2015 Annual Groundwater Monitoring Report

Empire Abo Gas Plant
Eddy County, New Mexico
AP-112

Project No. 6-0141-06

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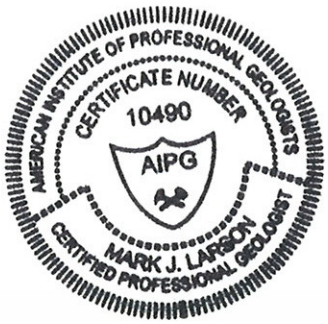

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1.0 EXECUTIVE SUMMARY

This report presents 2015 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 2015:

- April 21 – 23, 2015 - first semi-annual groundwater gauging and sampling event
- December 8 – 9, 2015 - second semi-annual groundwater gauging and sampling event

The following is documented in the report:

- Groundwater mounding is present beneath the central area of the Facility and causes groundwater to flow in a radial pattern;
- Groundwater mounding is present in the vicinity of MW-24 and may be the result of recharge;
- The regional groundwater flow direction is from northwest to southeast therefore well MW-06 is considered the background monitoring well;
- Hydrocarbon product (LNAPL) in the form of natural gas condensate was observed in 16 wells during the first semi-annual event (April 21 – 23, 2015) and 18 wells during the second semi-annual event (December 8 – 9, 2015) and ranged in thickness between about 0.02 (MW-03-02 and MW-03-04) to 6.45 feet (MW-19);
- Dissolved benzene exceeded the New Mexico Water Quality Control Commission (WQCC) human health standard of 0.010 milligrams per liter (mg/L) in groundwater samples from 13 monitoring wells during the first semi-annual event (April 21 – 23, 2015) and 14 monitoring wells during the second (December 8 – 9, 2015) sampling events;
- Benzene exceeded the WQCC human health standard in down gradient well MW-24 indicating down gradient (southeast) plume movement migration;
- Dissolved arsenic was reported exceeded the WQCC human health standard (0.1 mg/L) in the groundwater sample from P-01 (0.118 mg/), located west of the plant, on December 9, 2015;
- Dissolved chromium exceeded the WQCC human health standard (0.05 mg/L) in three (3) wells (MW-02-03, MW-07 and EB-06) and ranged from 0.057 to 0.14 mg/L, in MW-07;
- 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 resulting from a water leak in the cooling tower basin with migration to the north and northeast in the direction of groundwater flow;
- Sulfate and TDS are naturally elevated due to dissolution of minerals, predominately gypsum, in the Tansill formation.

Frontier will continue groundwater monitoring during 2016 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 2015 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 New Mexico Water Quality Control Commission (WQCC) discharge permit GW-022 administered by OCD. The permit was cancelled 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 under review 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 four (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 three (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 two (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 an evaporite facies about ten (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.

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 perched water in shallow discontinuous clay and silty-clay units.

Depth to groundwater was measured in 55 monitoring wells on April 20-21, 2015 and December 7-8, 2015. 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 April and December 2015. On April 20-21, 2015, groundwater was observed between approximately 7.90 (MW-07) and 112.45 (MW-16) feet bgs. Shallow groundwater was observed within the facility operation area where the area is underlain by laterally discontinuous clay and silty clay and where water line leaks were discovered and repaired. The deepest groundwater occurs in well MW-16 located north of the Facility. Similar results were observed on December 7 and 8, 2015. Table 1 presents a summary of monitoring well gauging data. Figure 4a and Figure 4b present groundwater potentiometric maps for April 20-21, 2015 and December 7-8, 2015, respectfully.

For three (3) consecutive gauging events, the groundwater elevation in MW-24 has increased causing mounding in the vicinity of the well. Figure 4c presents a chart showing depth to groundwater in MW-24 between May 2012 and December 2015. The mounding may represent recharging conditions.

The following monitoring wells were dry during 2015:

Well	April 20-21, 2015	December 7-8, 2015
EB-01	√	√
EB-04		√
P-04		√

2.5 Light Non-Aqueous Phase Liquid

Light non-aqueous phase liquid (LNAPL) in the form of natural gas condensate was measured in 16 monitoring wells during the April 2015 and 18 wells during the December 2015 monitoring events. The LNAPL was observed in wells located near the west central (MW-02-09, MW-02-13, MW-03-01, MW-09, MW-10, MW-11, MW-02-14, and MW-06), southwest (MW-03-02 and MW-19), east central (MW-02-06, MW-02-10, MW-04, and MW-21), northeast (MW-03-04 and MW-13), and southeast (MW-20, and EB-03) areas of the Facility. LNAPL was also observed east (EB-08) of the Facility.

On April 20-21, 2015, the apparent LNAPL thickness ranged from approximately 0.20 (MW-03-02 and MW-03-04) to 6.45 feet (MW-19). On December 7 and 8, 2015, the apparent LNAPL thickness ranged from approximately 0.01 (MW-02-06 and MW-20) to 4.30 feet (MW-10).

The following monitoring wells reported LNAPL during 2015:

Well	April 20-21, 2015	December 7-8, 2015
MW-02-06	√	√
MW-02-09	√	√
MW-02-10	√	√
MW-02-13	√	√
MW-02-14	√	√
MW-03-01	√	√
MW-03-02	√	√
MW-03-04	√	√
MW-04	√	√

Well	April 20-21, 2015	December 7-8, 2015
MW-06	√	√
MW-09	√	√
MW-10	√	√
MW-11	√	√
MW-13		√
MW-19	√	√
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 April 20-21, 2015 and December 7-8, 2015, 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, MW-11 and MW-06, where the gas inlet is located.

3.0 GROUNDWATER SAMPLES AND LABORATORY ANALYSIS

Groundwater samples were collected from 34 monitoring wells during the first semi-annual events on April 21-23, 2015, and from 32 wells during the second semi-annual event on December 8-9, 2015. Samples were not collected from with measured LNAPL. Eight (8) monitoring wells had insufficient water for sample collection or were dry during 2015.

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 0.45 micron (µ) and acidified with nitric acid within 24-hours of collection. DHL analyzed the samples for benzene, toluene, ethylbenzene, xylene (BTEX) by EPA SW-846 Method 8021B, dissolved metals (arsenic, barium, cadmium, calcium, chromium, lead, magnesium, potassium, selenium, silver, sodium) by Methods SW-6020A and 7470A (December 2015), anions, alkalinity and total dissolved solids (TDS) by Methods E-300, M2320B and M2540, respectively. 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 3 presents the dissolved metals analytical data summary. Table 4 presents the general chemistry, including anion, cation and TDS, analytical 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 milligrams per liter (mg/L). Dissolved benzene exceeded the WQCC human health standard of 0.01 mg/L in samples from 14 and 13 wells during April and December 2015, respectively. Benzene was reported above the WQCC human health standard in well MW-24 during April (2.73 mg/L) and December (2.14 mg/L) 2015 indicating down gradient (southeast) migration.

April 2015 Benzene Results

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

- MW-02-07 (3.4 mg/L)
- MW-02-11 (27.3 mg/L)
- MW-02-15 (0.576 mg/L)
- MW-02-16 (7.98 mg/L)
- MW-02-18 (8.24 mg/L)
- MW-03-03 (2.33 mg/L)
- MW-03 (2.52 mg/L)
- MW-07 (12.3 mg/L)
- MW-14 (0.0167 mg/L)
- MW-20 (0.665 mg/L)
- MW-22 (4.48 mg/L)
- MW-23 (0.0645mg/L)
- MW-24 (2.73 mg/L)
- EB-03 (0.145 mg/L)

Figure 6a presents a map of dissolved benzene concentrations in groundwater on April 21 – 23, 2015.

Toluene exceeded the WQCC human health standard (0.75 mg/L) in wells MW-07 (1.78 mg/L) and MW-02-16 (0.836 mg/L) during April 2015. Ethylbenzene nominally exceeded the WQCC human health standard (0.75 mg/L) in well MW-02-11 (0.774 mg/L) during April 2015. Xylenes exceeded the WQCC human health standard (0.62 mg/L) in samples from well MW-02-11 (1.43 mg/L) during April 2015.

December 2015 Benzene Results

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

- MW-02-06 (0.721 mg/L)
- MW-02-11 (29.6 mg/L)
- MW-02-15 (0.448 mg/L)
- MW-02-16 (8.22 mg/L)
- MW-02-18 (10.5 mg/L)
- MW-03 (2.12 mg/L)
- MW-03-03 (2.52 mg/L)
- MW-07 (7.26 mg/L)
- MW-12 (0.0122 mg/L)
- MW-14 (0.111 mg/L)
- MW-20 (0.556 mg/L)
- MW-22 (3.54 mg/L)
- MW-24 (2.14 mg/L)

Figure 6b presents a concentration map of dissolved benzene concentrations in groundwater samples on December 8 – 9, 2015.

Toluene exceeded the WQCC human health standard (0.75 mg/L) in well MW-07 (1.28 mg/L) in December 2015. Ethylbenzene exceeded the WQCC human health standard (0.75 mg/L) in wells MW-02-06 (1.76 mg/L) and MW-07 (0.873 mg/L) in December 2015. Xylenes exceeded the WQCC human health standard (0.62 mg/L) in samples from wells MW-02-06 (3.49 mg/L), MW-02-11 (0.813 mg/L) and MW-07 (0.655 mg/L) during December 2015.

3.2 Dissolved Metals Analysis

Samples for dissolved metals were collected during the April 2015 event and were reported with dissolved arsenic above the WQCC human health standard (0.1 mg/L) in sample P-01 (0.118 mg/L) and

dissolved chromium above the WQCC human health standard (0.05 mg/L) in samples MW-07 (0.14 mg/L) and EB-06 (0.0597 mg/L). Dissolved chromium concentrations were reported above the WQCC human health standard in samples MW-02-03 (0.0651 mg/L), MW-07 (0.057 mg/L), and EB-06 (0.0676 mg/L) during the December 2015 event. These results except arsenic, 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 during the current and previous monitoring events.

Chromium concentrations indicate no clear increasing or decreasing trends. Inference from other compounds required a higher reporting limit for chromium in sample MW-02-05 (0.1 mg/L) which was reported as non-detect. Figure 7a and 7b presents a map showing dissolved chromium concentrations in groundwater exceeding the WQCC human health standard during April and December 2015, respectively.

3.3 General Chemistry Analysis

Sulfate and TDS are naturally occurring at concentrations above the WQCC domestic water quality standards of 600 and 1,000 mg/L due to dissolution of gypsum in the Tansill formation Chloride is variable in concentration and exceeded the WQCC domestic water quality standard of 250 mg/L in nine (9) wells during April and ten (10) wells during December 2015. Chloride, sulfate, and TDS concentrations over time have very similar trends and appear linear with neither increasing nor decreasing trends exhibited. Dissolution of gypum from a leak in the cooling tower basin is suspected as the source for elevated chloride, sulfate and TDS near the northwest corner of the Facility. Mounded groundwater caused the elevated sulfate, chloride and TDS to migrate north and northeast in the direction of groundwater flow.

April 2015 Results

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

- MW-02-02 (12,500 mg/L)
- MW-02-05 (5,710 mg/L
- MW-02-15 (832 mg/L)
- MW-02-16 (258 mg/L)
- MW-03-03 (261 mg/L)
- MW-08 (261 mg/L)
- MW-15 (2,110 mg/L)
- MW-16 (371 mg/L)
- MW-18 (691 mg/L)

The chloride plume migrates north and northeast is the direction of groundwater flow.Figure 8a presents an isopleths map of chloride concentrations in groundwater on April 21 – 23, 2015.

