a,a,a-Trifluorotoluene	92.3	0	87-113		%REC	1	10/22/13 05:37 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:32 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.0116	0.00200	0.00500		mg/L	1	10/25/13 03:39 PM
Barium	0.0405	0.00300	0.0100		mg/L	1	10/25/13 03:39 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 03:39 PM
Calcium	584	5.00	15.0		mg/L	50	10/22/13 06:26 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:39 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 03:39 PM
Magnesium	115	5.00	15.0		mg/L	50	10/22/13 06:26 PM
Potassium	15.1	5.00	15.0		mg/L	50	10/22/13 06:26 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:39 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 03:39 PM
Sodium	230	5.00	15.0		mg/L	50	10/22/13 06:26 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	192	3.00	10.0		mg/L	10	10/21/13 02:57 PM
Sulfate	1950	100	300		mg/L	100	10/21/13 03:12 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	337	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 02:07 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 02:07 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 02:07 PM
Alkalinity, Total (As CaCO ₃)	337	12.5	25.0		mg/L @ pH 4.52	1	10/21/13 02:07 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3200	50.0	50.0		mg/L	1	10/22/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-12
Lab ID: 1310178-21
Collection Date: 10/16/13 10:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	1.48	0.00800	0.0200		mg/L	10	10/23/13 03:52 PM
Ethylbenzene	0.0385	0.00200	0.00600		mg/L	1	10/23/13 11:52 AM
Toluene	ND	0.00200	0.00600		mg/L	1	10/23/13 11:52 AM
Xylenes, Total	0.0307	0.00300	0.00900		mg/L	1	10/23/13 11:52 AM
Surr: a,a,a-Trifluorotoluene	89.6	0	87-113		%REC	10	10/23/13 03:52 PM
Surr: a,a,a-Trifluorotoluene	93.6	0	87-113		%REC	1	10/23/13 11:52 AM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:34 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00716	0.00200	0.00500		mg/L	1	10/25/13 03:45 PM
Barium	0.0180	0.00300	0.0100		mg/L	1	10/25/13 03:45 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 03:45 PM
Calcium	576	5.00	15.0		mg/L	50	10/22/13 06:32 PM
Chromium	0.00362	0.00200	0.00500	J	mg/L	1	10/25/13 03:45 PM
Lead	0.000617	0.000300	0.00100	J	mg/L	1	10/25/13 03:45 PM
Magnesium	208	5.00	15.0		mg/L	50	10/22/13 06:32 PM
Potassium	5.72	0.100	0.300		mg/L	1	10/25/13 03:45 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:45 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 03:45 PM
Sodium	88.4	5.00	15.0		mg/L	50	10/22/13 06:32 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	106	3.00	10.0		mg/L	10	10/21/13 11:30 AM
Sulfate	1950	100	300		mg/L	100	10/21/13 09:48 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	373	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:03 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:03 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:03 AM
Alkalinity, Total (As CaCO ₃)	373	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:03 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3290	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-22
Lab ID: 1310178-22
Collection Date: 10/16/13 11:15 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	5.48	0.0800	0.200		mg/L	100	10/23/13 12:11 PM
Ethylbenzene	ND	0.200	0.600		mg/L	100	10/23/13 12:11 PM
Toluene	ND	0.200	0.600		mg/L	100	10/23/13 12:11 PM
Xylenes, Total	ND	0.300	0.900		mg/L	100	10/23/13 12:11 PM
Surr: a,a,a-Trifluorotoluene	90.5	0	87-113		%REC	100	10/23/13 12:11 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:36 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/25/13 03:51 PM
Barium	0.0234	0.00300	0.0100		mg/L	1	10/25/13 03:51 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 03:51 PM
Calcium	652	5.00	15.0		mg/L	50	10/22/13 06:38 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:51 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 03:51 PM
Magnesium	157	5.00	15.0		mg/L	50	10/22/13 06:38 PM
Potassium	4.84	0.100	0.300		mg/L	1	10/25/13 03:51 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:51 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 03:51 PM
Sodium	63.7	5.00	15.0		mg/L	50	10/22/13 06:38 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	72.9	3.00	10.0		mg/L	10	10/21/13 10:17 AM
Sulfate	1630	100	300		mg/L	100	10/21/13 10:32 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	578	12.5	25.0		mg/L @ pH 4.53	1	10/22/13 11:23 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/22/13 11:23 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.53	1	10/22/13 11:23 AM
Alkalinity, Total (As CaCO ₃)	578	12.5	25.0		mg/L @ pH 4.53	1	10/22/13 11:23 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3120	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-05
Lab ID: 1310178-23
Collection Date: 10/16/13 01:25 PM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.00160	0.000800	0.00200	J	mg/L	1	10/23/13 12:31 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/23/13 12:31 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/23/13 12:31 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/23/13 12:31 PM
Surr: a,a,a-Trifluorotoluene	90.2	0	87-113		%REC	1	10/23/13 12:31 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:38 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/25/13 03:57 PM
Barium	0.0126	0.00300	0.0100		mg/L	1	10/25/13 03:57 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 03:57 PM
Calcium	558	5.00	15.0		mg/L	50	10/22/13 06:44 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:57 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 03:57 PM
Magnesium	128	5.00	15.0		mg/L	50	10/22/13 06:44 PM
Potassium	7.94	0.100	0.300		mg/L	1	10/25/13 03:57 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 03:57 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 03:57 PM
Sodium	207	5.00	15.0		mg/L	50	10/22/13 06:44 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	160	3.00	10.0		mg/L	10	10/21/13 10:46 AM
Sulfate	1600	100	300		mg/L	100	10/21/13 11:01 AM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	421	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 11:28 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 11:28 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 11:28 AM
Alkalinity, Total (As CaCO ₃)	421	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 11:28 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3170	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-02-03
Lab ID: 1310178-24
Collection Date: 10/16/13 09:36 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.00134	0.000800	0.00200	J	mg/L	1	10/23/13 12:50 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/23/13 12:50 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/23/13 12:50 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/23/13 12:50 PM
Surr: a,a,a-Trifluorotoluene	94.0	0	87-113		%REC	1	10/23/13 12:50 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:40 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00221	0.00200	0.00500	J	mg/L	1	10/25/13 04:02 PM
Barium	0.0100	0.00300	0.0100	J	mg/L	1	10/25/13 04:02 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 04:02 PM
Calcium	546	5.00	15.0		mg/L	50	10/22/13 05:55 PM
Chromium	0.0545	0.00200	0.00500		mg/L	1	10/25/13 04:02 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 04:02 PM
Magnesium	112	5.00	15.0		mg/L	50	10/22/13 05:55 PM
Potassium	4.92	0.100	0.300		mg/L	1	10/25/13 04:02 PM
Selenium	0.00519	0.00200	0.00500		mg/L	1	10/25/13 04:02 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 04:02 PM
Sodium	41.1	5.00	15.0		mg/L	50	10/22/13 05:55 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	46.0	3.00	10.0		mg/L	10	10/21/13 11:16 AM
Sulfate	1670	100	300		mg/L	100	10/21/13 12:08 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	102	12.5	25.0		mg/L @ pH 4.51	1	10/22/13 11:32 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.51	1	10/22/13 11:32 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.51	1	10/22/13 11:32 AM
Alkalinity, Total (As CaCO ₃)	102	12.5	25.0		mg/L @ pH 4.51	1	10/22/13 11:32 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2810	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-03-03
Lab ID: 1310178-25
Collection Date: 10/16/13 11:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	1.52	0.0160	0.0400		mg/L	20	10/23/13 01:10 PM
Ethylbenzene	ND	0.0400	0.120		mg/L	20	10/23/13 01:10 PM
Toluene	ND	0.0400	0.120		mg/L	20	10/23/13 01:10 PM
Xylenes, Total	ND	0.0600	0.180		mg/L	20	10/23/13 01:10 PM
Surr: a,a,a-Trifluorotoluene	90.2	0	87-113		%REC	20	10/23/13 01:10 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:46 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00358	0.00200	0.00500	J	mg/L	1	10/25/13 04:08 PM
Barium	0.0244	0.00300	0.0100		mg/L	1	10/25/13 04:08 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 04:08 PM
Calcium	486	5.00	15.0		mg/L	50	10/22/13 06:50 PM
Chromium	ND	0.00200	0.00500		mg/L	1	10/25/13 04:08 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 04:08 PM
Magnesium	81.2	5.00	15.0		mg/L	50	10/22/13 06:50 PM
Potassium	10.0	0.100	0.300		mg/L	1	10/25/13 04:08 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 04:08 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 04:08 PM
Sodium	160	5.00	15.0		mg/L	50	10/22/13 06:50 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	197	3.00	10.0		mg/L	10	10/21/13 12:23 PM
Sulfate	1020	10.0	30.0		mg/L	10	10/21/13 12:23 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	676	50.0	100		mg/L @ pH 4.51	1	10/22/13 11:36 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	50.0	100		mg/L @ pH 4.51	1	10/22/13 11:36 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	50.0	100		mg/L @ pH 4.51	1	10/22/13 11:36 AM
Alkalinity, Total (As CaCO ₃)	676	50.0	100		mg/L @ pH 4.51	1	10/22/13 11:36 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2540	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-3
Lab ID: 1310178-26
Collection Date: 10/16/13 09:50 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	2.42	0.0160	0.0400		mg/L	20	10/23/13 04:12 PM
Ethylbenzene	0.0823	0.0200	0.0600		mg/L	10	10/23/13 01:29 PM
Toluene	ND	0.0200	0.0600		mg/L	10	10/23/13 01:29 PM
Xylenes, Total	0.158	0.0300	0.0900		mg/L	10	10/23/13 01:29 PM
Surr: a,a,a-Trifluorotoluene	89.7	0	87-113		%REC	20	10/23/13 04:12 PM
Surr: a,a,a-Trifluorotoluene	88.1	0	87-113		%REC	10	10/23/13 01:29 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:48 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	0.00536	0.00200	0.00500		mg/L	1	10/25/13 05:19 PM
Barium	0.0266	0.00300	0.0100		mg/L	1	10/25/13 05:19 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 05:19 PM
Calcium	597	5.00	15.0		mg/L	50	10/22/13 06:56 PM
Chromium	0.00405	0.00200	0.00500	J	mg/L	1	10/25/13 05:19 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 05:19 PM
Magnesium	85.1	5.00	15.0		mg/L	50	10/22/13 06:56 PM
Potassium	13.2	5.00	15.0	J	mg/L	50	10/22/13 06:56 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 05:19 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 05:19 PM
Sodium	139	5.00	15.0		mg/L	50	10/22/13 06:56 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	175	3.00	10.0		mg/L	10	10/21/13 01:41 PM
Sulfate	1340	100	300		mg/L	100	10/21/13 01:55 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	605	50.0	100		mg/L @ pH 4.52	1	10/22/13 11:41 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	50.0	100		mg/L @ pH 4.52	1	10/22/13 11:41 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	50.0	100		mg/L @ pH 4.52	1	10/22/13 11:41 AM
Alkalinity, Total (As CaCO ₃)	605	50.0	100		mg/L @ pH 4.52	1	10/22/13 11:41 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2830	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-2-18
Lab ID: 1310178-27
Collection Date: 10/16/13 10:55 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	15.5	0.160	0.400		mg/L	200	10/23/13 06:05 PM
Ethylbenzene	0.335	0.0400	0.120		mg/L	20	10/23/13 04:31 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/23/13 01:48 PM
Xylenes, Total	0.155	0.00300	0.00900		mg/L	1	10/23/13 01:48 PM
Surr: a,a,a-Trifluorotoluene	88.5	0	87-113		%REC	20	10/23/13 04:31 PM
Surr: a,a,a-Trifluorotoluene	92.8	0	87-113		%REC	200	10/23/13 06:05 PM
Surr: a,a,a-Trifluorotoluene	114	0	87-113	S	%REC	1	10/23/13 01:48 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:50 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/25/13 05:25 PM
Barium	0.0177	0.00300	0.0100		mg/L	1	10/25/13 05:25 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 05:25 PM
Calcium	597	5.00	15.0		mg/L	50	10/22/13 08:15 PM
Chromium	0.00322	0.00200	0.00500	J	mg/L	1	10/25/13 05:25 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 05:25 PM
Magnesium	192	5.00	15.0		mg/L	50	10/22/13 08:15 PM
Potassium	3.05	0.100	0.300		mg/L	1	10/28/13 02:40 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 05:25 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 05:25 PM
Sodium	76.4	5.00	15.0		mg/L	50	10/22/13 08:15 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	78.2	3.00	10.0		mg/L	10	10/21/13 12:52 PM
Sulfate	1970	100	300		mg/L	100	10/21/13 02:39 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	679	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:55 AM
Alkalinity, Carbonate (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:55 AM
Alkalinity, Hydroxide (As CaCO ₃)	ND	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:55 AM
Alkalinity, Total (As CaCO ₃)	679	12.5	25.0		mg/L @ pH 4.52	1	10/22/13 11:55 AM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	3210	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-7
Lab ID: 1310178-28
Collection Date: 10/17/13 08:30 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B				Analyst: AV	
Benzene	14.6	0.0800	0.200		mg/L	100	10/23/13 02:08 PM
Ethylbenzene	ND	0.200	0.600		mg/L	100	10/23/13 02:08 PM
Toluene	1.20	0.200	0.600		mg/L	100	10/23/13 02:08 PM
Xylenes, Total	ND	0.300	0.900		mg/L	100	10/23/13 02:08 PM
Surr: a,a,a-Trifluorotoluene	92.4	0	87-113		%REC	100	10/23/13 02:08 PM
MERCURY FILTERED (0.45µ)							
		SW7470A				Analyst: LM	
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:52 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A				Analyst: SW	
Arsenic	0.0111	0.00200	0.00500		mg/L	1	10/25/13 05:31 PM
Barium	0.0282	0.00300	0.0100		mg/L	1	10/25/13 05:31 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 05:31 PM
Calcium	542	5.00	15.0		mg/L	50	10/28/13 01:15 PM
Chromium	0.130	0.00200	0.00500		mg/L	1	10/25/13 05:31 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 05:31 PM
Magnesium	76.9	1.00	3.00		mg/L	10	10/28/13 01:21 PM
Potassium	19.8	1.00	3.00		mg/L	10	10/28/13 01:21 PM
Selenium	0.00591	0.00200	0.00500		mg/L	1	10/25/13 05:31 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 05:31 PM
Sodium	68.7	1.00	3.00		mg/L	10	10/28/13 01:21 PM
ANIONS BY IC METHOD - WATER							
		E300				Analyst: JBC	
Chloride	64.1	3.00	10.0		mg/L	10	10/21/13 03:11 PM
Sulfate	2170	100	300		mg/L	100	10/21/13 01:21 PM
ALKALINITY							
		M2320 B				Analyst: JBC	
Alkalinity, Bicarbonate (As CaCO ₃)	1530	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:15 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:15 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:15 PM
Alkalinity, Total (As CaCO ₃)	1530	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:15 PM
TOTAL DISSOLVED SOLIDS							
		M2540C				Analyst: JCG	
Total Dissolved Solids (Residue, Filterable)	3450	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

DHL Analytical, Inc.

Date: 22-Nov-13

CLIENT: Larson & Associates
Project: Frontier ABO
Project No: 6-0141
Lab Order: 1310178

Client Sample ID: MW-2
Lab ID: 1310178-29
Collection Date: 10/17/13 08:45 AM
Matrix: AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC							
		SW8021B					Analyst: AV
Benzene	0.00570	0.000800	0.00200		mg/L	1	10/23/13 02:27 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	10/23/13 02:27 PM
Toluene	ND	0.00200	0.00600		mg/L	1	10/23/13 02:27 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	10/23/13 02:27 PM
Surr: a,a,a-Trifluorotoluene	92.8	0	87-113		%REC	1	10/23/13 02:27 PM
MERCURY FILTERED (0.45µ)							
		SW7470A					Analyst: LM
Mercury	ND	0.0000800	0.000200		mg/L	1	10/25/13 02:54 PM
DISSOLVED METALS-ICPMS (0.45µ)							
		SW6020A					Analyst: SW
Arsenic	ND	0.00200	0.00500		mg/L	1	10/25/13 05:37 PM
Barium	0.0465	0.00300	0.0100		mg/L	1	10/25/13 05:37 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	10/25/13 05:37 PM
Calcium	626	5.00	15.0		mg/L	50	10/22/13 08:27 PM
Chromium	0.00251	0.00200	0.00500	J	mg/L	1	10/25/13 05:37 PM
Lead	ND	0.000300	0.00100		mg/L	1	10/25/13 05:37 PM
Magnesium	89.8	5.00	15.0		mg/L	50	10/22/13 08:27 PM
Potassium	20.5	5.00	15.0		mg/L	50	10/22/13 08:27 PM
Selenium	ND	0.00200	0.00500		mg/L	1	10/25/13 05:37 PM
Silver	ND	0.00100	0.00200		mg/L	1	10/25/13 05:37 PM
Sodium	106	5.00	15.0		mg/L	50	10/22/13 08:27 PM
ANIONS BY IC METHOD - WATER							
		E300					Analyst: JBC
Chloride	150	3.00	10.0		mg/L	10	10/21/13 03:40 PM
Sulfate	1860	100	300		mg/L	100	10/21/13 03:57 PM
ALKALINITY							
		M2320 B					Analyst: JBC
Alkalinity, Bicarbonate (As CaCO ₃)	289	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:20 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:20 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:20 PM
Alkalinity, Total (As CaCO ₃)	289	25.0	50.0		mg/L @ pH 4.52	1	10/22/13 12:20 PM
TOTAL DISSOLVED SOLIDS							
		M2540C					Analyst: JCG
Total Dissolved Solids (Residue, Filterable)	2910	50.0	50.0		mg/L	1	10/23/13 08:55 AM

Qualifiers:	*	Value exceeds TCLP Maximum Concentration Level	B	Analyte detected in the associated Method Blank
	C	Sample Result or QC discussed in the Case Narrative	DF	Dilution Factor
	E	TPH pattern not Gas or Diesel Range Pattern	J	Analyte detected between MDL and RL
	MDL	Method Detection Limit	ND	Not Detected at the Method Detection Limit
	RL	Reporting Limit	S	Spike Recovery outside control limits
	N	Parameter not NELAC certified		

CLIENT: Larson & Associates

Work Order: 1310178

Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_131022A

The QC data in batch 60068 applies to the following samples: 1310178-01A, 1310178-02A, 1310178-03A, 1310178-04A, 1310178-05A, 1310178-06A, 1310178-07A, 1310178-08A, 1310178-09A, 1310178-10A, 1310178-11A, 1310178-12A, 1310178-13A, 1310178-14A, 1310178-16A, 1310178-17A, 1310178-18A, 1310178-19A, 1310178-20A

Sample ID: LCS-60068	Batch ID: 60068	TestNo: SW8021B	Units: mg/L							
SampType: LCS	Run ID: GC8_131022A	Analysis Date: 10/22/2013 9:06:55 AM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0436	0.00200	0.0500	0	87.2	81	125			
Toluene	0.0426	0.00600	0.0500	0	85.2	84	123			
Ethylbenzene	0.0438	0.00600	0.0500	0	87.5	83	119			
Xylenes, Total	0.132	0.00900	0.150	0	87.8	81	117			
Surr: a,a,a-Trifluorotoluene	181		200.0		90.3	87	113			

Sample ID: MB-60068	Batch ID: 60068	TestNo: SW8021B	Units: mg/L							
SampType: MBLK	Run ID: GC8_131022A	Analysis Date: 10/22/2013 9:46:52 AM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.00200								
Toluene	ND	0.00600								
Ethylbenzene	ND	0.00600								
Xylenes, Total	ND	0.00900								
Surr: a.a.a-Trifluorotoluene	188		200.0		94.2	87	113			

Sample ID: 1310178-02AMS	Batch ID: 60068	TestNo: SW8021B	Units: mg/L							
SampType: MS	Run ID: GC8_131022A	Analysis Date: 10/22/2013 1:35:30 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0472	0.00200	0.0500	0	94.3	81	125			
Toluene	0.0457	0.00600	0.0500	0	91.3	84	123			
Ethylbenzene	0.0467	0.00600	0.0500	0	93.4	83	119			
Xylenes, Total	0.139	0.00900	0.150	0	92.7	81	117			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.6	87	113			

Sample ID: 1310178-02AMSD	Batch ID: 60068	TestNo: SW8021B	Units: mg/L							
SampType: MSD	Run ID: GC8_131022A	Analysis Date: 10/22/2013 1:55:12 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0474	0.00200	0.0500	0	94.9	81	125	0.583	20	
Toluene	0.0462	0.00600	0.0500	0	92.3	84	123	1.09	20	
Ethylbenzene	0.0472	0.00600	0.0500	0	94.5	83	119	1.12	20	
Xylenes, Total	0.141	0.00900	0.150	0	94.0	81	117	1.43	20	
Surr: a,a,a-Trifluorotoluene	187		200.0		93.7	87	113	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_131022A