Sulfate – All sulfate concentrations exceeded the WQCC domestic water quality standard of 600 mg/L and ranged from 1,110 mg/L (MW-03) to 333,000 mg/L (MW-02-05). Sulfate is naturally elevated from dissolution of minerals, principally gypsum, in the Tansill formation. The sulfate concentrations in samples from MW-02-02 (301,000 mg/L) and MW-02-05 (333,000 mg/L) are likely the result of dissolution of minerals in the Tansill formation caused by a leak in the cooling tower basin. The sulfate plume migrates north and northeast is the direction of groundwater flow. Figure 9a presents an isopleth map of sulfate concentrations in groundwater on April 21 – 23, 2015.

TDS – All TDS concentrations exceeded the WQCC domestic water quality standard of 1,000 mg/L and ranged from 2,460 mg/L (MW-03) to 520,000 mg/L (MW-02-02). The TDS is the result of dissolution of minerals, principally gypsum, in the Tansill formation. The TDS concentration in samples from wells MW-02-02 (520,000 mg/L) and MW-02-05 (478,000 mg/L) are likely the result of dissolution of minerals in the Tansill formation caused by a leak in the cooling tower basin. The TDS plume migrates north and northeast in the direction of groundwater flow. The TDS plume migrates north and northeast is the direction of groundwater flow. Figure 10a presents an isopleth map of TDS concentrations in groundwater on April 21 – 23, 2015.

December 2015 Results

Chloride – The following samples exhibited chloride concentrations above the WQCC domestic water quality standard of 250 mg/L during December 2015:

- MW-02-02 (9,950 mg/L)
- MW-02-05 (5,700 mg/L)
- MW-02-15 (785 mg/L)
- MW-03-03 (279 mg/L)
- MW-08 (274 mg/L)
- MW-15 (2,480 mg/L)
- MW-16 (387 mg/L)
- MW-18 (385 mg/L)

The chloride plume migrates north and northeast is the direction of groundwater flow.Figure 8b presents an isopleths map for observed chloride concentrations in groundwater during December 2015.

Sulfate – All sulfate concentrations exceeded the WQCC domestic water quality standard of 600 mg/L and ranged from 1,150 mg/L (MW-03-03) to 296,000 mg/L (MW-02-02). The sulfate is naturally elevated from dissolution of minerals, principally gypsum, in the Tansill formation. The sulfate concentration in samples from wells MW-02-02 (296,000 mg/L) and MW-02-05 (290,000 mg/L) are likely the result of dissolution of minerals in the Tansill formation caused by a leak in the cooling tower basin. The sulfate plume migrates north and northeast is the direction of groundwater flow. Figure 9b presents an isopleth map of sulfate concentrations in groundwater on December 8 - 9, 2015.

TDS – All TDS concentrations exceeded the WQCC domestic water quality standard of 1,000 mg/L and ranged from 1,830 mg/L (MW-02-03) to 545,000 mg/L (MW-02-05). The TDS is naturally elevated from dissolution of minerals, principally gypsum, in the Tansill formation. The TDS concentrations in groundwater samples from MW-02-02 (529,000 mg/L) and MW-02-05 (545,000 mg/L) are likely the result of dissolution of minerals in the Tansill formation caused by a leak in the cooling tower basin. The TDS plume migrates north and northeast is the direction of groundwater flow. Figure 10b presents an isopleth map showing TDS concentrations in groundwater samples on December 8 – 9, 2015.

4.0 CONCLUSIONS

The following observations are documented in this report:

- Groundwater is mounded beneath the Facility which causes groundwater to flow in a radial pattern. The mounding is caused by shallow groundwater perched on laterally discontinuous clay and silty clay;

- The regional groundwater flow direction is from northwest to southeast, therefore, monitoring well EB-6, has been observed up gradient to the Facility;
- Groundwater mounding has been observed in the vicinity of MW-24 for three (3) consecutive quarters and may represent recharging conditions;
- LNAPL was observed in 16 wells during the first semi-annual monitoring event (April 21 – 23, 2015) and 18 wells during the second semi-annual monitoring event (December 8 – 9, 2015) with apparent LNAPL thickness ranging from approximately 0.02 (MW-03-02 and MW-03-04) to 6.45 feet (MW-19). LNAPL is most prevalent near the west central area of the Facility;
- Dissolved benzene exceeded the WQCC human health standard (0.01 mg/L) in groundwater samples from 13 monitoring wells during the first (April 21 – 23, 2015) and 14 wells during the second (December 8 – 9, 2015) monitoring events and ranged in concentrations from 0.0122 mg/ L (MW-12) to 29.60 mg/L (MW-02-11);
- Arsenic exceeded the WQCC human health standard (0.1 mg/L) in groundwater from well P-01 (0.118 mg/L) on December 9, 2015;
- Chromium exceeded the WQCC human health standard (0.05 mg/L) in groundwater samples from three (3) monitoring wells (MW-02-03, MW-07 and EB-06) and ranged in concentration between 0.07 and 0.14 mg/L in samples from MW-07;
- 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 dissolution of minerals in the Tansil formation caused by a leak in the concrete basin of the cooling tower. The elevated chloride, sulfate and TDS migrate to the north and northeast in the direction of groundwater flow caused by groundwater mounding beneath central area of the plant.

5.0 RECOMMENDATIONS

Frontier will continue monitoring groundwater on a semi-annual (twice yearly) schedule during 2016. The laboratory results will be reported to the OCD in an annual report to be submitted during the first quarter 2017. 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.

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-1						Plugged						
MW-2	12/29/1991	37.88	4	3,545.3	19 - 34	2.89	3,548.19	5/20/2013	--	34.00	--	3,514.19
								10/15/2013	--	34.05	--	3,514.14
								5/14/2014	--	34.00	--	3,514.19
								10/14/2014	--	34.05	--	3,514.14
								4/21/2015	--	34.05	--	3,514.14
								12/8/2015	--	34.10	--	3,514.09
MW-02-01						Plugged						
MW-02-02	10/6/1992	48.65	4	3,549.3	35 - 45	2.96	3,552.26	5/20/2013	--	26.91	--	3,525.35
								10/15/2013	--	27.00	--	3,525.26
								5/14/2014	--	27.22	--	3,525.04
								10/14/2014	--	27.20	--	3,525.06
								4/21/2015	--	26.96	--	3,525.30
								12/8/2015	--	27.20	--	3,525.06
MW-02-03	9/28/1992	108.50	4	3,553.0	95 - 105	3.03	3,556.03	5/20/2013	--	77.55	--	3,478.48
								10/15/2013	--	79.00	--	3,477.03
								5/14/2014	--	81.11	--	3,474.92
								10/14/2014	--	79.12	--	3,476.91
								4/21/2015	--	79.65	--	3,476.38
								12/8/2015	--	79.95	--	3,476.08
MW-02-04	9/30/1992	61.60	4	3,550.9	45 - 55	2.89	3,553.79	5/20/2013	--	51.45	--	3,502.34
								10/15/2013	--	51.00	--	3,502.79
								5/14/2014	--	52.80	--	3,500.99
								10/14/2014	--	48.58	--	3,505.21
								4/21/2015	--	50.70	--	3,503.09
								12/8/2015	--	52.30	--	3,501.49
MW-02-05	10/6/1992	52.31	4	3,549.9	40 - 50	2.79	3,552.69	5/20/2013	--	27.45	--	3,525.24
								10/15/2013	--	27.60	--	3,525.09
								5/14/2014	--	27.90	--	3,524.79
								10/14/2014	--	27.90	--	3,524.79
								4/21/2015	--	27.62	--	3,525.07
								12/8/2015	--	27.80	--	3,524.89
MW-02-06	9/29/1992	23.90	4	3,548.3	11 - 21	2.52	3,550.82	5/20/2013	19.25	19.30	0.05	3,531.55*
								10/15/2013	10.55	11.00	0.45	3,540.13*
								5/14/2014	20.50	20.85	0.35	3,530.22*
								10/14/2014	11.75	12.20	0.45	3,538.94*
								4/21/2015	18.30	18.60	0.30	3,532.43*
								12/8/2015	sheen	16.11	0.00	3,534.71
MW-02-07	10/5/1992	63.80	4	3,544.2	53 - 63	2.80	3,547.00	5/20/2013	--	58.00	--	3,489.00
								10/15/2013	--	60.40	--	3,486.60
								5/14/2014	--	61.70	--	3,485.30
								10/14/2014	--	59.05	--	3,487.95

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
								4/21/2015	--	62.00	--	3,485.00
								12/8/2015	--	DRY	--	--
MW-02-09	10/7/1992	43.97	4	3,543.5	30 - 40	3.02	3,546.52	5/20/2013	34.00	38.45	4.45	3,511.18*
								10/15/2013	34.55	37.70	3.15	3,511.02*
								5/14/2014	34.60	39.15	4.55	3,510.56*
								10/14/2014	34.82	38.90	4.08	3,510.48*
								4/21/2015	34.92	38.80	3.88	3,510.44*
								12/8/2015	35.70	37.90	2.20	3,510.16*
MW-02-10	9/29/1992	72.90	4	3,545.4	65 - 75	3.00	3,548.40	5/20/2013	63.96	**	>10	--
								10/15/2013	66.1	72.4	6.30	3,480.41*
								5/14/2014	68.35	>72.9	>4.55	<3,475.50
								10/14/2014	64.72	>72.9	>8.15	<3,475.50
								4/21/2015	67.25	>72.9	>5.65	<3,475.50
								12/8/2015	67.05	>72.9	>5.85	<3,475.50
MW-02-11	9/29/1992	23.42	4	3,544.0	10 - 20	2.79	3,546.79	5/20/2013	21.78	21.90	0.12	3,524.97*
								10/15/2013	18.25	18.30	0.05	3,528.52*
								5/14/2014	22.45	22.50	0.05	3,523.64*
								10/14/2014	17.29	17.35	0.06	3,528.80*
								4/21/2015	--	19.54	--	3,527.25
								12/8/2015	--	18.80	--	3,527.99
MW-02-12	10/1/1992	85.85	4	3,540.3	70 - 80	3.02	3,543.32	5/20/2013	--	66.84	--	3,476.48
								10/15/2013	--	67.80	--	3,475.52
								5/14/2014	--	70.00	--	3,473.32
								10/14/2014	--	67.25	--	3,476.07
								4/21/2015	--	68.10	--	3,475.22
								12/8/2015	--	68.25	--	3,475.07
MW-02-13	10/7/1992	50.05	4	3,542.7	36 - 46	2.89	3,545.59	5/20/2013	43.80	47.42	3.62	3,500.70*
								10/15/2013	43.82	47.40	3.58	3,500.70*
								5/14/2014	45.91	47.38	1.47	3499.24*
								10/14/2014	41.40	47.25	5.85	3,502.44*
								4/21/2015	45.00	46.80	1.80	3,500.05*
								12/8/2015	44.75	46.90	2.15	3,500.20*
MW-02-14	10/5/1992	78.80	4	3,541.3	63 - 73	3.23	3,544.53	5/20/2013	59.47	60.35	0.88	3,484.80*
								10/15/2013	60.15	60.85	0.70	3,484.17*
								5/14/2014	61.60	62.20	0.60	3,482.75*
								10/14/2014	59.30	61.20	1.90	3,484.66*
								4/21/2015	61.25	62.00	0.75	3,483.06*
								12/8/2015	61.35	61.70	0.35	3,483.08*
MW-02-15	10/2/1992	75.95	4	3,540.2	60 - 70	3.09	3,543.29	5/20/2013	--	61.04	--	3,482.25
								10/15/2013	--	61.50	--	3,481.79
								5/14/2014	--	62.75	--	3,480.54