Sample ID: ICV-131022		Batch ID: R69306		TestNo: SW8021B		Units: mg/L					
SampType: ICV		Run ID: GC8_131022A		Analysis Date: 10/22/2013 8:41:01 AM		Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0929	0.00200	0.100	0	92.9	80	120			
Toluene	0.0921	0.00600	0.100	0	92.1	80	120			
Ethylbenzene	0.0932	0.00600	0.100	0	93.2	80	120			
Xylenes, Total	0.280	0.00900	0.300	0	93.4	80	120			
Surr: a,a,a-Trifluorotoluene	188		200.0		94.2	87	113			

Sample ID: CCV1-131022	Batch ID: R69306	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_131022A	Analysis Date: 10/22/2013 2:14:30 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0471	0.00200	0.0500	0	94.1	80	120			
Toluene	0.0463	0.00600	0.0500	0	92.7	80	120			
Ethylbenzene	0.0472	0.00600	0.0500	0	94.5	80	120			
Xylenes, Total	0.141	0.00900	0.150	0	94.2	80	120			
Surr: a,a,a-Trifluorotoluene	189		200.0		94.6	87	113			

Sample ID: CCV2-131022	Batch ID: R69306	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_131022A	Analysis Date: 10/22/2013 5:56:48 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0469	0.00200	0.0500	0	93.8	80	120			
Toluene	0.0458	0.00600	0.0500	0	91.5	80	120			
Ethylbenzene	0.0469	0.00600	0.0500	0	93.8	80	120			
Xylenes, Total	0.140	0.00900	0.150	0	93.2	80	120			
Surr: a,a,a-Trifluorotoluene	189		200.0		94.4	87	113			

Sample ID: CCV3-131022	Batch ID: R69306	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_131022A	Analysis Date: 10/22/2013 7:21:49 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0453	0.00200	0.0500	0	90.7	80	120			
Toluene	0.0438	0.00600	0.0500	0	87.7	80	120			
Ethylbenzene	0.0450	0.00600	0.0500	0	89.9	80	120			
Xylenes, Total	0.135	0.00900	0.150	0	89.7	80	120			
Surr: a,a,a-Trifluorotoluene	183		200.0		91.6	87	113			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_131023A

The QC data in batch 60096 applies to the following samples: 1310178-15A, 1310178-21A, 1310178-22A, 1310178-23A, 1310178-24A, 1310178-25A, 1310178-26A, 1310178-27A, 1310178-28A, 1310178-29A

Sample ID: LCS-60096	Batch ID: 60096	TestNo: SW8021B	Units: mg/L							
SampType: LCS	Run ID: GC8_131023A	Analysis Date: 10/23/2013 10:05:18 A	Prep Date: 10/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0440	0.00200	0.0500	0	88.0	81	125			
Toluene	0.0430	0.00600	0.0500	0	85.9	84	123			
Ethylbenzene	0.0443	0.00600	0.0500	0	88.5	83	119			
Xylenes, Total	0.133	0.00900	0.150	0	88.6	81	117			
Surr: a,a,a-Trifluorotoluene	183		200.0		91.4	87	113			

Sample ID: MB-60096	Batch ID: 60096	TestNo: SW8021B	Units: mg/L							
SampType: MBLK	Run ID: GC8_131023A	Analysis Date: 10/23/2013 10:44:27 A	Prep Date: 10/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	ND	0.00200								
Toluene	ND	0.00600								
Ethylbenzene	ND	0.00600								
Xylenes, Total	ND	0.00900								
Surr: a,a,a-Trifluorotoluene	190		200.0		94.8	87	113			

Sample ID: 1310178-24AMS	Batch ID: 60096	TestNo: SW8021B	Units: mg/L							
SampType: MS	Run ID: GC8_131023A	Analysis Date: 10/23/2013 2:46:54 PM	Prep Date: 10/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0485	0.00200	0.0500	0.00134	94.3	81	125			
Toluene	0.0462	0.00600	0.0500	0	92.3	84	123			
Ethylbenzene	0.0467	0.00600	0.0500	0	93.5	83	119			
Xylenes, Total	0.138	0.00900	0.150	0	92.1	81	117			
Surr: a,a,a-Trifluorotoluene	188		200.0		94.1	87	113			

Sample ID: 1310178-24AMSD	Batch ID: 60096	TestNo: SW8021B	Units: mg/L							
SampType: MSD	Run ID: GC8_131023A	Analysis Date: 10/23/2013 3:06:24 PM	Prep Date: 10/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0477	0.00200	0.0500	0.00134	92.8	81	125	1.54	20	
Toluene	0.0454	0.00600	0.0500	0	90.8	84	123	1.66	20	
Ethylbenzene	0.0464	0.00600	0.0500	0	92.8	83	119	0.683	20	
Xylenes, Total	0.138	0.00900	0.150	0	91.8	81	117	0.230	20	
Surr: a,a,a-Trifluorotoluene	187		200.0		93.6	87	113	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_131023A

Sample ID: ICV-131023		Batch ID: R69343		TestNo: SW8021B		Units: mg/L				
SampType: ICV		Run ID: GC8_131023A		Analysis Date: 10/23/2013 9:32:14 AM		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0929	0.00200	0.100	0	92.9	80	120			
Toluene	0.0923	0.00600	0.100	0	92.3	80	120			
Ethylbenzene	0.0929	0.00600	0.100	0	92.9	80	120			
Xylenes, Total	0.279	0.00900	0.300	0	92.9	80	120			
Surr: a,a,a-Trifluorotoluene	189		200.0		94.5	87	113			

Sample ID: CCV1-131023	Batch ID: R69343	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_131023A	Analysis Date: 10/23/2013 3:26:21 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0474	0.00200	0.0500	0	94.8	80	120			
Toluene	0.0458	0.00600	0.0500	0	91.5	80	120			
Ethylbenzene	0.0468	0.00600	0.0500	0	93.6	80	120			
Xylenes, Total	0.140	0.00900	0.150	0	93.2	80	120			
Surr: a,a,a-Trifluorotoluene	186		200.0		92.9	87	113			

Sample ID: CCV2-131023	Batch ID: R69343	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_131023A	Analysis Date: 10/23/2013 5:10:45 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0471	0.00200	0.0500	0	94.2	80	120			
Toluene	0.0460	0.00600	0.0500	0	92.1	80	120			
Ethylbenzene	0.0472	0.00600	0.0500	0	94.4	80	120			
Xylenes, Total	0.141	0.00900	0.150	0	93.7	80	120			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.7	87	113			

Sample ID: CCV3-131023	Batch ID: R69343	TestNo: SW8021B	Units: mg/L							
SampType: CCV	Run ID: GC8_131023A	Analysis Date: 10/23/2013 6:25:12 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0468	0.00200	0.0500	0	93.5	80	120			
Toluene	0.0451	0.00600	0.0500	0	90.1	80	120			
Ethylbenzene	0.0462	0.00600	0.0500	0	92.3	80	120			
Xylenes, Total	0.138	0.00900	0.150	0	92.0	80	120			
Surr: a,a,a-Trifluorotoluene	186		200.0		93.1	87	113			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_131023B

The QC data in batch 60066 applies to the following samples: 1310178-01B, 1310178-02B, 1310178-03B, 1310178-04B, 1310178-05B, 1310178-06B, 1310178-07B, 1310178-08B, 1310178-09B, 1310178-10B, 1310178-11B, 1310178-12B, 1310178-13B, 1310178-14B, 1310178-15B, 1310178-16B

Sample ID: 1310178-03B SD	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: SD	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:42:20 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0	0.00100	0	0				0	10	
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Sample ID: 1310178-03B PDS	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: PDS	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:48:31 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00245	0.000200	0.00250	0	98.0	85	115			
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Sample ID: 1310178-03B MS	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: MS	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:50:33 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00196	0.000200	0.00200	0	98.0	80	120			
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Sample ID: 1310178-03B MSD	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: MSD	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:52:36 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00191	0.000200	0.00200	0	95.5	80	120	2.58	15	
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The QC data in batch 60066 applies to the following samples: 1310178-01B, 1310178-02B, 1310178-03B, 1310178-04B, 1310178-05B, 1310178-06B, 1310178-07B, 1310178-08B, 1310178-09B, 1310178-10B, 1310178-11B, 1310178-12B, 1310178-13B, 1310178-14B, 1310178-15B, 1310178-16B

Sample ID: MB-60066	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:24:00 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	ND	0.000200								
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Sample ID: Filter Blank-60066	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:28:03 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	ND	0.000200								
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Sample ID: LCS-60066	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:32:08 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_131023B

Sample ID: LCS-60066	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:32:08 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00186	0.000200	0.00200	0	93.0	85	115			

Sample ID: LCSD-60066	Batch ID: 60066	TestNo: SW7470A	Units: mg/L							
SampType: LCSD	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:34:10 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00196	0.000200	0.00200	0	98.0	85	115	5.24	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_131023B

Sample ID: ICV-131023	Batch ID: R69305	TestNo: SW7470A	Units: mg/L							
SampType: ICV	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:19:54 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00411	0.000200	0.00400	0	103	90	110			

Sample ID: CCV1-131023	Batch ID: R69305	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 1:44:24 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00190	0.000200	0.00200	0	95.0	90	110			

Sample ID: CCV2-131023	Batch ID: R69305	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 2:09:01 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Sample ID: CCV3-131023	Batch ID: R69305	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 2:33:45 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00203	0.000200	0.00200	0	102	90	110			

Sample ID: CCV4-131023	Batch ID: R69305	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC_HG_131023B	Analysis Date: 10/23/2013 2:58:35 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00193	0.000200	0.00200	0	96.5	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_131025A

The QC data in batch 60075 applies to the following samples: 1310178-17B, 1310178-18B, 1310178-19B, 1310178-20B, 1310178-21B, 1310178-22B, 1310178-23B, 1310178-24B, 1310178-25B, 1310178-26B, 1310178-27B, 1310178-28B, 1310178-29B

Sample ID: MB-60075	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 1:57:32 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury ND 0.000200

Sample ID: Filter Blank-60075	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: MBLK	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 1:59:33 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury ND 0.000200

Sample ID: LCS-60075	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: LCS	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:03:37 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00202 0.000200 0.00200 0 101 85 115

Sample ID: LCSD-60075	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: LCSD	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:05:40 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00199 0.000200 0.00200 0 99.5 85 115 1.50 15