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
								10/14/2014	--	60.71	--	3,482.58
								4/21/2015	--	62.25	--	3,481.04
								12/8/2015	--	62.21	--	3,481.08
MW-02-16	9/30/1992	86.10	4	3,541.0	70 - 80	3.24	3,544.24	5/20/2013	--	67.25	--	3,476.99
								10/15/2013	--	67.90	--	3,476.34
								5/14/2014	--	70.00	--	3,474.24
								10/14/2014	--	67.58	--	3,476.66
								4/21/2015	--	68.56	--	3,475.68
								12/8/2015	--	68.50	--	3,475.74
MW-02-18	10/7/1992	39.80	4	3,542.7	26 - 36	3.00	3,545.70	5/20/2013	--	20.65	--	3,525.05
								10/15/2013	--	17.15	--	3,528.55
								5/14/2014	--	21.25	--	3,524.45
								10/14/2014	--	15.35	--	3,530.35
								4/21/2015	--	18.35	--	3,527.35
								12/8/2015	--	17.75	--	3,527.95
MW-03	12/20/1991	63.30	4	3,552.4	69 - 89	2.90	3,555.30	5/20/2013	--	72.62	--	3,482.68
								10/15/2013	--	75.90	--	3,479.40
								5/14/2014	77.30	77.32	0.02	3,477.99*
								10/14/2014	--	75.12	--	3,480.18
								4/21/2015	--	76.35	--	3,478.95
								12/8/2015	--	76.28	--	3,479.02
MW-03-01	5/3/1994	73.40	4	3,539.9	50 - 70	2.66	3,542.56	5/20/2013	--	57.50	--	3,485.06
								10/15/2013	58.10	58.70	0.60	3,484.28*
								5/14/2014	59.20	60.70	1.50	3,482.91*
								10/14/2014	57.07	57.15	0.08	3,485.47*
								4/21/2015	59.65	60.20	0.55	3,482.75*
								12/8/2015	59.66	61.00	1.34	3,482.50*
MW-03-02	5/4/1994	105.75	4	3,538.6	60 - 100	2.48	3,541.08	5/20/2013	68.75	69.10	0.35	3,472.22*
								10/15/2013	65.80	69.00	3.20	3,474.32*
								5/14/2014	69.80	70.40	0.60	3,471.10*
								10/14/2014	67.40	68.20	0.80	3,473.44*
								4/21/2015	68.75	68.95	0.20	3,472.27*
								12/8/2015	68.75	69.20	0.45	3,472.20*
MW-03-03	5/4/1994	85.40	4	3,542.3	55 - 80	2.42	3,544.72	5/20/2013	--	71.30	--	3,473.42
								10/15/2013	--	71.65	--	3,473.07
								5/14/2014	--	72.90	--	3,471.82
								10/14/2014	--	71.30	--	3,473.42
								4/21/2015	--	71.40	--	3,473.32
								12/8/2015	--	71.70	--	3,473.02
MW-03-04	5/4/1994	117.50	4	3,555.7	65 - 110	2.75	3,558.45	5/20/2013	78.12	78.42	0.30	3,480.24*
								10/15/2013	81.55	81.95	0.40	3,476.78*

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
								5/14/2014	83.35	84.25	0.90	3,474.83*
								10/14/2014	81.80	82.25	0.45	3,476.52*
								4/21/2015	82.35	82.55	0.20	3,476.04*
								12/8/2015	82.70	82.95	0.25	3,475.68*
MW-04	12/21/1991	62.59	4	3,547.8	45 - 60	3.19	3,550.99	5/20/2013	52.03	52.10	0.07	3,498.94*
								10/15/2013	53.25	53.45	0.20	3,497.68*
								5/14/2014	57.80	58.30	0.50	3,493.04*
								10/14/2014	53.00	53.25	0.25	3,497.92*
								4/21/2015	56.90	57.55	0.65	3,493.90*
								12/8/2015	53.55	54.20	0.65	3,497.25*
MW-05	12/22/1991	95.30	4	3,540.6	71 - 96	3.17	3,543.77	5/20/2013	--	66.73	--	3,477.04
								10/15/2013	--	67.60	--	3,476.17
								5/14/2014	--	69.70	--	3,474.07
								10/14/2014	--	67.00	--	3,476.77
								4/21/2015	--	68.02	--	3,475.75
								12/8/2015	--	68.20	--	3,475.57
MW-06	12/22/1991	76.90	4	3,541.8	30 - 50	2.70	3,544.50	5/20/2013	42.48	46.30	3.82	3,500.88*
								10/15/2013	41.68	46.80	5.12	3,501.28*
								5/14/2014	44.70	47.00	2.30	3,499.11*
								10/14/2014	39.60	43.70	4.10	3,503.67*
								4/21/2015	42.80	44.90	2.10	3,501.07*
								12/8/2015	43.05	46.45	3.40	3,500.43*
MW-07	12/22/1991	26.35	4	3,546.0	11 - 26	0.49	3,546.49	5/20/2013	--	4.30	--	3,542.19
								10/15/2013	--	8.05	--	3,538.44
								5/14/2014	--	8.10	--	3,538.39
								10/14/2014	--	7.30	--	3,539.19
								4/21/2015	--	7.90	--	3,538.59
								12/8/2015	--	6.00	--	3,540.49
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
								5/14/2014	--	68.15	--	3,475.58
								10/14/2014	--	65.95	--	3,477.78
								4/21/2015	--	67.10	--	3,476.63
								12/8/2015	--	67.25	--	3,476.48
MW-09	12/29/1991	75.80	4	3,540.4	52 - 72	2.42	3,542.82	5/20/2013	--	56.50	--	3,486.32
								10/15/2013	57.25	57.55	0.30	3,485.48*
								5/14/2014	58.50	59.32	0.82	3,484.07*
								10/14/2014	55.90	57.95	2.05	3,486.31*
								4/21/2015	58.70	60.80	2.10	3,483.49*
								12/8/2015	58.85	59.60	0.75	3,483.75*
MW-10	7/28/2008	53.24	4	3,541.8	15 - 50	2.64	3,544.44	5/20/2013	45.55	51.60	6.05	3,497.07*

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
								10/15/2013	47.55	52.00	4.45	3,495.55*
								5/14/2014	50.70	52.30	1.60	3,493.26*
								10/14/2014	47.40	51.10	3.70	3,495.93*
								4/21/2015	48.05	50.95	2.90	3,495.52*
								12/8/2015	48.70	53.00	4.30	3,494.45*
MW-11	7/29/2008	58.98	4	3,540.2	21 - 56	2.53	3,542.73	5/20/2013	--	56.10	--	3,486.63
								10/15/2013	--	57.00	--	3,485.73
								5/14/2014	58.30	**	0.68	--
								10/14/2014	56.00	56.20	0.20	3,486.67
								4/21/2015	58.60	>58.98	> 0.38	<3,483.75
								12/8/2015	58.40	>58.98	> 0.58	<3,483.75
MW-12	7/29/2008	74.11	4	3,522.6	36 - 71	2.65	3,525.25	5/20/2013	--	62.00	--	3,463.25
								10/15/2013	--	61.20	--	3,464.05
								5/14/2014	--	62.78	--	3,462.47
								10/14/2014	--	60.95	--	3,464.30
								4/21/2015	--	59.80	--	3,465.45
								12/8/2015	--	60.45	--	3,464.80
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
								5/14/2014	81.10	>88.64	> 7.54	<3,472.76
								10/13/2014	--	84.65	--	3,476.75
								4/20/2015	--	86.03	--	3,475.37
								12/7/2015	83.00	>88.64	> 5.64	<3,472.76
MW-14	7/30/2008	72.50	4	3,517.7	33 - 68	2.62	3,520.32	5/20/2013	61.52	61.54	0.02	3,458.79*
								10/14/2013	--	60.61	--	3,459.71
								5/14/2014	62.23	62.28	0.05	3,458.08*
								10/13/2014	57.80	60.80	3.00	3,461.62*
								4/20/2015	--	59.55	--	3,460.77
								12/7/2015	sheen	59.50	--	3,460.82
MW-15	7/30/2008	80.20	4	3,559.7	42 - 77	2.75	3,562.45	5/20/2013	--	67.30	--	3,495.15
								10/14/2013	--	66.52	--	3,495.93
								5/14/2014	--	67.75	--	3,494.70
								10/13/2014	--	65.65	--	3,496.80
								4/20/2015	--	67.30	--	3,495.15
								12/7/2015	--	64.70	--	3,497.75
MW-16	6/24/2009	117.39	4	3,582.6	80 - 115	2.86	3,585.46	5/20/2013	--	111.70	--	3,473.76
								10/14/2013	--	112.30	--	3,473.16
								5/14/2014	--	114.10	--	3,471.36
								10/13/2014	--	113.85	--	3,471.61
								4/20/2015	--	112.45	--	3,473.01
								12/7/2015	--	114.25	--	3,471.21

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-17	6/23/2009	101.60	4	3,568.0	60 - 95	2.84	3,570.84	5/20/2013	--	93.36	--	3,477.48
								10/15/2013	--	93.00	--	3,477.84
								5/14/2014	--	95.61	--	3,475.23
								10/14/2014	--	95.15	--	3,475.69
								4/20/2015	--	95.80	--	3,475.04
								12/7/2015	--	96.45	--	3,474.39
MW-18	6/24/2009	56.53	4	3,529.7	33 - 53	2.93	3,532.63	5/20/2013	--	50.95	--	3,481.68
								10/14/2013	Sheen	50.50	--	3,482.13
								5/14/2014	--	51.31	--	3,481.32
								10/13/2014	--	51.79	--	3,480.84
								4/20/2015	--	51.02	--	3,481.61
								12/7/2015	--	52.21	--	3,480.42
MW-19	6/17/2009	79.42	4	3,540.6	41 - 76	2.74	3,543.34	5/20/2013	67.10	71.15	4.05	3,475.02*
								10/15/2013	67.00	71.10	4.10	3,475.11*
								5/14/2014	62.75	73.30	10.55	3,466.72*
								10/14/2014	66.50	70.10	3.60	3,465.05*
								4/21/2015	66.00	72.45	6.45	3,464.70*
								12/7/2015	65.50	68.60	3.10	3,466.20*
MW-20	6/18/2009	79.39	4	3,538.7	41 - 76	2.77	3,541.47	5/20/2013	71.02	71.05	0.03	3,470.44*
								10/15/2013	70.40	70.45	0.05	3,471.05*
								5/14/2014	71.50	72.00	0.50	3469.82*
								10/14/2014	--	69.90	--	3,471.57
								4/21/2015	--	70.90	--	3,470.57
								12/7/2015	sheen	70.71	--	3,470.76
MW-21	6/18/2009	81.48	4	3,540.2	43 - 78	2.95	3,543.15	5/20/2013	66.65	67.65	1.00	3,476.20*
								10/15/2013	67.40	68.60	1.20	3,475.39*
								5/14/2014	69.23	70.50	1.27	3,473.54*
								10/14/2014	66.80	67.92	1.12	3,476.01*
								4/21/2015	67.55	68.60	1.05	3,475.29*
								12/7/2015	67.80	68.80	1.00	3475.05*
MW-22	6/19/2009	41.07	4	3,542.9	13 - 38	2.97	3,545.87	5/20/2013	--	20.90	--	3,524.97
								10/15/2013	--	17.40	--	3,528.47
								5/14/2014	--	21.51	--	3,524.36
								10/14/2014	--	15.55	--	3,530.32
								4/21/2015	Sheen	18.60	--	3,527.27
								12/7/2015	--	17.95	--	3,527.92
MW-23	6/19/2009	85.74	4	3,539.2	49 - 84	3.01	3,542.21	5/20/2013	--	72.71	--	3,469.50
								10/14/2013	--	72.72	--	3,469.49
								5/14/2014	--	74.70	--	3,467.51
								10/13/2014	--	72.37	--	3,469.84
								4/20/2015	--	71.98	--	3,470.23
								12/7/2015	--	72.65	--	3,469.56