Sample ID: 1310193-18B SD	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: SD	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:13:49 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0 0.00100 0 0 0 0 0 0 10

Sample ID: 1310193-18B PDS	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: PDS	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:15:52 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00242 0.000200 0.00250 0 96.8 85 115

Sample ID: 1310193-18B MS	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: MS	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:22:02 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00210 0.000200 0.00200 0 105 80 120

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_131025A

Sample ID: 1310193-18B MSD	Batch ID: 60075	TestNo: SW7470A	Units: mg/L							
SampType: MSD	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:24:05 PM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00211	0.000200	0.00200	0	106	80	120	0.475	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_131025A

Sample ID: ICV-131025	Batch ID: R69363	TestNo: SW7470A	Units: mg/L							
SampType: ICV	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 1:53:26 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00416	0.000200	0.00400	0	104	90	110			

Sample ID: CCV1-131025	Batch ID: R69363	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:17:56 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00190	0.000200	0.00200	0	95.0	90	110			

Sample ID: CCV2-131025	Batch ID: R69363	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 2:42:33 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	90	110			

Sample ID: CCV3-131025	Batch ID: R69363	TestNo: SW7470A	Units: mg/L							
SampType: CCV	Run ID: CETAC_HG_131025A	Analysis Date: 10/25/2013 3:07:17 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00196	0.000200	0.00200	0	98.0	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_131025A

Sample ID: ILCVL-131025		Batch ID: R69380		TestNo: SW6020A		Units: mg/L				
SampType: LCVL		Run ID: ICP-MS2_131025A		Analysis Date: 10/25/2013 1:01:00 PM		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00512	0.00500	0.00500	0	102	70	130			
Barium	0.00477	0.0100	0.00500	0	95.5	70	130			
Cadmium	0.000982	0.00100	0.00100	0	98.2	70	130			
Chromium	0.00502	0.00500	0.00500	0	100	70	130			
Lead	0.000969	0.00100	0.00100	0	96.9	70	130			
Potassium	0.114	0.300	0.100	0	114	70	130			
Selenium	0.00541	0.00500	0.00500	0	108	70	130			
Silver	0.00192	0.00200	0.00200	0	96.0	70	130			

Sample ID: LCVL1-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 2:58:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00508	0.00500	0.00500	0	102	70	130			
Barium	0.00482	0.0100	0.00500	0	96.3	70	130			
Cadmium	0.00107	0.00100	0.00100	0	107	70	130			
Chromium	0.00496	0.00500	0.00500	0	99.2	70	130			
Lead	0.000998	0.00100	0.00100	0	99.8	70	130			
Potassium	0.117	0.300	0.100	0	117	70	130			
Selenium	0.00529	0.00500	0.00500	0	106	70	130			
Silver	0.00193	0.00200	0.00200	0	96.6	70	130			

Sample ID: LCVL2-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 5:01:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00510	0.00500	0.00500	0	102	70	130			
Barium	0.00483	0.0100	0.00500	0	96.7	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Chromium	0.00485	0.00500	0.00500	0	96.9	70	130			
Lead	0.000985	0.00100	0.00100	0	98.5	70	130			
Potassium	0.118	0.300	0.100	0	118	70	130			
Selenium	0.00539	0.00500	0.00500	0	108	70	130			
Silver	0.00188	0.00200	0.00200	0	94.0	70	130			

Sample ID: LCVL3-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 6:35:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00515	0.00500	0.00500	0	103	70	130			
Barium	0.00500	0.0100	0.00500	0	100	70	130			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_131025A

Sample ID: LCVL3-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 6:35:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.00104	0.00100	0.00100	0	104	70	130			
Chromium	0.00474	0.00500	0.00500	0	94.8	70	130			
Lead	0.000985	0.00100	0.00100	0	98.5	70	130			
Selenium	0.00553	0.00500	0.00500	0	111	70	130			
Silver	0.00196	0.00200	0.00200	0	97.9	70	130			

Sample ID: ICV1-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: ICV	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 12:43:00 P	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.0996	0.00500	0.100	0	99.6	90	110			
Barium	0.0987	0.0100	0.100	0	98.7	90	110			
Cadmium	0.0994	0.00100	0.100	0	99.4	90	110			
Chromium	0.102	0.00500	0.100	0	102	90	110			
Lead	0.0978	0.00100	0.100	0	97.8	90	110			
Potassium	2.65	0.300	2.50	0	106	90	110			
Selenium	0.0988	0.00500	0.100	0	98.8	90	110			
Silver	0.0980	0.00200	0.100	0	98.0	90	110			

Sample ID: CCV1-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 2:11:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.205	0.00500	0.200	0	103	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Cadmium	0.202	0.00100	0.200	0	101	90	110			
Chromium	0.212	0.00500	0.200	0	106	90	110			
Lead	0.202	0.00100	0.200	0	101	90	110			
Potassium	5.29	0.300	5.00	0	106	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			
Silver	0.201	0.00200	0.200	0	100	90	110			

Sample ID: CCV2-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 4:14:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.205	0.00500	0.200	0	103	90	110			
Barium	0.201	0.0100	0.200	0	101	90	110			
Cadmium	0.197	0.00100	0.200	0	98.4	90	110			
Chromium	0.213	0.00500	0.200	0	106	90	110			
Lead	0.202	0.00100	0.200	0	101	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2_131025A

Sample ID: CCV2-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 4:14:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.43	0.300	5.00	0	109	90	110			
Selenium	0.207	0.00500	0.200	0	103	90	110			
Silver	0.198	0.00200	0.200	0	99.0	90	110			

Sample ID: CCV3-131025	Batch ID: R69380	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS2_131025A	Analysis Date: 10/25/2013 6:00:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.210	0.00500	0.200	0	105	90	110			
Barium	0.206	0.0100	0.200	0	103	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			
Chromium	0.207	0.00500	0.200	0	103	90	110			
Lead	0.209	0.00100	0.200	0	105	90	110			
Selenium	0.219	0.00500	0.200	0	109	90	110			
Silver	0.204	0.00200	0.200	0	102	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131021A

The QC data in batch 60044 applies to the following samples: 1310178-01B, 1310178-02B, 1310178-03B, 1310178-04B, 1310178-05B, 1310178-06B, 1310178-07B, 1310178-08B, 1310178-09B, 1310178-10B, 1310178-11B, 1310178-12B, 1310178-13B, 1310178-14B, 1310178-15B, 1310178-16B

Sample ID: MB-60044	Batch ID: 60044	TestNo: SW6020A	Units: mg/L
SampType: MBLK	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 12:35:00 P	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500								
Barium	ND	0.0100								
Cadmium	ND	0.00100								
Calcium	ND	0.300								
Chromium	ND	0.00500								
Lead	ND	0.00100								
Magnesium	ND	0.300								
Potassium	ND	0.300								
Selenium	ND	0.00500								
Silver	ND	0.00200								
Sodium	ND	0.300								

Sample ID: Filter Blank-60044	Batch ID: 60044	TestNo: SW6020A	Units: mg/L
SampType: MBLK	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 12:41:00 P	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500								
Barium	ND	0.0100								
Cadmium	ND	0.00100								
Calcium	ND	0.300								
Chromium	ND	0.00500								
Lead	ND	0.00100								
Magnesium	ND	0.300								
Potassium	ND	0.300								
Selenium	ND	0.00500								
Silver	ND	0.00200								
Sodium	ND	0.300								

Sample ID: LCS-60044	Batch ID: 60044	TestNo: SW6020A	Units: mg/L
SampType: LCS	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 12:47:00 P	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.198	0.00500	0.200	0	99.0	80	120			
Barium	0.195	0.0100	0.200	0	97.7	80	120			
Cadmium	0.196	0.00100	0.200	0	97.8	80	120			
Calcium	4.81	0.300	5.00	0	96.3	80	120			
Chromium	0.188	0.00500	0.200	0	94.0	80	120			
Lead	0.197	0.00100	0.200	0	98.4	80	120			
Magnesium	4.64	0.300	5.00	0	92.8	80	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131021A

Sample ID: LCS-60044	Batch ID: 60044	TestNo: SW6020A	Units: mg/L							
SampType: LCS	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 12:47:00 P	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.06	0.300	5.00	0	101	80	120			
Selenium	0.205	0.00500	0.200	0	102	80	120			
Silver	0.194	0.00200	0.200	0	97.1	80	120			
Sodium	4.67	0.300	5.00	0	93.5	80	120			

Sample ID: LCSD-60044	Batch ID: 60044	TestNo: SW6020A				Units: mg/L				
SampType: LCSD	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 12:53:00 P				Prep Date: 10/21/2013				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0	102	80	120	3.04	15	
Barium	0.202	0.0100	0.200	0	101	80	120	3.42	15	
Cadmium	0.201	0.00100	0.200	0	100	80	120	2.67	15	
Calcium	5.01	0.300	5.00	0	100	80	120	4.05	15	
Chromium	0.198	0.00500	0.200	0	98.8	80	120	4.98	15	
Lead	0.204	0.00100	0.200	0	102	80	120	3.39	15	
Magnesium	4.82	0.300	5.00	0	96.4	80	120	3.85	15	
Potassium	5.11	0.300	5.00	0	102	80	120	0.866	15	
Selenium	0.202	0.00500	0.200	0	101	80	120	1.48	15	
Silver	0.199	0.00200	0.200	0	99.5	80	120	2.44	15	
Sodium	4.82	0.300	5.00	0	96.4	80	120	3.06	15	

Sample ID: 1310178-09B SD	Batch ID: 60044	TestNo: SW6020A	Units: mg/L							
SampType: SD	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 1:11:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0	0.0250	0	0				0	10	
Barium	0.0178	0.0500	0	0.0183				2.41	10	
Cadmium	0	0.00500	0	0				0	10	
Chromium	0	0.0250	0	0				0	10	
Lead	0	0.00500	0	0				0	10	
Potassium	4.65	1.50	0	4.67				0.365	10	
Selenium	0	0.0250	0	0				0	10	
Silver	0	0.0100	0	0				0	10	

Sample ID: 1310178-09B PDS	Batch ID: 60044	TestNo: SW6020A	Units: mg/L							
SampType: PDS	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 2:12:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.230	0.00500	0.200	0	115	80	120			
Barium	0.218	0.0100	0.200	0.0183	99.9	80	120			
Cadmium	0.180	0.00100	0.200	0	90.0	80	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131021A

Sample ID: 1310178-09B PDS	Batch ID: 60044	TestNo: SW6020A	Units: mg/L							
SampType: PDS	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 2:12:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chromium	0.182	0.00500	0.200	0	91.0	80	120			
Lead	0.186	0.00100	0.200	0	92.8	80	120			
Potassium	9.85	0.300	5.00	4.67	104	80	120			
Selenium	0.197	0.00500	0.200	0	98.6	80	120			
Silver	0.159	0.00200	0.200	0	79.6	80	120			S

Sample ID: 1310178-09B MS	Batch ID: 60044	TestNo: SW6020A	Units: mg/L							
SampType: MS	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 2:18:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.237	0.00500	0.200	0	119	80	120			
Barium	0.225	0.0100	0.200	0.0183	104	80	120			
Cadmium	0.181	0.00100	0.200	0	90.5	80	120			
Calcium	523	0.300	5.00	560	-754	80	120			S
Chromium	0.184	0.00500	0.200	0	92.2	80	120			
Lead	0.194	0.00100	0.200	0	96.8	80	120			
Magnesium	277	0.300	5.00	303	-530	80	120			S
Potassium	10.1	0.300	5.00	4.67	108	80	120			
Selenium	0.209	0.00500	0.200	0	104	80	120			
Silver	0.174	0.00200	0.200	0	87.1	80	120			
Sodium	89.2	0.300	5.00	97.8	-173	80	120			S

Sample ID: 1310178-09B MSD	Batch ID: 60044	TestNo: SW6020A	Units: mg/L							
SampType: MSD	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 2:24:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.238	0.00500	0.200	0	119	80	120	0.169	15	
Barium	0.225	0.0100	0.200	0.0183	103	80	120	0.044	15	
Cadmium	0.180	0.00100	0.200	0	90.2	80	120	0.277	15	
Calcium	521	0.300	5.00	560	-784	80	120	0.287	15	S
Chromium	0.184	0.00500	0.200	0	92.2	80	120	0	15	
Lead	0.192	0.00100	0.200	0	96.0	80	120	0.882	15	
Magnesium	276	0.300	5.00	303	-540	80	120	0.181	15	S
Potassium	10.1	0.300	5.00	4.67	108	80	120	0.099	15	
Selenium	0.209	0.00500	0.200	0	105	80	120	0.239	15	
Silver	0.175	0.00200	0.200	0	87.6	80	120	0.572	15	
Sodium	88.6	0.300	5.00	97.8	-184	80	120	0.585	15	S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131021A

Sample ID: ILCVL-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 11:54:00 A	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00520	0.00500	0.00500	0	104	70	130			
Barium	0.00501	0.0100	0.00500	0	100	70	130			
Cadmium	0.00104	0.00100	0.00100	0	104	70	130			
Calcium	0.0931	0.300	0.100	0	93.1	70	130			
Chromium	0.00497	0.00500	0.00500	0	99.5	70	130			
Lead	0.00102	0.00100	0.00100	0	102	70	130			
Magnesium	0.100	0.300	0.100	0	100	70	130			
Potassium	0.0984	0.300	0.100	0	98.4	70	130			
Selenium	0.00545	0.00500	0.00500	0	109	70	130			
Silver	0.00197	0.00200	0.00200	0	98.7	70	130			
Sodium	0.0984	0.300	0.100	0	98.4	70	130			

Sample ID: LCVL1-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 3:18:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00505	0.00500	0.00500	0	101	70	130			
Barium	0.00488	0.0100	0.00500	0	97.6	70	130			
Cadmium	0.000976	0.00100	0.00100	0	97.6	70	130			
Calcium	0.105	0.300	0.100	0	105	70	130			
Chromium	0.00429	0.00500	0.00500	0	85.8	70	130			
Lead	0.000971	0.00100	0.00100	0	97.1	70	130			
Magnesium	0.109	0.300	0.100	0	109	70	130			
Potassium	0.140	0.300	0.100	0	140	70	130			S
Selenium	0.00487	0.00500	0.00500	0	97.3	70	130			
Silver	0.00187	0.00200	0.00200	0	93.6	70	130			
Sodium	0.116	0.300	0.100	0	116	70	130			

Sample ID: LCVL2-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 5:01:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00529	0.00500	0.00500	0	106	70	130			
Barium	0.00539	0.0100	0.00500	0	108	70	130			
Cadmium	0.000875	0.00100	0.00100	0	87.5	70	130			
Chromium	0.00393	0.00500	0.00500	0	78.6	70	130			
Selenium	0.00648	0.00500	0.00500	0	130	70	130			
Silver	0.00181	0.00200	0.00200	0	90.7	70	130			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131021A

Sample ID: ICV1-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L							
SampType: ICV	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 11:42:00 A	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.102	0.00500	0.100	0	102	90	110			
Barium	0.100	0.0100	0.100	0	100	90	110			
Cadmium	0.100	0.00100	0.100	0	100	90	110			
Calcium	2.43	0.300	2.50	0	97.0	90	110			
Chromium	0.0996	0.00500	0.100	0	99.6	90	110			
Lead	0.0985	0.00100	0.100	0	98.5	90	110			
Magnesium	2.41	0.300	2.50	0	96.4	90	110			
Potassium	2.50	0.300	2.50	0	99.8	90	110			
Selenium	0.103	0.00500	0.100	0	103	90	110			
Silver	0.0966	0.00200	0.100	0	96.6	90	110			
Sodium	2.39	0.300	2.50	0	95.7	90	110			

Sample ID: CCV1-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 2:36:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.208	0.00500	0.200	0	104	90	110			
Barium	0.203	0.0100	0.200	0	101	90	110			
Cadmium	0.188	0.00100	0.200	0	93.8	90	110			
Calcium	4.91	0.300	5.00	0	98.2	90	110			
Chromium	0.182	0.00500	0.200	0	91.0	90	110			
Lead	0.192	0.00100	0.200	0	96.2	90	110			
Magnesium	4.50	0.300	5.00	0	89.9	90	110			
Potassium	5.31	0.300	5.00	0	106	90	110			
Selenium	0.196	0.00500	0.200	0	98.0	90	110			
Silver	0.180	0.00200	0.200	0	90.2	90	110			
Sodium	4.26	0.300	5.00	0	85.1	90	110			S

Sample ID: CCV2-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 4:12:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cadmium	0.182	0.00100	0.200	0	91.2	90	110			
Chromium	0.183	0.00500	0.200	0	91.6	90	110			
Selenium	0.217	0.00500	0.200	0	108	90	110			
Silver	0.192	0.00200	0.200	0	95.9	90	110			

Sample ID: CCV2-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 4:18:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131021A

Sample ID: CCV2-131021	Batch ID: R69290	TestNo: SW6020A	Units: mg/L
SampType: CCV	Run ID: ICP-MS3_131021A	Analysis Date: 10/21/2013 4:18:00 PM	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.205	0.00500	0.200	0	102	90	110			
Barium	0.214	0.0100	0.200	0	107	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

The QC data in batch 60044 applies to the following samples: 1310178-01B, 1310178-02B, 1310178-03B, 1310178-04B, 1310178-05B, 1310178-06B, 1310178-07B, 1310178-08B, 1310178-09B, 1310178-10B, 1310178-11B, 1310178-12B, 1310178-13B, 1310178-14B, 1310178-15B, 1310178-16B

Sample ID: 1310178-09B SD	Batch ID: 60044	TestNo: SW6020A	Units: mg/L
SampType: SD	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 2:06:00 PM	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	580	75.0	0	584				0.816	10	
Magnesium	330	75.0	0	319				3.34	10	
Sodium	105	75.0	0	102				3.14	10	

Sample ID: 1310178-09B PDS	Batch ID: 60044	TestNo: SW6020A	Units: mg/L
SampType: PDS	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 3:07:00 PM	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	825	15.0	250	584	96.2	80	120			
Magnesium	532	15.0	250	319	85.2	80	120			
Sodium	321	15.0	250	102	87.8	80	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

The QC data in batch 60045 applies to the following samples: 1310178-17B, 1310178-18B, 1310178-19B, 1310178-20B, 1310178-21B, 1310178-22B, 1310178-23B, 1310178-24B, 1310178-25B, 1310178-26B, 1310178-27B, 1310178-28B, 1310178-29B

Sample ID: MB-60045	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: MBLK	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 5:25:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	ND	0.00500
Barium	ND	0.0100
Cadmium	ND	0.00100
Calcium	ND	0.300
Chromium	ND	0.00500
Lead	ND	0.00100
Magnesium	ND	0.300
Potassium	ND	0.300
Selenium	ND	0.00500
Silver	ND	0.00200
Sodium	ND	0.300

Sample ID: Filter Blank-60045	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: MBLK	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 5:31:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	ND	0.00500
Barium	ND	0.0100
Cadmium	ND	0.00100
Calcium	ND	0.300
Chromium	ND	0.00500
Lead	ND	0.00100
Magnesium	ND	0.300
Potassium	ND	0.300
Selenium	ND	0.00500
Silver	ND	0.00200
Sodium	ND	0.300

Sample ID: LCS-60045	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: LCS	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 5:37:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.203	0.00500	0.200	0	101	80	120
Barium	0.203	0.0100	0.200	0	102	80	120
Cadmium	0.200	0.00100	0.200	0	99.8	80	120
Calcium	5.18	0.300	5.00	0	104	80	120
Chromium	0.196	0.00500	0.200	0	97.8	80	120
Lead	0.210	0.00100	0.200	0	105	80	120
Magnesium	4.84	0.300	5.00	0	96.7	80	120

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

Sample ID: LCS-60045	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: LCS	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 5:37:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Potassium	5.16	0.300	5.00	0	103	80	120			
Selenium	0.212	0.00500	0.200	0	106	80	120			
Silver	0.203	0.00200	0.200	0	102	80	120			
Sodium	4.77	0.300	5.00	0	95.4	80	120			

Sample ID: LCSD-60045	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: LCSD	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 5:43:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.202	0.00500	0.200	0	101	80	120	0.098	15	
Barium	0.201	0.0100	0.200	0	100	80	120	1.19	15	
Cadmium	0.200	0.00100	0.200	0	100	80	120	0.200	15	
Calcium	5.08	0.300	5.00	0	102	80	120	1.75	15	
Chromium	0.195	0.00500	0.200	0	97.3	80	120	0.513	15	
Lead	0.207	0.00100	0.200	0	103	80	120	1.44	15	
Magnesium	4.80	0.300	5.00	0	95.9	80	120	0.851	15	
Potassium	5.15	0.300	5.00	0	103	80	120	0.136	15	
Selenium	0.214	0.00500	0.200	0	107	80	120	0.847	15	
Silver	0.199	0.00200	0.200	0	99.3	80	120	2.24	15	
Sodium	4.70	0.300	5.00	0	94.1	80	120	1.44	15	