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-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
								5/14/2014	--	29.50	--	3,499.60
								10/13/2014	--	21.69	--	3,507.41
								4/20/2015	--	24.92	--	3,504.18
								12/7/2015	--	24.50	--	3,504.60
EB-01	3/29/2004	37.05	1	3,491.5	33 - 38	0.65	3,492.15	5/20/2013	--	DRY	--	--
								10/14/2013	--	DRY	--	--
								5/14/2014	--	DRY	--	--
								10/13/2014	--	DRY	--	--
								4/20/2015	--	DRY	--	--
								12/7/2015	--	DRY	--	--
EB-02	3/29/2004	57.47	2	3,522.6	35 - 55	2.74	3,525.34	5/20/2013	Sheen	42.05	--	3,483.29
								10/14/2013	--	42.45	--	3,482.89
								5/14/2014	--	42.72	--	3,482.62
								10/13/2014	--	43.40	--	3,481.94
								4/20/2015	--	43.70	--	3,481.64
								12/7/2015	--	44.16	--	3,481.18
EB-03	3/30/2004	69.84	2	3,517.8	46 - 66	3.25	3,521.05	5/20/2013	61.32	61.36	0.04	3,459.72*
								10/14/2013	Sheen	60.78	0.00	3460.27*
								5/14/2014	61.65	61.69	0.04	3459.39*
								10/13/2014	--	58.95	--	3,462.10
								4/20/2015	Sheen	60.75	--	3,460.30
								12/7/2015	60.80	61.60	0.80	3,460.01*
EB-04	3/31/2004	53.91	2	3,505.3	31 - 51	3.08	3,508.38	5/20/2013	Sheen	52.63	--	3,455.75
								10/14/2013	--	52.70	--	3,455.68
								5/14/2014	--	DRY	--	--
								10/13/2014	--	DRY	--	--
								4/20/2015	--	50.81	--	3,457.57
								12/7/2015	--	DRY	--	--
EB-05	3/31/2004	57.93	2	3,523.7	44 - 54	2.91	3,526.61	5/20/2013	Sheen	50.15	--	3,476.46
								10/14/2013	--	49.92	--	3,476.69
								5/14/2014	--	50.65	--	3,475.96
								10/13/2014	--	51.00	--	3,475.61
								4/20/2015	--	50.41	--	3,476.20
								12/7/2015	--	51.10	--	3,475.51
EB-06	3/31/2004	58.35	1	3,555.6	72 - 82	1.03	3,556.63	5/20/2013	--	73.45	--	3,483.18
								10/14/2013	Sheen	73.04	--	3,483.59
								5/14/2014	--	73.98	--	3,482.65
								10/13/2014	--	74.70	--	3,481.93
								4/20/2015	--	73.80	--	3,482.83

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
								12/7/2015	--	75.28	--	3,481.35
EB-07	4/1/2004	56.08	2	3,501.3	43 - 53	2.67	3,503.97	5/20/2013	--	53.92	--	3,450.05
								10/15/2013	--	54.58	--	3,449.39
								5/14/2014	--	DRY	--	--
								10/13/2014	--	47.90	--	3,456.07
								4/20/2015	--	49.19	--	3,454.78
								12/7/2015	--	50.00	--	3,453.97
EB-08	4/2/2004	86.22	2	3,533.8	66 - 81	3.27	3,537.07	5/20/2013	71.2	73.60	2.40	3,465.15*
								10/14/2013	70.9	73.20	2.30	3,465.48*
								5/14/2014	72.55	74.90	2.35	3,463.82*
								10/13/2014	69.5	72.00	2.50	3,466.82*
								4/20/2015	70.0	71.70	1.70	3,466.56*
								12/7/2015	71.0	72.10	1.10	3,465.75*
P-01	12/29/2005	54.60	2	3,527.9	40 - 50	2.31	3,530.21	5/20/2013	Sheen	50.87	--	3,479.34
								10/14/2013	--	50.85	--	3,479.36
								5/14/2014	--	50.95	--	3,479.26
								10/13/2014	--	50.82	--	3,479.39
								4/20/2015	--	50.93	--	3,479.28
								12/7/2015	Sheen	50.95	--	3,479.26
P-02	12/27/2005	27.45	2	3,542.3	19.5 - 22.5	2.43	3,544.73	5/20/2013	--	22.70	--	3,522.03
								10/14/2013	--	20.92	--	3,523.81
								5/14/2014	--	22.15	--	3,522.58
								10/13/2014	--	18.80	--	3,525.93
								4/20/2015	--	21.14	--	3,523.59
								12/7/2015	--	20.55	--	3,524.18
P-03	12/27/2005	78.65	2	3,534.4	58 - 78	2.43	3,536.83	5/20/2013	--	72.72	--	3,464.11
								10/14/2013	--	56.39	--	3,480.44
								5/14/2014	--	73.91	--	3,462.92
								10/13/2014	--	40.70	--	3,496.13
								4/20/2015	--	56.65	--	3,480.18
								12/7/2015	--	44.93	--	3,491.90
P-04	12/28/2005	61.65	2	3,513.5	51 - 61	2.27	3,515.77	5/20/2013	--	DRY	--	--
								10/14/2013	--	DRY	--	--
								5/14/2014	--	56.80	--	3,458.97
								10/13/2014	--	59.30	--	3,456.47
								4/20/2015	--	60.40	--	3,455.37
								12/7/2015	--	DRY	--	--
P-05	12/28/2005	47.35	2	3,504.9	35 - 45	2.58	3,507.48	5/20/2013	--	47.34	--	3,460.14
								10/14/2013	--	47.3	--	3,460.18
								5/14/2014	--	47.3	--	3,460.18
								10/13/2014	--	47.3	--	3,460.18

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
								4/20/2015	--	47	--	3,460.48
								12/7/2015	--	47.14	--	3,460.34

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-01			Plugged		
MW-02	5/22/2013	<0.0008	<0.002	<0.002	<0.003
	10/17/2013	**0.0057**	<0.002	<0.002	<0.003
	5/14/2014		Insufficient Water for Sample Collection		
	10/15/2014	<0.0008	<0.002	<0.002	<0.003
	4/23/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
MW-02-01			Plugged		
MW-02-02	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
	10/15/2014	<0.008	<0.02	<0.02	<0.03
	4/23/2015	<0.020	<0.060	<0.060	<0.090
	12/9/2015	<0.020	<0.060	<0.060	<0.090
MW-02-03	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
	10/15/2014	<0.0008	<0.002	<0.002	<0.003
	4/22/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
MW-02-04	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
	10/15/2014	<0.00008	<0.002	<0.002	<0.002
	4/22/2015	<0.002	<0.006	<0.006	<0.009
	12/9/2015	<0.002	<0.006	<0.006	<0.009
MW-02-05	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
	10/15/2014	<0.008	<0.02	<0.02	<0.03
	4/23/2015	<0.002	<0.006	<0.006	<0.009
	12/9/2015	<0.002	<0.006	<0.006	<0.009
MW-02-06	5/23/2013		LNAPL Present, No Sample Collected		
	10/15/2013		LNAPL Present, No Sample Collected		
	5/14/2014		LNAPL Present, No Sample Collected		
	10/14/2014		LNAPL Present, No Sample Collected		
	4/21/2015		LNAPL Present, No Sample Collected		
	12/9/2015	**0.721**	**1.76**	<0.300	**3.49**
MW-02-07	5/22/2013	**3.19**	**0.0489**	<0.0400	**0.0605**

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**
	10/15/2013	Insufficient Water for Sample Collection			
	5/15/2014	**5.09**	**0.0742**	0.608	**0.069**
	10/15/2014	**5.00**	<0.002	**0.277**	<0.003
	4/23/2015	**3.40**	<0.300	<0.300	<0.450
	12/8/2015	Dry			
MW-02-09	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-02-10	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-02-11	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/22/2015	**27.30**	**0.774**	<0.120	**1.43**
	12/9/2015	**29.60**	**0.539**	**<1.2**	**0.813**
MW-02-12	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
	10/15/2014	**0.0043**	<0.002	<0.002	<0.003
	4/22/2015	<0.002	<0.006	<0.006	<0.009
	12/9/2015	**0.0028**	<0.006	<0.006	<0.009
MW-02-13	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-02-14	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			

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**
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-02-15	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
	10/15/2014	**0.555**	<0.002	<0.002	<0.003
	4/23/2015	**0.576**	**0.00539**	0.00295	<0.009
	12/8/2015	**0.448**	<0.03	<0.03	<0.045
MW-02-16	5/22/2013	**0.138**	**0.002**	<0.002	<0.003
	10/16/2013	**0.384**	**0.0049**	<0.002	<0.003
	5/14/2014	**2.22**	**0.148**	0.0656	**0.0977**
	10/15/2014	**0.0231**	<0.05	<0.05	<0.075
	4/22/2015	**7.98**	**0.715**	**0.836**	**0.513**
	12/8/2015	**8.22**	**0.534**	**0.676**	**<0.900**
MW-02-18	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**
	10/15/2014	**8.14**	<0.2	<0.2	<0.3
	4/22/2015	**8.24**	<0.600	<0.600	**<0.900**
	12/9/2015	**10.5**	**0.291**	<0.600	**<0.900**
MW-03	5/23/2013	**1.3**	**0.318**	**0.00501**	**0.271**
	10/16/2013	**2.42**	**0.0823**	<0.0200	**0.158**
	5/14/2014	LNAPL Present, No Sample Collected			
	10/15/2014	**2.87**	**0.156**	<0.04	**0.199**
	4/22/2015	**2.52**	**0.273**	<0.006	**0.296**
	12/9/2015	**2.12**	**0.19**	<0.120	**0.238**
MW-03-01	5/22/2013	**32**	**0.745**	**11.5**	**0.841**
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-03-02	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			