Sample ID: 1310178-24B SD	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: SD	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 6:01:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0	1.25	0	0				0	10	
Barium	0	2.50	0	0				0	10	
Cadmium	0	0.250	0	0				0	10	
Calcium	579	75.0	0	546				5.92	10	
Chromium	0	1.25	0	0				0	10	
Lead	0	0.250	0	0				0	10	
Magnesium	121	75.0	0	112				7.51	10	
Potassium	0	75.0	0	5.24				0	10	
Selenium	0	1.25	0	0				0	10	
Silver	0	0.500	0	0				0	10	
Sodium	43.1	75.0	0	41.1				4.76	10	

Sample ID: 1310178-24B PDS	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: PDS	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 7:02:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

Sample ID: 1310178-24B PDS	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: PDS	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 7:02:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	10.1	0.250	10.0	0	101	80	120			
Barium	10.2	0.500	10.0	0	102	80	120			
Cadmium	9.86	0.0500	10.0	0	98.6	80	120			
Calcium	813	15.0	250	546	107	80	120			
Chromium	9.64	0.250	10.0	0	96.4	80	120			
Lead	10.1	0.0500	10.0	0	101	80	120			
Magnesium	352	15.0	250	112	96.0	80	120			
Potassium	259	15.0	250	5.24	102	80	120			
Selenium	10.3	0.250	10.0	0	103	80	120			
Silver	9.38	0.100	10.0	0	93.8	80	120			
Sodium	272	15.0	250	41.1	92.4	80	120			

Sample ID: 1310178-24B MS	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: MS	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 7:08:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.218	0.250	0.200	0	109	80	120			
Barium	0.216	0.500	0.200	0	108	80	120			
Cadmium	0.201	0.0500	0.200	0	101	80	120			
Calcium	569	15.0	5.00	546	470	80	120			S
Chromium	0.255	0.250	0.200	0	128	80	120			S
Lead	0.207	0.0500	0.200	0	104	80	120			
Magnesium	121	15.0	5.00	112	173	80	120			S
Potassium	11.0	15.0	5.00	5.24	115	80	120			
Selenium	0.257	0.250	0.200	0	129	80	120			S
Silver	0.202	0.100	0.200	0	101	80	120			
Sodium	46.1	15.0	5.00	41.1	100	80	120			

Sample ID: 1310178-24B MSD	Batch ID: 60045	TestNo: SW6020A	Units: mg/L							
SampType: MSD	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 7:14:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.209	0.250	0.200	0	105	80	120	4.16	15	
Barium	0.208	0.500	0.200	0	104	80	120	3.91	15	
Cadmium	0.192	0.0500	0.200	0	96.2	80	120	4.39	15	
Calcium	540	15.0	5.00	546	-100	80	120	5.14	15	S
Chromium	0.243	0.250	0.200	0	122	80	120	4.82	15	S
Lead	0.196	0.0500	0.200	0	98.1	80	120	5.33	15	
Magnesium	115	15.0	5.00	112	50.0	80	120	5.21	15	S
Potassium	10.5	15.0	5.00	5.24	105	80	120	4.56	15	
Selenium	0.204	0.250	0.200	0	102	80	120	22.9	15	R

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

Sample ID: 1310178-24B MSD		Batch ID: 60045		TestNo: SW6020A		Units: mg/L				
SampType: MSD		Run ID: ICP-MS3_131022A		Analysis Date: 10/22/2013 7:14:00 PM		Prep Date: 10/21/2013				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.196	0.100	0.200	0	98.1	80	120	2.76	15	
Sodium	44.1	15.0	5.00	41.1	60.6	80	120	4.41	15	S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

Sample ID: ILCVL-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 1:48:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00503	0.00500	0.00500	0	101	70	130			
Barium	0.00500	0.0100	0.00500	0	100	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Calcium	0.0906	0.300	0.100	0	90.6	70	130			
Chromium	0.00493	0.00500	0.00500	0	98.5	70	130			
Lead	0.000984	0.00100	0.00100	0	98.4	70	130			
Magnesium	0.0984	0.300	0.100	0	98.4	70	130			
Potassium	0.107	0.300	0.100	0	107	70	130			
Selenium	0.00501	0.00500	0.00500	0	100	70	130			
Silver	0.00197	0.00200	0.00200	0	98.5	70	130			
Sodium	0.103	0.300	0.100	0	103	70	130			

Sample ID: LCVL1-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 3:42:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0932	0.300	0.100	0	93.2	70	130			
Magnesium	0.102	0.300	0.100	0	102	70	130			
Potassium	0.110	0.300	0.100	0	110	70	130			
Sodium	0.0982	0.300	0.100	0	98.2	70	130			

Sample ID: LCVL2-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 5:07:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00510	0.00500	0.00500	0	102	70	130			
Barium	0.00503	0.0100	0.00500	0	101	70	130			
Cadmium	0.00100	0.00100	0.00100	0	100	70	130			
Calcium	0.0913	0.300	0.100	0	91.3	70	130			
Chromium	0.00477	0.00500	0.00500	0	95.5	70	130			
Lead	0.00100	0.00100	0.00100	0	100	70	130			
Magnesium	0.0990	0.300	0.100	0	99.0	70	130			
Potassium	0.108	0.300	0.100	0	108	70	130			
Selenium	0.00562	0.00500	0.00500	0	112	70	130			
Silver	0.00198	0.00200	0.00200	0	98.8	70	130			
Sodium	0.0935	0.300	0.100	0	93.5	70	130			

Sample ID: LCVL3-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 7:56:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:
 B Analyte detected in the associated Method Blank
 J Analyte detected between MDL and RL
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 J Analyte detected between SDL and RL

DF Dilution Factor
 MDL Method Detection Limit
 R RPD outside accepted control limits
 S Spike Recovery outside control limits
 N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

Sample ID: LCVL3-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 7:56:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00485	0.00500	0.00500	0	96.9	70	130			
Barium	0.00458	0.0100	0.00500	0	91.7	70	130			
Cadmium	0.000934	0.00100	0.00100	0	93.4	70	130			
Calcium	0.0806	0.300	0.100	0	80.6	70	130			
Chromium	0.00429	0.00500	0.00500	0	85.7	70	130			
Lead	0.000927	0.00100	0.00100	0	92.7	70	130			
Magnesium	0.0876	0.300	0.100	0	87.6	70	130			
Potassium	0.102	0.300	0.100	0	102	70	130			
Selenium	0.00522	0.00500	0.00500	0	104	70	130			
Silver	0.00188	0.00200	0.00200	0	93.8	70	130			
Sodium	0.0797	0.300	0.100	0	79.7	70	130			

Sample ID: LCVL4-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 9:45:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	0.0915	0.300	0.100	0	91.5	70	130			
Magnesium	0.0925	0.300	0.100	0	92.5	70	130			
Potassium	0.108	0.300	0.100	0	108	70	130			
Sodium	0.0838	0.300	0.100	0	83.8	70	130			

Sample ID: ICV1-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: ICV	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 1:30:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.101	0.00500	0.100	0	101	90	110			
Barium	0.101	0.0100	0.100	0	101	90	110			
Cadmium	0.100	0.00100	0.100	0	100	90	110			
Calcium	2.41	0.300	2.50	0	96.3	90	110			
Chromium	0.100	0.00500	0.100	0	100	90	110			
Lead	0.0996	0.00100	0.100	0	99.6	90	110			
Magnesium	2.45	0.300	2.50	0	97.9	90	110			
Potassium	2.48	0.300	2.50	0	99.1	90	110			
Selenium	0.0993	0.00500	0.100	0	99.3	90	110			
Silver	0.0980	0.00200	0.100	0	98.0	90	110			
Sodium	2.43	0.300	2.50	0	97.3	90	110			

Sample ID: CCV1-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 3:12:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

Sample ID: CCV1-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 3:12:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5.32	0.300	5.00	0	106	90	110			
Magnesium	4.94	0.300	5.00	0	98.9	90	110			
Potassium	5.20	0.300	5.00	0	104	90	110			
Sodium	4.90	0.300	5.00	0	98.1	90	110			

Sample ID: CCV2-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 4:31:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.199	0.00500	0.200	0	99.6	90	110			
Barium	0.192	0.0100	0.200	0	96.2	90	110			
Cadmium	0.193	0.00100	0.200	0	96.7	90	110			
Calcium	5.25	0.300	5.00	0	105	90	110			
Chromium	0.187	0.00500	0.200	0	93.4	90	110			
Lead	0.202	0.00100	0.200	0	101	90	110			
Magnesium	4.78	0.300	5.00	0	95.5	90	110			
Potassium	5.04	0.300	5.00	0	101	90	110			
Selenium	0.212	0.00500	0.200	0	106	90	110			
Silver	0.194	0.00200	0.200	0	97.2	90	110			
Sodium	4.73	0.300	5.00	0	94.7	90	110			

Sample ID: CCV3-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 7:20:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.197	0.00500	0.200	0	98.4	90	110			
Barium	0.196	0.0100	0.200	0	98.2	90	110			
Cadmium	0.193	0.00100	0.200	0	96.6	90	110			
Calcium	5.28	0.300	5.00	0	106	90	110			
Chromium	0.184	0.00500	0.200	0	92.2	90	110			
Lead	0.204	0.00100	0.200	0	102	90	110			
Magnesium	4.62	0.300	5.00	0	92.5	90	110			
Potassium	5.08	0.300	5.00	0	102	90	110			
Selenium	0.213	0.00500	0.200	0	107	90	110			
Silver	0.195	0.00200	0.200	0	97.6	90	110			
Sodium	4.56	0.300	5.00	0	91.2	90	110			

Sample ID: CCV4-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 9:09:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131022A

Sample ID: CCV4-131022	Batch ID: R69291	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131022A	Analysis Date: 10/22/2013 9:09:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.27	0.300	5.00	0	105	90	110			
Magnesium	4.67	0.300	5.00	0	93.4	90	110			
Potassium	5.19	0.300	5.00	0	104	90	110			
Sodium	4.57	0.300	5.00	0	91.5	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131025A

Sample ID: ILCVL-131025	Batch ID: R69375	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131025A	Analysis Date: 10/25/2013 12:28:00 P	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.103	0.300	0.100	0	103	70	130			

Sample ID: LCVL1-131025	Batch ID: R69375	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131025A	Analysis Date: 10/25/2013 2:22:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.0977	0.300	0.100	0	97.6	70	130			