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-03-03	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
	10/15/2014	**2.68**	<0.1	<0.1	**0.171**
	4/22/2015	**2.33**	<0.300	<0.300	**0.246**
	12/9/2015	**2.52**	<0.300	<0.300	<0.450
MW-03-04	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-04	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-05	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
	10/15/2014	<0.0008	<0.002	<0.002	<0.003
	4/23/2015	<0.002	<0.006	<0.006	<0.009
	12/9/2015	**0.0011**	<0.006	<0.006	<0.009
MW-06	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-07	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**
	10/15/2014	**12.7**	**0.352**	**2.66**	<0.3
	4/23/2015	**12.3**	<0.600	**1.78**	**<0.900**
	12/9/2015	**7.26**	**0.873**	**1.28**	**0.655**
MW-08	5/22/2013	**0.00373**	<0.002	**0.00218**	<0.003
	10/16/213	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	<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**
	10/15/2014	<0.0008	<0.002	<0.002	<0.003
	4/23/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
MW-09	5/22/2013	**4.4**	**0.0448**	**0.0378**	**0.216**
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-10	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-11	5/20/2013	Insufficient Water for sample			
	10/15/2013	Insufficient Water for sample			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-12	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
	10/15/2014	**1.8000**	<0.2	<0.2	<0.3
	4/22/2015	**0.00162**	<0.006	<0.006	<0.009
	12/9/2015	**0.0122**	<0.006	<0.006	<0.009
MW-13	5/21/2013	**2.71**	<0.002	<0.002	**0.11**
	10/14/2013	**0.00186**	<0.002	<0.002	<0.003
	5/14/2014	LNAPL Present, No Sample Collected			
	10/15/2014	**0.6**	**0.0178**	**0.00451**	**0.0258**
	4/20/2015	Insufficient Water for sample			
	12/8/2015	LNAPL Present, No Sample Collected			
MW-14	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	**0.0941**	<0.001	<0.001	**0.0015**
	5/14/2014	LNAPL Present, No Sample Collected			
	10/13/2014	LNAPL Present, No Sample Collected			
	4/21/2015	**0.0167**	**0.0191**	<0.006	**0.0159**
	12/8/2015	**0.111**	<0.006	<0.006	**0.0153**

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-15	5/21/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	Insufficient Water for Sample Collection			
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
MW-16	5/21/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	Insufficient Water for Sample Collection			
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
MW-17	5/21/2013	**0.0427**	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	Insufficient Water for Sample Collection			
	10/14/2014	<0.002	<0.006	<0.006	**0.0248**
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
MW-18	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	<0.002	<0.002	<0.002	<0.003
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
MW-19	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/7/2015	LNAPL Present, No Sample Collected			
MW-20	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/15/2014	**2.84**	**0.104**	<0.04	<0.06
	4/22/2015	**0.665**	<0.150	<0.150	<0.225
	12/8/2015	**0.556**	<0.150	<0.150	<0.225
MW-21	5/20/2013	LNAPL Present, No Sample Collected			
	10/15/2013	LNAPL Present, No Sample Collected			

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**
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	LNAPL Present, No Sample Collected			
	4/21/2015	LNAPL Present, No Sample Collected			
	12/7/2015	LNAPL Present, No Sample Collected			
MW-22	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
	10/15/2014	**8.81**	**0.27**	<0.2	<0.2
	4/22/2015	**4.48**	**<1.20**	**<1.20**	**<1.80**
	12/9/2015	**3.54**	**<1.2**	**<1.2**	**<1.2**
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
	10/14/2014	**0.16**	**0.00433**	<0.0060	0.0409
	4/21/2015	**0.0645**	**0.00215**	<0.006	0.00304
	12/8/2015	**0.009**	<0.006	<0.006	<0.009
MW-24	3/13/2012	**4.16**	**1.78**	**0.00541**	**0.82**
	9/27/2012	**5.1**	**1.45**	<0.100	0.461
	5/20/2013	No Sample Collected			
	10/15/2013	No Sample Collected			
	5/14/2014	Insufficient Water for Sample Collection			
	10/14/2014	**1.04**	**0.707**	**0.00282**	0.447
	4/23/2015	**2.73**	**0.717**	<0.060	0.276
	12/8/2015	**2.14**	**0.743**	<0.120	0.354
EB-01	5/20/2013	Dry			
	10/14/2013	Dry			
	5/14/2014	Dry			
	10/13/2014	Dry			
	4/20/2015	Dry			
	12/7/2015	Dry			
EB-02	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
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
EB-03	10/15/2013	**0.0982**	<0.002	<0.002	0.0173
	5/14/2014	LNAPL Present, No Sample Collected			
	10/14/2014	**0.936**	**0.0523**	**0.00564**	0.0998

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**
	4/21/2015	**0.145**	<0.003	<0.003	0.0722
	12/8/2015	LNAPL Present, No Sample Collected			
EB-04	5/20/2013	<0.000800	<0.0020	<0.00200	<0.00300
	10/15/2013	<0.000800	<0.0020	<0.00200	<0.00300
	5/14/2014	Dry			
	10/14/2014	Dry			
	4/21/2015	Dry			
	12/8/2015	Dry			
EB-05	5/20/2013	<0.0008	<0.002	<0.002	<0.003
	10/15/2013	<0.0008	<0.002	<0.002	<0.003
	5/14/2014	Insufficient Water for Sample Collection			
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
EB-06	5/20/2013	<0.0008	<0.002	<0.002	<0.003
	10/14/2013	Insufficient Water for Sample Collection			
	5/14/2014	<0.0008	<0.002	**0.00219**	**0.00338**
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
EB-07	5/20/2013	<0.0002	<0.0003	<0.0007	<0.0009
	10/14/2013	Insufficient Water for Sample Collection			
	5/14/2014	Insufficient Water for Sample Collection			
	10/14/2014	<0.0002	<0.0003	<0.0007	<0.0009
	4/21/2015	<0.0002	<0.0003	<0.0007	<0.0009
	12/8/2015	Insufficient Water for Sample Collection			
EB-08	5/20/2013	LNAPL Present, No Sample Collected			
	10/14/2013	LNAPL Present, No Sample Collected			
	5/14/2014	LNAPL Present, No Sample Collected			
	10/13/2014	LNAPL Present, No Sample Collected			
	4/20/2015	LNAPL Present, No Sample Collected			
	12/7/2015	LNAPL Present, No Sample Collected			
P-01	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
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009

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	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**
	10/14/2014	**0.13100**	**0.168**	<0.006	**0.191**
	4/21/2015	<0.002	<0.006	<0.006	<0.009
	12/8/2015	<0.002	<0.006	<0.006	<0.009
P-03	5/21/2013	**0.00308**	<0.002	<0.002	<0.003
	10/14/2013	Insufficient Water for Sample Collection			
	5/14/2014	Insufficient Water for Sample Collection			
	10/14/2014	**0.04350**	**0.00292**	<0.006	<0.009
	4/21/2015	**0.00650**	<0.006	<0.006	<0.009
	12/8/2015	**0.00240**	<0.006	<0.006	<0.009
P-04	5/20/2013	Dry			
	10/15/2013	Dry			
	5/14/2014	Dry			
	10/14/2014	<0.002	<0.006	<0.006	<0.009
	4/20/2015	Insufficient Water for Sample Collection			
	12/8/2015	Dry			
P-05	5/20/2013	Insufficient Water for Sample Collection			
	10/14/2013	Insufficient Water for Sample Collection			
	5/14/2014	Insufficient Water for Sample Collection			
	10/13/2014	Insufficient Water for Sample Collection			
	4/20/2015	Insufficient Water for Sample Collection			
	12/8/2015	Insufficient Water for Sample Collection			

Notes: Analysis performed by DHL Analyticla, Round Rock, Texas
Volatiles analyzed by EPA SW-846 Method 8021B
All values reported in milligrams per liter (mg/L) equivelent to parts per million (ppm)
< values - Indicate the value is less than method detection limit (MDL).
Blue and bold indicates analyte concentration exceeds Water Quality Control Commission (WQCC) human health standard

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	<0.000800	<0.00200	0.0147	<0.00300
	5/22/2013	0.000971	<0.00200	<0.00200	<0.00300
Equipment Rinse-04	5/23/2013	<0.000800	<0.00200	<0.00200	<0.00300
Field Blank-01	3/10/2008	<0.0008	<0.002	**0.00961**	<0.003
	9/17/2008	<0.0008	<0.002	**0.00528**	<0.003
	3/10/2009	<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	**0.0177**	<0.003
	9/14/2010	<0.0008	<0.002	**0.00375**	<0.003
Field Blank-02	9/16/2009	<0.0008	<0.002	<0.002	<0.003
	3/31/2010	<0.0008	<0.002	**0.0224**	<0.003
	9/15/2010	<0.0008	<0.002	**0.00225**	<0.003
Trip Blank-01	3/10/2008	<0.0008	<0.002	<0.002	<0.003
	9/16/2008	**0.00122**	<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
	3/30/2010	<0.0008	<0.002	<0.002	<0.003
	9/14/2010	<0.0008	<0.002	<0.002	<0.003
	3/8/2011	<0.00100	<0.00100	<0.00100	<0.00100
	3/15/2011	<0.00100	<0.00100	<0.00100	<0.00100
	3/17/2011	0.0071	<0.00100	<0.00100	<0.00100
	10/13/2011	<0.00100	<0.00100	<0.00100	<0.00100
	10/12/2011	<1.00	<0.000860	<0.000719	<0.000942
	3/12/2012	<0.0008	<0.002	<0.002	<0.003
	3/13/2012	<0.000800	<0.00200	<0.00200	<0.00300
	9/27/2012	<0.000800	<0.00200	<0.00200	<0.00300
	5/23/2013	<0.000800	<0.00200	<0.00200	<0.00300
Trip Blank-02	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	<0.0008	<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	<0.0008	<0.002	<0.002	<0.003
	3/13/2012	<0.000800	<0.00200	<0.00200	<0.00300
	9/28/2012	<0.000800	<0.00200	<0.00200	<0.00300
	5/22/2013	<0.000800	<0.00200	<0.00200	<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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
MW-01		Plugged							
MW-02	5/21/2013	--	**--**	--	--	--	--	--	--
	10/17/2013	<0.002	**0.047**	<0.0003	**0.00251**	<0.0003	<0.00008	<0.002	<0.001
	5/14/2014	Insufficient Water for Sample							
	10/15/2014	**0.0023**	**0.037**	<0.0003	<0.002	<0.003	<0.00008	<0.002	<0.001
	4/23/2015	<0.005	**0.037**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	**0.0051**	**0.042**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-02-01		Plugged							
MW-02-02	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.0319**	<0.0300	**0.00441**	<0.0200	<0.0030	<0.000080	<0.0200	<0.0100
	5/15/2014	**0.0369**	<0.0300	**0.00845**	<0.0200	<0.0030	<0.000080	<0.0200	<0.0100
	10/15/2014	**0.0442**	<0.03	**0.00328**	<0.02	<0.003	<0.00008	**0.0415**	<0.01
	4/23/2015	**0.0232**	<0.100	**0.00415**	<0.050	<0.010	<0.0002	<0.050	<0.020
	12/9/2015	**0.0680**	<0.100	**0.00407**	<0.050	<0.010	<0.0002	<0.05	<0.02
MW-02-03	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00221**	**0.01**	<0.00030	**0.0545**	<0.0003	<0.00008	**0.00519**	<0.001
	5/15/2014	**0.00336**	**0.00965**	<0.00030	**0.0549**	<0.0003	<0.00008	**0.00546**	<0.001
	10/15/2014	**0.00264**	**0.00904**	<0.0003	**0.0575**	<0.0003	<0.00008	**0.00581**	<0.001
	4/22/2015	**0.00218**	**0.0103**	<0.001	**0.0328**	<0.001	<0.0002	**0.00336**	<0.002
	12/9/2015	**0.00276**	**0.00987**	<0.001	**0.0651**	<0.001	<0.0002	**0.00516**	<0.002
MW-02-04	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00508**	**0.0216**	<0.00030	<0.0020	<0.0003	<0.000080	<0.002	<0.001
	5/15/2014	<0.002	**0.0198**	<0.00030	<0.002	<0.0003	<0.00008	<0.002	<0.001
	10/15/2014	<0.002	**0.0195**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	<0.005	**0.0195**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/9/2015	**0.00788**	**0.0197**	<0.001	<0.005	<0.001	<0.0002	**0.00496**	<0.002
MW-02-05	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.0331**	<0.0300	**0.00522**	**0.0343**	**0.0034**	<0.00008	<0.0200	<0.0100
	5/15/2014	**0.0331**	<0.03	**0.00672**	<0.02	<0.003	<0.00008	<0.02	<0.01
	10/15/2014	**0.0468**	<0.03	<0.003	<0.02	<0.003	<0.00008	**0.0416**	<0.01
	4/23/2015	<0.100	<0.200	<0.020	**<0.100**	<0.020	<0.0002	**<0.100**	<0.040
	12/9/2015	**0.0556**	<0.200	<0.020	**<0.100**	<0.020	<0.0002	**<0.100**	<0.040
MW-02-06	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/23/2015	LNAPL Present, No Sample Collected							
	12/9/2015	**0.0122**	**0.0258**	**0.000412**	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-02-07	5/22/2013	--	--	--	--	--	--	--	--
	10/16/2013	Insufficient Water for Sample Collection							
	5/15/2014	**0.0118**	**0.0243**	<0.0003	**0.0232**	<0.0003	<0.00008	**0.208**	<0.001

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
	10/15/2014	**0.0148**	**0.023**	<0.003	**0.0168**	<0.0003	**0.0000959**		
	4/23/2015	**0.00852**	**0.0236**	<0.001	**0.0122**	<0.001	<0.0002	<0.005	<0.002
	12/9/2015	Dry							
MW-02-09	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/23/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-02-10	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/23/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-02-11	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	<0.005	**0.0153**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.001
	12/9/2015	**0.00212**	**0.0161**	<0.001	<0.005	<0.001	<0.0002	**0.00227**	<0.002
MW-02-12	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	<0.0020	**0.015**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/14/2014	**0.016**	**0.0144**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	10/15/2014	**0.00317**	**0.0147**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	**0.00365**	**0.0152**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/9/2015	**0.0029**	**0.0147**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-02-13	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/14/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-02-14	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/14/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-02-15	5/22/2013	--	--	--	--	--	--	--	--

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
	10/16/2013	**0.0563**	**0.0232**	<0.00030	**0.00446**	<0.00030	<0.00008	<0.0020	<0.0010
	5/14/2014	**0.0193**	**0.0217**	<0.00030	**0.00262**	<0.00030	<0.00008	<0.0020	<0.0010
	10/15/2014	**0.00387**	**0.0196**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/23/2015	**0.00708**	**0.0208**	<0.001	**0.00225**	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	**0.01**	**0.0207**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-02-16	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.0265**	**0.0252**	<0.00030	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/14/2014	**0.0319**	**0.0196**	<0.00030	<0.002	<0.0003	<0.00008	<0.002	<0.001
	10/15/2014	**0.00778**	**0.0234**	<0.0003	**0.0032**	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	**0.00473**	**0.0263**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	**0.0122**	**0.0261**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-02-18	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	<0.002	**0.0177**	<0.0003	**0.00322**	**0.0003**	<0.00008	<0.002	<0.0010
	5/15/2014	<0.002	**0.0161**	<0.0003	<0.002	**0.0003**	<0.00008	**0.0121**	<0.0010
	10/15/2014	<0.002	**0.0151**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	<0.005	**0.0145**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/9/2015	<0.005	**0.0177**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-03	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00536**	**0.0266**	<0.0003	**0.00405**	<0.0003	<0.00008	<0.002	<0.001
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	**0.00327**	**0.0276**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	**0.00431**	**0.0261**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/9/2015	**0.00272**	**0.0287**	<0.001	<0.005	<0.001	<0.0002	**0.121**	<0.002
MW-03-01	5/22/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-03-02	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-03-03	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00358**	**0.0244**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/15/2014	**0.00212**	**0.0224**	<0.0003	<0.002	<0.0003	<0.00008	**0.00611**	<0.001
	10/15/2014	**0.00334**	**0.0225**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	**0.0128**	**0.0237**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.001
	12/9/2015	**0.00577**	**0.0238**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.001

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
MW-03-04	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-04	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/15/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-05	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	<0.002	**0.0126**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/14/2014	**0.0035**	**0.0141**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	10/15/2014	<0.002	**0.0141**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/23/2015	<0.005	**0.0137**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/9/2015	<0.005	**0.0138**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-06	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/14/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/23/2015	LNAPL Present, No Sample Collected							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-07	5/22/2013	--	--	--	--	--	--	--	--
	10/17/2013	**0.0111**	**0.0282**	<0.0003	**0.13**	<0.0003	<0.00008	**0.00591**	<0.001
	5/15/2014	**0.0081**	**0.0262**	<0.0003	**0.167**	<0.0003	<0.00008	**0.266**	<0.001
	10/15/2014	**0.00772**	**0.0262**	<0.003	**0.0874**	<0.0003	<0.00008	<0.002	<0.001
	4/23/2015	**0.00468**	**0.0245**	<0.001	**0.140**	<0.001	<0.0002	<0.005	<0.002
	12/9/2015	**0.00453**	**0.0609**	<0.001	**0.057**	<0.001	<0.0002	<0.005	<0.002
MW-08	5/22/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00771**	**0.0226**	<0.000300	<0.002	<0.0003	<0.00008	<0.00200	<0.001
	5/14/2014	**0.00518**	**0.0170**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	10/15/2014	**0.00465**	**0.0192**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/23/2015	**0.00282**	**0.0180**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	**0.00588**	**0.0193**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-09	5/22/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/14/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
	4/23/2015	LNAPL Present, No Sample Collected							
	12/8/2015	LNAPL Present, No Sample Collected							
MW-10	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/14/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/23/2015	LNAPL Present, No Sample Collected							
	12/8/2015	LNAPL Present, No Sample Collected							
MW-11	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	Insufficient Water for Sample Collection							
	5/14/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/23/2015	LNAPL Present, No Sample Collected							
	12/8/2015	LNAPL Present, No Sample Collected							
MW-12	5/22/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00716**	**0.018**	<0.0003	**0.00362**	**0.000617**	<0.00008	<0.0020	<0.001
	5/14/2014	**0.00338**	**0.013**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	10/15/2014	**0.0124**	**0.0202**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	<0.005	**0.0185**	<0.001	<0.005	**0.000387**	<0.0002	<0.005	<0.002
	12/9/2015	<0.005	**0.0179**	<0.001	<0.005	**0.000308**	<0.0002	<0.005	<0.002
MW-13	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00186**	**0.0405**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/14/2014	LNAPL Present, No Sample Collected							
	10/15/2014	**0.0206**	**0.0299**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	Insufficient Water for Sample							
	12/9/2015	LNAPL Present, No Sample Collected							
MW-14	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.00467**	**0.0212**	<0.00030	<0.002	<0.0003	<0.00008	<0.0020	<0.0010
	4/21/2015	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	**0.00422**	**0.0224**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	<0.005	**0.0193**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-15	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.0057**	**0.0145**	**0.000323**	<0.002	<0.0003	<0.00008	**0.0101**	<0.00100
	5/14/2014	Insufficient Water for Sample							
	10/14/2014	**0.0026**	**0.0126**	<0.001	<0.005	<0.001	<0.0002	**0.0050**	<0.002
	4/21/2015	**0.0061**	**0.0145**	**0.000516**	<0.005	<0.001	<0.0002	**0.0046**	<0.002
	12/8/2015	**0.0073**	**0.0135**	**0.000456**	<0.005	<0.001	<0.0002	**0.0045**	<0.002
MW-16	5/21/2013	--	--	--	--	--	--	--	--
	10/15/213	**0.00242**	**0.0102**	**0.0003**	**0.0128**	**0.0003**	<0.00008	**0.00608**	**0.001**

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
	5/14/2014	Insufficient Water for Sample							
	10/14/2014	**0.0022**	**0.00965**	<0.001	**0.0147**	<0.001	<0.0002	**0.00679**	<0.002
	4/21/2015	**0.00223**	**0.0092**	<0.001	**0.0155**	<0.001	<0.0002	**0.0058**	<0.002
	12/8/2015	**0.00285**	**0.0093**	<0.001	**0.0173**	<0.001	<0.0002	**0.00564**	<0.002
MW-17	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.00525**	**0.0229**	**0.0003**	**0.002**	**0.0003**	<0.00008	**0.002**	**0.001**
	5/14/2014	Insufficient Water for Sample							
	10/14/2014	<0.005	**0.0195**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	**0.00353**	**0.0165**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	**0.00543**	**0.0153**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-18	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.002**	**0.0158**	**0.0003**	**0.00731**	**0.0003**	<0.00008	**0.00202**	0.001
	5/13/2014	<0.002	**0.0151**	<0.0003	**0.00208**	<0.0003	<0.00008	<0.002	<0.001
	10/14/2014	<0.005	**0.0136**	<0.001	**0.00343**	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	<0.005	**0.0148**	<0.001	**0.00431**	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	<0.005	**0.0139**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-19	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	LNAPL Present, No Sample Collected							
	5/13/2014	LNAPL Present, No Sample Collected							
	10/14/2014	LNAPL Present, No Sample Collected							
	4/21/2015	LNAPL Present, No Sample Collected							
	12/8/2015	LNAPL Present, No Sample Collected							
MW-20	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	LNAPL Present, No Sample Collected							
	5/13/2014	LNAPL Present, No Sample Collected							
	10/15/2014	**0.0378**	**0.0163**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	4/22/2015	**0.0106**	**0.0126**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	<0.005	**0.0145**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-21	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	LNAPL Present, No Sample Collected							
	5/13/2014	LNAPL Present, No Sample Collected							
	10/15/2014	LNAPL Present, No Sample Collected							
	4/22/2015	LNAPL Present, No Sample Collected							
	12/8/2015	LNAPL Present, No Sample Collected							
MW-22	5/23/2013	--	--	--	--	--	--	--	--
	10/16/2013	<0.002	**0.0234**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/15/2014	<0.002	**0.0217**	<0.0003	<0.002	<0.0003	<0.00008	**0.0288**	<0.001
	10/15/2014	<0.002	**0.0209**	<0.0003	<0.002	<0.0003	<0.00008	<0.001	<0.001
	4/22/2015	<0.005	**0.0187**	<0.001	<0.005	<0.001	<0.002	<0.005	<0.002
	12/9/2015	<0.005	**0.0207**	<0.001	**0.0284**	<0.001	<0.0002	<0.005	<0.002