Sample ID: ICV1-131025	Batch ID: R69375	TestNo: SW6020A	Units: mg/L							
SampType: ICV	Run ID: ICP-MS3_131025A	Analysis Date: 10/25/2013 12:10:00 P	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	2.42	0.300	2.50	0	96.8	90	110			

Sample ID: CCV1-131025	Batch ID: R69375	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131025A	Analysis Date: 10/25/2013 1:52:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	4.79	0.300	5.00	0	95.8	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131028A

Sample ID: ILCVL-131028	Batch ID: R69393	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131028A	Analysis Date: 10/28/2013 12:15:00 P	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0925	0.300	0.100	0	92.5	70	130			
Magnesium	0.0988	0.300	0.100	0	98.8	70	130			
Potassium	0.105	0.300	0.100	0	105	70	130			
Sodium	0.0989	0.300	0.100	0	98.9	70	130			

Sample ID: LCVL1-131028	Batch ID: R69393	TestNo: SW6020A		Units: mg/L						
SampType: LCVL	Run ID: ICP-MS3_131028A	Analysis Date: 10/28/2013 2:03:00 PM		Prep Date:						
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0974	0.300	0.100	0	97.4	70	130			
Magnesium	0.0998	0.300	0.100	0	99.8	70	130			
Potassium	0.116	0.300	0.100	0	116	70	130			
Sodium	0.101	0.300	0.100	0	101	70	130			

Sample ID: LCVL2-131028	Batch ID: R69393	TestNo: SW6020A	Units: mg/L							
SampType: LCVL	Run ID: ICP-MS3_131028A	Analysis Date: 10/28/2013 4:10:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	0.138	0.300	0.100	0	138	70	130			S

Sample ID: ICV1-131028	Batch ID: R69393	TestNo: SW6020A	Units: mg/L							
SampType: ICV	Run ID: ICP-MS3_131028A	Analysis Date: 10/28/2013 11:57:00 A	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.39	0.300	2.50	0	95.6	90	110			
Magnesium	2.39	0.300	2.50	0	95.4	90	110			
Potassium	2.48	0.300	2.50	0	99.2	90	110			
Sodium	2.40	0.300	2.50	0	95.9	90	110			

Sample ID: CCV1-131028	Batch ID: R69393	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131028A	Analysis Date: 10/28/2013 1:33:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.10	0.300	5.00	0	102	90	110			
Magnesium	4.76	0.300	5.00	0	95.2	90	110			
Potassium	5.09	0.300	5.00	0	102	90	110			
Sodium	4.89	0.300	5.00	0	97.9	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_131028A

Sample ID: CCV2-131028	Batch ID: R69393	TestNo: SW6020A	Units: mg/L							
SampType: CCV	Run ID: ICP-MS3_131028A	Analysis Date: 10/28/2013 3:39:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.17	0.300	5.00	0	103	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC_131018A

The QC data in batch 60032 applies to the following samples: 1310178-01D, 1310178-02D, 1310178-03D, 1310178-04D, 1310178-05D, 1310178-06D, 1310178-07D, 1310178-08D, 1310178-09D, 1310178-10D

Sample ID: LCS-60032	Batch ID: 60032	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC_131018A	Analysis Date: 10/18/2013 9:16:46 AM	Prep Date: 10/18/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.91	1.00	10.00	0	99.1	90	110			
Sulfate	28.7	3.00	30.00	0	95.6	90	110			

Sample ID: LCSD-60032	Batch ID: 60032	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC_131018A	Analysis Date: 10/18/2013 9:31:22 AM	Prep Date: 10/18/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.93	1.00	10.00	0	99.3	90	110	0.129	20	
Sulfate	28.8	3.00	30.00	0	95.9	90	110	0.277	20	

Sample ID: MB-60032	Batch ID: 60032	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC_131018A	Analysis Date: 10/18/2013 9:45:59 AM	Prep Date: 10/18/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID: 1310178-02D MS	Batch ID: 60032	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC_131018A	Analysis Date: 10/18/2013 12:13:26 P	Prep Date: 10/18/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2360	100	2000	606.1	87.9	90	110			S
Sulfate	3330	300	2000	1466	93.4	90	110			

Sample ID: 1310178-02D MSD	Batch ID: 60032	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC_131018A	Analysis Date: 10/18/2013 12:28:03 P	Prep Date: 10/18/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2390	100	2000	606.1	89.4	90	110	1.29	20	S
Sulfate	3400	300	2000	1466	96.7	90	110	1.92	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC_131018A

Sample ID: ICV-131018	Batch ID: R69244	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC_131018A	Analysis Date: 10/18/2013 8:55:23 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	25.2	1.00	25.00	0	101	90	110			
Sulfate	73.8	3.00	75.00	0	98.5	90	110			

Sample ID: CCV1-131018	Batch ID: R69244	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC_131018A	Analysis Date: 10/18/2013 12:42:39 P	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.97	1.00	10.00	0	99.7	90	110			
Sulfate	29.8	3.00	30.00	0	99.3	90	110			

Sample ID: CCV2-131018	Batch ID: R69244	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC_131018A	Analysis Date: 10/18/2013 3:34:00 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.4	3.00	30.00	0	101	90	110			

Sample ID: CCV3-131018	Batch ID: R69244	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC_131018A	Analysis Date: 10/18/2013 4:35:45 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.0	1.00	10.00	0	100	90	110			
Sulfate	30.4	3.00	30.00	0	101	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC_131021A

The QC data in batch 60037 applies to the following samples: 1310178-11D, 1310178-12D, 1310178-13D, 1310178-14D, 1310178-15D, 1310178-16D, 1310178-17D, 1310178-18D, 1310178-19D, 1310178-20D

Sample ID: LCS-60037	Batch ID: 60037	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC_131021A	Analysis Date: 10/21/2013 9:06:27 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.91	1.00	10.00	0	99.1	90	110			
Sulfate	29.0	3.00	30.00	0	96.6	90	110			

Sample ID: LCSD-60037	Batch ID: 60037	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC_131021A	Analysis Date: 10/21/2013 9:21:04 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.95	1.00	10.00	0	99.5	90	110	0.392	20	
Sulfate	28.9	3.00	30.00	0	96.4	90	110	0.219	20	

Sample ID: MB-60037	Batch ID: 60037	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC_131021A	Analysis Date: 10/21/2013 9:35:40 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID: 1310178-17D MS	Batch ID: 60037	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC_131021A	Analysis Date: 10/21/2013 1:43:34 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2480	100	2000	737.6	87.1	90	110			S
Sulfate	3530	300	2000	1632	94.9	90	110			

Sample ID: 1310178-17D MSD	Batch ID: 60037	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC_131021A	Analysis Date: 10/21/2013 1:58:10 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2500	100	2000	737.6	88.2	90	110	0.925	20	S
Sulfate	3630	300	2000	1632	99.8	90	110	2.74	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC_131021A

Sample ID: ICV-131021	Batch ID: R69260	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC_131021A	Analysis Date: 10/21/2013 8:48:28 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	25.2	1.00	25.00	0	101	90	110			
Sulfate	74.2	3.00	75.00	0	99.0	90	110			

Sample ID: CCV1-131021	Batch ID: R69260	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC_131021A	Analysis Date: 10/21/2013 11:33:32 A	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.96	1.00	10.00	0	99.6	90	110			
Sulfate	29.5	3.00	30.00	0	98.5	90	110			

Sample ID: CCV2-131021	Batch ID: R69260	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC_131021A	Analysis Date: 10/21/2013 2:27:23 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.97	1.00	10.00	0	99.7	90	110			
Sulfate	30.2	3.00	30.00	0	101	90	110			

Sample ID: CCV3-131021	Batch ID: R69260	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC_131021A	Analysis Date: 10/21/2013 3:38:54 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_131021A

The QC data in batch 60038 applies to the following samples: 1310178-21D, 1310178-22D, 1310178-23D, 1310178-24D, 1310178-25D, 1310178-26D, 1310178-27D, 1310178-28D, 1310178-29D

Sample ID: LCS-60038	Batch ID: 60038	TestNo: E300	Units: mg/L							
SampType: LCS	Run ID: IC2_131021A	Analysis Date: 10/21/2013 9:04:58 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.5	1.00	10.00	0	105	90	110			
Sulfate	28.9	3.00	30.00	0	96.5	90	110			

Sample ID: LCSD-60038	Batch ID: 60038	TestNo: E300	Units: mg/L							
SampType: LCSD	Run ID: IC2_131021A	Analysis Date: 10/21/2013 9:19:33 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.6	1.00	10.00	0	106	90	110	0.149	20	
Sulfate	29.0	3.00	30.00	0	96.5	90	110	0.056	20	

Sample ID: MB-60038	Batch ID: 60038	TestNo: E300	Units: mg/L							
SampType: MBLK	Run ID: IC2_131021A	Analysis Date: 10/21/2013 9:34:07 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	1.00								
Sulfate	ND	3.00								

Sample ID: 1310178-25D MS	Batch ID: 60038	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_131021A	Analysis Date: 10/21/2013 2:10:26 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	373	10.0	200.0	196.6	88.2	90	110			S
Sulfate	1270	30.0	200.0	1024	123	90	110			S

Sample ID: 1310178-25D MSD	Batch ID: 60038	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_131021A	Analysis Date: 10/21/2013 2:25:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	372	10.0	200.0	196.6	87.7	90	110	0.299	20	S
Sulfate	1270	30.0	200.0	1024	124	90	110	0.117	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_131021A

Sample ID: ICV-131021	Batch ID: R69261	TestNo: E300	Units: mg/L							
SampType: ICV	Run ID: IC2_131021A	Analysis Date: 10/21/2013 8:47:46 AM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	26.8	1.00	25.00	0	107	90	110			
Sulfate	76.4	3.00	75.00	0	102	90	110			

Sample ID: CCV1-131021	Batch ID: R69261	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_131021A	Analysis Date: 10/21/2013 11:45:17 A	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.5	1.00	10.00	0	105	90	110			
Sulfate	29.0	3.00	30.00	0	96.6	90	110			

Sample ID: CCV2-131021	Batch ID: R69261	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_131021A	Analysis Date: 10/21/2013 2:54:09 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.6	1.00	10.00	0	106	90	110			
Sulfate	29.0	3.00	30.00	0	96.8	90	110			

Sample ID: CCV3-131021	Batch ID: R69261	TestNo: E300	Units: mg/L							
SampType: CCV	Run ID: IC2_131021A	Analysis Date: 10/21/2013 4:11:38 PM	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.7	1.00	10.00	0	107	90	110			
Sulfate	29.6	3.00	30.00	0	98.7	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_131021A