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
MW-23	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00408**	**0.0158**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/13/2014	**0.00543**	**0.0184**	<0.0003	**0.00661**	<0.0003	<0.00008	<0.002	<0.001
	10/14/2014	**0.00338**	**0.0194**	<0.00100	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	<0.005	**0.0156**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	<0.005	**0.0179**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
MW-24	5/21/2013	No Sample Collected							
	10/16/2013	No Sample Collected							
	5/13/2014	Insufficient Water for Sample							
	10/14/2014	**0.00347**	**0.0272**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/23/2015	<0.005	**0.0237**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	<0.005	**0.0221**	<0.001	**0.00305**	<0.001	<0.0002	<0.005	<0.002
EB-01	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	Dry							
	5/13/2014	Dry							
	10/14/2014	Dry							
	4/23/2015	Dry							
	12/8/2015	Dry							
EB-02	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.002**	**0.0108**	**0.0003**	**0.0002**	<0.0003	<0.00008	**0.00372**	<0.001
	5/13/2014	<0.002	**0.0114**	<0.0003	<0.002	<0.0003	<0.00008	**0.00322**	<0.001
	10/14/2014	<0.005	**0.0102**	<0.001	<0.005	<0.001	<0.0002	**0.00385**	<0.002
	4/21/2015	<0.005	**0.0106**	**0.00114**	<0.005	<0.001	<0.0002	**0.00211**	<0.002
	12/8/2015	<0.005	**0.00947**	<0.001	<0.005	<0.001	<0.0002	**0.00364**	<0.002
EB-03	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.002**	**0.0269**	**0.0003**	**0.00208**	**0.0003**	<0.00008	**0.002**	**0.001**
	5/13/2014	LNAPL Present, No Sample Collected							
	10/14/2014	<0.005	**0.0234**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	<0.005	**0.0222**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	LNAPL Present, No Sample Collected							
EB-04	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.00322**	**0.0197**	**0.0003**	**0.0577**	**0.0003**	<0.00008	**0.002333**	**0.001**
	5/13/2014	Dry							
	10/14/2014	Dry							
	4/21/2015	Dry							
	12/8/2015	Dry							
EB-05	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	**0.0119**	**0.0239**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	5/13/2014	Insufficient Water for Sample Collection							
	10/14/2014	<0.005	**0.0222**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	<0.005	**0.0198**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
	12/8/2015	**0.00307**	**0.0209**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
EB-06	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	Insufficient Water for Sample Collection							
	5/14/2014	**0.00215**	**0.013**	**0.001**	**0.0372**	<0.0003	<0.00008	**0.00287**	<0.001
	10/14/2014	**0.00215**	**0.0132**	**0.000333**	**0.0508**	<0.001	<0.0002	**0.00357**	<0.002
	4/21/2015	<0.005	**0.0117**	<0.001	**0.0597**	<0.001	<0.0002	**0.00311**	<0.002
	12/8/2015	**0.00208**	**0.0124**	**0.000436**	**0.0676**	<0.001	<0.0002	**0.0038**	<0.002
EB-07	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	Insufficient Water for Sample Collection							
	5/14/2014	Insufficient Water for Sample Collection							
	10/14/2014	**0.0049**	**0.0163**	<0.001	<0.005	<0.001	<0.0002	**0.00403**	<0.00200
	4/21/2015	**0.00277**	**0.0163**	**0.000451**	<0.005	<0.001	<0.0002	**0.00427**	<0.002
	12/8/2015	Insufficient Water for Sample Collection							
EB-08	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	LNAPL Present, No Sample Collected							
	5/13/2014	LNAPL Present, No Sample Collected							
	10/14/2014	LNAPL Present, No Sample Collected							
	4/23/2015	LNAPL Present, No Sample Collected							
	12/8/2015	LNAPL Present, No Sample Collected							
P-01	5/21/2013	--	--	--	--	--	--	--	--
	10/15/2013	<0.002	**0.0183**	<0.0003	<0.002	<0.0003	<0.00008	<0.003	<0.001
	5/13/2014	<0.002	**0.0158**	<0.0003	<0.002	<0.0003	<0.00008	<0.002	<0.001
	10/14/2014	<0.005	**0.014**	<0.001	<0.005	<0.001	<0.0002	<0.0050	<0.002
	4/21/2015	**0.0024**	**0.0133**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	**0.118**	**0.0273**	<0.001	**0.0327**	<0.001	<0.0002	**0.0141**	<0.002
P-02	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	**0.00318**	**0.0172**	<0.00030	<0.002	<0.0003	<0.00008	<0.002	<0.00100
	5/15/2014	**0.00206**	**0.0162**	<0.0003	<0.002	<0.0003	<0.00008	**0.0214**	<0.001
	10/14/2014	<0.005	**0.0171**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	<0.005	**0.0164**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	<0.005	**0.0168**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
P-03	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	Insufficient Water for Sample Collection							
	5/15/2014	Insufficient Water for Sample Collection							
	10/14/2014	<0.005	**0.032**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	<0.005	**0.0206**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	12/8/2015	<0.005	**0.0223**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
P-04	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	Dry							
	5/15/2014	Dry							

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	Chromium	Lead	Mercury	Selenium	Silver
WQCC Standard (mg/L)		**0.1**	**1**	**0.01**	**0.05**	**0.05**	**0.002**	**0.05**	**0.05**
	10/14/2014	**0.00274**	**0.0175**	<0.001	<0.005	<0.001	<0.0002	<0.005	<0.002
	4/21/2015	Insufficient Water for Sample Collection							
	12/8/2015	Dry							
P-05	5/21/2013	--	--	--	--	--	--	--	--
	10/16/2013	Insufficient Water for Sample Collection							
	5/13/2014	Insufficient Water for Sample Collection							
	10/14/2014	Insufficient Water for Sample Collection							
	4/23/2015	Insufficient Water for Sample Collection							
	12/8/2015	Insufficient Water for Sample Collection							

Notes: analysis performed by DHL Analytical, Round Rock, Texas
Metals analyzed by EPA SW-846 Method 6020
Mercury analyzed by EPA SW-846 Method 7470A
All values reported in milligrams per liter (mg/L) equivelent to parts per million (ppm)
< values - Indicate the value is less than Method Detection Limit (MDL).
Blue and bold indicates analyte concentration exceeds Water Quality Control Commission (WQCC) human health 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 Anaytical 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

Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
MW-01						Plugged							
MW-02	5/22/2013	--	--	--	--	--	--	--	--	124.0	--	**1,670**	**2,900**
	10/17/2013	626	89.8	20.5	106	289	<25.0	<25.0	289	150.0	--	**1,860**	**2,910**
	5/14/2014					Insufficient Water for Sample							
	10/15/2014	643	75.5	18.9	120	234			234	112.0		**1,560**	**2,960**
	4/23/2015	521	105	20.3	120	227	<20.0	<20.0	227	136.0	--	**1,800**	**2,750**
	12/8/2015	540	114	20.8	120	276	<20.0	<20.0	276	125.0	--	**1,650**	**3,020**
MW-02-01						Plugged							
MW-02-02	5/23/2013	--	--	--	--	--	--	--	--	**10,800.0**	--	**344,000**	**507,000**
	10/16/2013	290	45,900	2,070	21,800	103,000	<250	<250	10,300	**16,400.0**	--	**223,000**	**440,000**
	5/15/2014	340	48,700	2,240	29,800	8,630	1,270	<200	9,900	**14,700.0**	--	**263,000**	**301,000**
	10/15/2014	239	48,500	1,630	55,800	18,300	148	<10.0	18,400	**11,800.0**	--	**186,000**	**474,000**
	4/23/2015	262	45,100	2,260	24,300	4,130	<20.0	<20.0	4,130	**12,500.0**	--	**301,000**	**520,000**
	12/9/2015	209	55,500	1,630	60,200	6,640	<20.0	<20.0	6,640	**9,950.0**	--	**296,000**	**529,000**
MW-02-03	5/23/2013	--	--	--	--	--	--	--	--	68.2	--	**1,930**	**3,120**
	10/16/2013	<0.00030	112	4.92	41.1	102	<12.5	<12.5	102	46.0	--	**1,670**	**2,810**
	5/15/2014	<0.00030	123	5.64	50.6	113	<10.0	<10.0	113	37.3	--	**2,040**	**1,720**
	10/15/2014	<0.0003	134	5.99	50.6	107	<10.0	<10.0	107	36.4	--	**1,640**	**2,950**
	4/22/2015	<0.001	131	5.59	80.3	186	<20.0	<20.0	186	65.5	--	**1,790**	**5,280**
	12/9/2015	<0.001	127	5.00	47.5	104	<20.0	<20.0	104	36.3	--	**2,020**	**1,830**
MW-02-04	5/23/2013	--	--	--	--	--	--	--	--	81.2	--	**1,690**	**2,920**
	1016/2013	577	118	12.0	73.4	324	<12.5	<12.5	324	93.4	--	**1,590**	**2,540**
	5/15/2014	549	89.5	11.80	59.1	270	<10.0	<10.0	270	58.3	--	**1,590**	**1,540**
	10/15/2014	631	98.0	12.5	70.3	285	<10.0	<10.0	285	67.1	--	**1,540**	**2,860**
	4/22/2015	495	96.0	11.1	62.9	274	<20.0	<20.0	274	86.2	--	**1,710**	**3,180**
	12/9/2015	540	134	11.1	63.8	253	<20.0	<20.0	253	62.1	--	**1,480**	**2,580**
MW-02-05	5/23/2013	--	--	--	--	--	--	--	--	**5,840.0**	--	**355,000**	**533,000**
	10/16/2013	309	47,200	1,470	19,200	8,990	1,550	<250	10,500	**10,400.0**	--	**237,000**	**458,000**
	5/15/2014	351	49,700.0	1,660	28,400	5,460	2,620	<200	8,090	**7,800.0**	--	**307,000**	**172,000**

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
	10/15/2014	240	48,000.0	1,170	65,100	1,260	<10.0	<10.0	1,260	**5,550.0**	--	**321,000**	**478,000**
	4/23/2015	204	44,300.0	1,100	49,700	4,140	<20.0	<20.0	4,140	**5,710.0**	--	**333,000**	**489,000**
	12/9/2015	209	54,100.0	1,120	58,200	7,810	<20.0	<20.0	7,810	**5,700.0**	--	**290,000**	**545,000**
MW-02-06	5/23/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/9/2015	560	161	8.09	58.3	495	<20.0	<20.0	495	36.3	--	**1,620**	**3,170**
MW-02-07	5/22/2013	--	--	--	--	--	--	--	--	158.0	--	**1,950**	**3,780**
	10/16/2013	Insufficient Water For Sample Collection											
	5/15/2014	718	107	18.9	208	1,020	<10.0	<10.0	1,020	182.0	--	**2,170**	**2,580**
	10/15/2014	707	320	24.4	391	759	--	--	759	171.0	--	**1,860**	**3,980**
	4/23/2015	588	113	17.7	207	1,610	<20.0	<20.0	1,610	202.0	--	**1,520**	**3,250**
	12/9/2015	Dry											
MW-02-09	5/22/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-02-10	5/22/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-02-11	5/22/2013	LNAPL Present, No Sample Collected											