The QC data in batch 60049 applies to the following samples: 1310178-01D, 1310178-02D, 1310178-03D, 1310178-04D, 1310178-05D, 1310178-06D, 1310178-07D, 1310178-08D, 1310178-09D, 1310178-10D, 1310178-11D, 1310178-12D, 1310178-13D, 1310178-14D, 1310178-15D, 1310178-16D, 1310178-17D, 1310178-18D, 1310178-19D, 1310178-20D

Sample ID: LCS-60049	Batch ID: 60049	TestNo: M2320 B	Units: mg/L @ pH 4.52
SampType: LCS	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 10:07:00 A	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	51.5	20.0	50.00	0	103	74	129			

Sample ID: MB-60049	Batch ID: 60049	TestNo: M2320 B	Units: mg/L @ pH 4.47
SampType: MBLK	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 10:09:00 A	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	20.0								
Alkalinity, Carbonate (As CaCO3)	ND	20.0								
Alkalinity, Hydroxide (As CaCO3)	ND	20.0								
Alkalinity, Total (As CaCO3)	ND	20.0								

Sample ID: 1310178-01D DUP	Batch ID: 60049	TestNo: M2320 B	Units: mg/L @ pH 4.52
SampType: DUP	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 10:24:00 A	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	332	25.0	0	333.5				0.481	20	
Alkalinity, Carbonate (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	332	25.0	0	333.5				0.481	20	

Sample ID: 1310178-20D DUP	Batch ID: 60049	TestNo: M2320 B	Units: mg/L @ pH 4.53
SampType: DUP	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 2:14:00 PM	Prep Date: 10/21/2013

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	333	25.0	0	336.6				1.17	20	
Alkalinity, Carbonate (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	333	25.0	0	336.6				1.17	20	

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_131021A

Sample ID: ICV-131021	Batch ID: R69266	TestNo: M2320 B	Units: mg/L @ pH 4.51							
SampType: ICV	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 10:02:00 A	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	11.6	20.0	0							
Alkalinity, Carbonate (As CaCO3)	88.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	99.8	20.0	100.0	0	99.8	98	102			

Sample ID: CCV1-131021	Batch ID: R69266	TestNo: M2320 B	Units: mg/L @ pH 4.51							
SampType: CCV	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 11:13:00 A	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	19.2	20.0	0							
Alkalinity, Carbonate (As CaCO3)	81.9	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	90	110			

Sample ID: CCV2-131021	Batch ID: R69266	TestNo: M2320 B	Units: mg/L @ pH 4.51							
SampType: CCV	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 12:51:00 P	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	28.5	20.0	0							
Alkalinity, Carbonate (As CaCO3)	70.9	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	99.4	20.0	100.0	0	99.4	90	110			

Sample ID: CCV3-131021	Batch ID: R69266	TestNo: M2320 B	Units: mg/L @ pH 4.49							
SampType: CCV	Run ID: TITRATOR_131021A	Analysis Date: 10/21/2013 2:39:00 PM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	20.2	20.0	0							
Alkalinity, Carbonate (As CaCO3)	77.1	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	97.4	20.0	100.0	0	97.4	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_131022A

The QC data in batch 60079 applies to the following samples: 1310178-21D, 1310178-22D, 1310178-23D, 1310178-24D, 1310178-25D, 1310178-26D, 1310178-27D, 1310178-28D, 1310178-29D

Sample ID: LCS-60079	Batch ID: 60079	TestNo: M2320 B	Units: mg/L @ pH 4.51							
SampType: LCS	Run ID: TITRATOR_131022A	Analysis Date: 10/22/2013 10:52:00 A	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	51.5	20.0	50.00	0	103	74	129			
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Sample ID: MB-60079	Batch ID: 60079	TestNo: M2320 B	Units: mg/L @ pH 4.5							
SampType: MBLK	Run ID: TITRATOR_131022A	Analysis Date: 10/22/2013 10:54:00 A	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	ND	20.0								
Alkalinity, Carbonate (As CaCO3)	ND	20.0								
Alkalinity, Hydroxide (As CaCO3)	ND	20.0								
Alkalinity, Total (As CaCO3)	ND	20.0								

Sample ID: 1310178-21D DUP	Batch ID: 60079	TestNo: M2320 B	Units: mg/L @ pH 4.52							
SampType: DUP	Run ID: TITRATOR_131022A	Analysis Date: 10/22/2013 11:11:00 A	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	365	25.0	0	373.4				2.22	20	
Alkalinity, Carbonate (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	365	25.0	0	373.4				2.22	20	

Sample ID: 1310183-01D DUP	Batch ID: 60079	TestNo: M2320 B	Units: mg/L @ pH 4.51							
SampType: DUP	Run ID: TITRATOR_131022A	Analysis Date: 10/22/2013 12:29:00 P	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	158	25.0	0	159.1				0.820	20	
Alkalinity, Carbonate (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	0	25.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	158	25.0	0	159.1				0.820	20	

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_131022A

Sample ID: ICV-131022	Batch ID: R69280	TestNo: M2320 B				Units: mg/L @ pH 4.51				
SampType: ICV	Run ID: TITRATOR_131022A	Analysis Date: 10/22/2013 10:37:00 A				Prep Date: 10/22/2013				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	12.2	20.0	0							
Alkalinity, Carbonate (As CaCO3)	89.1	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID: CCV1-131022	Batch ID: R69280	TestNo: M2320 B				Units: mg/L @ pH 4.51				
SampType: CCV	Run ID: TITRATOR_131022A	Analysis Date: 10/22/2013 12:00:00 P				Prep Date: 10/22/2013				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	22.6	20.0	0							
Alkalinity, Carbonate (As CaCO3)	77.4	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	90	110			

Sample ID: CCV2-131022	Batch ID: R69280	TestNo: M2320 B	Units: mg/L @ pH 4.51							
SampType: CCV	Run ID: TITRATOR_131022A	Analysis Date: 10/22/2013 12:45:00 P	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	21.6	20.0	0							
Alkalinity, Carbonate (As CaCO3)	78.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	99.8	20.0	100.0	0	99.8	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: WC_131021B

The QC data in batch 60041 applies to the following samples: 1310178-01D, 1310178-02D, 1310178-03D, 1310178-04D, 1310178-05D, 1310178-06D, 1310178-07D, 1310178-08D, 1310178-09D, 1310178-10D, 1310178-11D, 1310178-12D, 1310178-13D, 1310178-14D, 1310178-15D, 1310178-17D, 1310178-19D, 1310178-20D

Sample ID: LCS-60041	Batch ID: 60041	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_131021B	Analysis Date: 10/22/2013 8:55:00 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 680 10.0 745.6 0 91.2 90 113

Sample ID: MB-60041	Batch ID: 60041	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_131021B	Analysis Date: 10/22/2013 8:55:00 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera ND 10.0

Sample ID: 1310178-01D-DUP	Batch ID: 60041	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_131021B	Analysis Date: 10/22/2013 8:55:00 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 2870 50.0 0 2915 1.56 5

Sample ID: 1310178-20D-DUP	Batch ID: 60041	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_131021B	Analysis Date: 10/22/2013 8:55:00 AM	Prep Date: 10/21/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3210 50.0 0 3200 0.312 5

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: WC_131022B

The QC data in batch 60060 applies to the following samples: 1310178-21D, 1310178-22D, 1310178-23D, 1310178-24D, 1310178-25D, 1310178-26D, 1310178-27D, 1310178-28D, 1310178-29D

Sample ID: LCS-60060	Batch ID: 60060	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_131022B	Analysis Date: 10/23/2013 8:55:00 AM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 720 10.0 745.6 0 96.6 90 113

Sample ID: MB-60060	Batch ID: 60060	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_131022B	Analysis Date: 10/23/2013 8:55:00 AM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera ND 10.0

Sample ID: 1310178-28D-DUP	Batch ID: 60060	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_131022B	Analysis Date: 10/23/2013 8:55:00 AM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3430 50.0 0 3445 0.582 5

Sample ID: 1310178-29D-DUP	Batch ID: 60060	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_131022B	Analysis Date: 10/23/2013 8:55:00 AM	Prep Date: 10/22/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 3100 50.0 0 2910 6.16 5 R

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Larson & Associates
Work Order: 1310178
Project: Frontier ABO

ANALYTICAL QC SUMMARY REPORT

RunID: WC_131023A

The QC data in batch 60092 applies to the following samples: 1310178-16D, 1310178-18D

Sample ID: LCS-60092	Batch ID: 60092	TestNo: M2540C	Units: mg/L							
SampType: LCS	Run ID: WC_131023A	Analysis Date: 10/24/2013 9:20:00 AM	Prep Date: 10/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	720	10.0	745.6	0	96.6	90	113
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Sample ID: MB-60092	Batch ID: 60092	TestNo: M2540C	Units: mg/L							
SampType: MBLK	Run ID: WC_131023A	Analysis Date: 10/24/2013 9:20:00 AM	Prep Date: 10/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	ND	10.0
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Sample ID: 1310188-04B-DUP	Batch ID: 60092	TestNo: M2540C	Units: mg/L							
SampType: DUP	Run ID: WC_131023A	Analysis Date: 10/24/2013 9:20:00 AM	Prep Date: 10/23/2013							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera	2660	50.0	0	2550	4.03	5
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Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

APPENDIX B



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
SANTA FE

Scott A. Verhines, P.E.
State Engineer

CONCHA ORTIZ Y PINO BLDG.
POST OFFICE BOX 25102
130 SOUTH CAPITOL
SANTA FE, NEW MEXICO 87504-5102
(505) 827-6091
FAX: (505) 827-3806

March 8, 2013

Permit Number: Evaluation of Empire Abo Gas Processing Plant remediation Plan

Larson and Associates Inc
Attn: Jeremy J. C. Cannady
507 North Marienfeld, Suite 202
Midland Texas 79701

GREETINGS:

The Hydrology evaluation for the remediation plan you submitted concerning the Empire Abo Gas Processing station concluded there was mounded water under the plant and the planned pumping would not cause effects to the Pecos River. You may proceed with the plan and can submit an application to appropriate and any necessary well permits if required.

Sincerely,

A handwritten signature in cursive script that reads "Tim Williams".

Tim Williams
Carlsbad Basin Watermaster
Water Resource Allocation Program
Water Rights Division
District II Office of the State Engineer
1900 West Second Street
Roswell New Mexico 88201