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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/22/2015	616	240.0	3.94	101	803	<20.0	<20.0	803	86.6	--	**1,850**	**3,720**
	12/9/2015	630	228.0	3.83	101	834	<20.0	<20.0	834	75.2	--	**1,710**	**3,720**
MW-02-12	5/23/2013	--	--	--	--	--	--	--	--	117.0	--	**1,850**	**3,370**
	10/16/2013	558	118	9.30	215	508	<12.5	<12.5	508	124.0	--	**1,700**	**3,150**
	5/14/2014	568	110	9.78	212	517	<10.0	<10.0	517	103.0	--	**1,790**	**2,240**
	10/15/2014	626	142	10.2	253	526	<10.0	<10.0	526	114.0	--	**1,730**	**3,660**
	4/22/2015	525	135	8.90	244	497	<20.0	<20.0	497	138.0	--	**1,910**	**4,510**
	12/9/2015	546	130	8.94	238	518	<20.0	<20.0	518	137.0	--	**1,710**	**3,450**
MW-02-13	5/23/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/22/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-02-14	5/23/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/22/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-02-15	5/22/2013	--	--	--	--	--	--	--	--	**835.0**	--	**1,620**	**4,260**
	10/16/2013	750	93.9	20.9	340	464	<12.5	<12.5	464	**738.0**	--	**1,630**	**3,900**
	5/14/2014	800	106	13.8	417	629	<10.0	<10.0	629	**773.0**	--	**1,650**	**3,620**
	10/15/2014	795	117	12.2	478	580	<10.0	<10.0	580	**793.0**	--	**1,540**	**4,760**
	4/23/2015	688	115	13.3	446	610	<20.0	<20.0	610	**832.0**	--	**1,640**	**4,220**
	12/8/2015	709	114	10.7	427	644	<20.0	<20.0	644	**785.0**	--	**1,660**	**4,250**

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
MW-02-16	5/22/2013	--	--	--	--	--	--	--	--	202.0	--	**1,970**	**3,850**
	10/16/2013	622	90.5	19.8	250	557	<12.5	<12.5	557	163.0	--	**1,670**	**3,230**
	5/14/2014	680	108	10.7	353	731	<10.0	<10.0	731	233.0	--	**1,880**	**2,730**
	10/15/2014	689	109	10.6	354	707	<10.0	<10.0	707	201.0	--	**1,660**	**3,500**
	4/22/2015	605	96.8	16.4	277	680	<20.0	<20.0	680	**258.0**	--	**1,690**	**3,440**
	12/8/2015	643	95.2	14.7	259	817	<20.0	<20.0	817	234.0	--	**1,660**	**3,350**
MW-02-18	5/23/2013	--	--	--	--	--	--	--	--	85.1	--	**1,880**	**3,630**
	10/16/2013	597	192	3.05	76.4	679	<12.5	<12.5	679	78.2	--	**1,970**	**3,210**
	5/15/2014	652	212	3.82	87.6	550	<10.0	<10.0	550	61.4	--	**2,040**	**2,050**
	10/15/2014	639	230	3.87	92.2	623	<10.0	<10.0	623	67.1	--	**1,700**	**3,770**
	4/22/2015	556	218	3.14	80	652	<20.0	<20.0	652	71.2	--	**1,840**	**3,350**
	12/9/2015	570	201	3.17	63.6	677	<20.0	<20.0	677	50.1	--	**1,610**	**3,560**
MW-03	5/23/2013	--	--	--	--	--	--	--	--	140.0	--	**1,680**	**3,190**
	10/16/2013	597	85	13.20	139	605	<50.0	<50.0	605	175.0	--	**1,340**	**2,830**
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	588	92	15.40	147	663	<10.0	<10.0	663	132.0	--	**1,180**	**2,860**
	4/22/2015	428	98	11.30	110	563	<20.0	<20.0	563	118.0	--	**1,110**	**2,460**
	12/9/2015	475	93	12.30	112	627	<20.0	<20.0	627	104.0	--	**1,220**	**2,640**
MW-03-01	5/22/2013	--	--	--	--	--	--	--	--	**2,720.0**	--	**2,900**	**5,550**
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/22/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-03-02	5/23/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											

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Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
	4/22/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-03-03	5/23/2013	--	--	--	--	--	--	--	--	212.0	--	**1,110**	**2,640**
	10/16/2013	486	81.2	10	160	676	50	50	676	197.0	--	**1,020**	**2,540**
	5/15/2014	627	96.6	10.4	189	587	<10.0	<10.0	587	171.0	--	**1,410**	**2,210**
	10/15/2014	536	94.1	10.9	197	739	<10.0	<10.0	739	216.0	--	**1,100**	**3,190**
	4/22/2015	501	105	9.73	212	751	<20.0	<20.0	751	**261.0**	--	**1,200**	**3,000**
	12/9/2015	499	107	10.4	221	715	<20.0	<20.0	715	**279.0**	--	**1,150**	**3,090**
MW-04	5/23/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/22/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-05	5/22/2013	--	--	--	--	--	--	--	--	153.0	--	**1,840**	**3,440**
	10/16/2013	558	128	7.94	207	421	<25.0	<25.0	421	160.0	--	**1,600**	**3,170**
	5/14/2014	592	124	8.56	214	464	<10.0	<10.0	464	142.0	--	**1,850**	**2,150**
	10/15/2014	618	141	9.33	243	491	<10.0	<10.0	491	134.0	--	**1,660**	**3,650**
	4/23/2015	507	128	7.17	213	460	<20.0	<20.0	460	148.0	--	**1,770**	**3,130**
	12/9/2015	517	128	8.09	226	461	<20.0	<20.0	461	137.0	--	**1,640**	**3,290**
MW-06	5/23/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/15/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/22/2015	LNAPL Present, No Sample Collected											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-07	5/22/2013	--	--	--	--	--	--	--	--	66.9	--	**2,100**	**3,770**
	10/17/2013	542	77	19.8	68.7	1,530	25	25	1,530	64.1	--	**2,170**	**3,450**

Table 4
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Frontier Field Services - Empire Abo Gas Plant (GW-022)
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
	5/15/2014	609	176	24.3	68.4	1,580	<10.0	<10.0	1,580	53.0	--	**2,720**	**3,240**
	10/15/2014	628	54	15.2	62.5	1,240	<10.0	<10.0	1,240	29.9	--	**1,710**	**3,360**
	4/23/2015	597	175	21.0	63.5	1,740	<20.0	<20.0	1,740	38.8	--	**2,130**	**3,850**
	12/9/2015	528	15	4.87	10.4	578	<20.0	<20.0	578	7.28	--	**1,210**	**2,350**
MW-08	5/22/2013	--	--	--	--	--	--	--	--	**278.0**	--	**1,610**	**3,180**
	10/16/2013	431	103	8.37	246	479	<12.5	<12.5	479	235.0	--	**1,240**	**2,460**
	5/14/2014	538	120	7.54	279	451	<10.0	<10.0	451	**261.0**	--	**1,630**	**2,490**
	10/15/2014	517	125	7.98	316	465	<10	<10	465	**253.0**	--	**1,390**	**3,080**
	4/23/2015	432	125	7.21	295	447	<20.0	<20.0	447	**261.0**	--	**1,560**	**2,770**
	12/8/2015	450	123	7.84	278	461	<20.0	<20.0	461	**274.0**	--	**1,550**	**3,060**
MW-09	5/22/2013	--	--	--	--	--	--	--	--	**318.0**	--	**1,270**	**3,120**
	10/16/2013	LNAPL Present, No Sample Collected											
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/8/2015	LNAPL Present, No Sample Collected											
MW-10	5/22/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/8/2015	LNAPL Present, No Sample Collected											
MW-11	5/22/2013	LNAPL Present, No Sample Collected											
	10/16/2013	Insufficient Water For Sample Collection											
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/8/2015	LNAPL Present, No Sample Collected											

Table 4
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Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
MW-12	5/22/2013	--	--	--	--	--	--	--	--	109.0	--	**2,230**	**3,770**
	10/16/2013	576	208	5.72	88.4	373	<12.5	<12.5	373	106.0	--	**1,950**	**3,290**
	5/14/2014	562	260	5.95	104	309	<10.0	<10.0	309	86.0	--	**2,340**	**2,470**
	10/15/2014	672	170	6.4	99.9	370	<10.0	<10.0	370	79.0	--	**1,690**	**3,470**
	4/22/2015	529	249	5.68	93.6	497	<20.0	<20.0	497	86.8	--	**2,090**	**3,650**
	12/9/2015	537	245	5.26	87.9	461	<20.0	<20.0	461	79.8	--	**1,970**	**3,590**
MW-13	5/21/2013	--	--	--	--	--	--	--	--	138.0	--	**1,440**	**2,910**
	10/16/2013	584	115	15.5	230	337	<12.5	<12.5	337	192.0	--	**1,950**	**3,200**
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	674	52.8	13.6	126	439	<10.0	<10.0	439	104.0	--	**1,440**	**2,990**
	4/22/2015	Insufficient Water For Sample Collection											
	12/9/2015	LNAPL Present, No Sample Collected											
MW-14	5/21/2013	LNAPL Present, No Sample Collected											
	10/15/2013	598	103	4.81	114	505	<25.0	<25.0	505	105.0	--	**1,690**	**2,710**
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/21/2015	579	121	4.45	163	468	<20.0	<20.0	468	142.0	--	**1,790**	**3,140**
	12/8/2015	545	116	4.63	141	600	<20.0	<20.0	600	125.0	--	**1,720**	**2,960**
MW-15	5/21/2013	--	--	--	--	--	--	--	--	**6,360.0**	--	**95,600**	**141,000**
	10/15/2013	451	2,810	104	3,490	423	<25.0	<25.0	423	**1,320.0**	--	**16,400**	**28,500**
	5/14/2014	Insufficient Water For Sample Collection											
	10/14/2014	542	1,560	56.7	2,010	281	<20.0	<20.0	281	**774.0**	--	**9,190**	**16,400**
	4/21/2015	424	4,940	173	6,280	881	<20.0	<20.0	881	**2,110.0**	--	**29,100**	**47,800**
	12/8/2015	428	5,870	201	7,560	747	<20.0	<20.0	747	**2,480.0**	--	**39,800**	**59,400**
MW-16	5/21/2013	--	--	--	--	--	--	--	--	**353.0**	--	**2,260**	**4,130**
	10/15/2013	540	250	9.90	238	77.5	<12.5	<12.5	77.5	**381.0**	--	**2,230**	**3,820**
	5/14/2014	Insufficient Water For Sample Collection											
	10/14/2014	600	270	9.98	275	83.8	<20.0	<20.0	83.9	**377.0**	--	**2,220**	**6,220**
	4/21/2015	500	262	8.99	245	68.1	<20.0	<20.0	68.1	**371.0**	--	**2,240**	**5,210**

Table 4
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Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
	12/8/2015	485	248	8.68	240	82.6	<20.0	<20.0	82.6	**387.0**	--	**2,430**	**3,760**
MW-17	5/21/2013	--	--	--	--	--	--	--	--	158.0	--	**1,810**	**3,290**
	10/15/2013	612	118	9.29	140	334	<12.5	<12.5	334	170.0	--	**1,590**	**2,910**
	5/14/2014	Insufficient Water For Sample Collection											
	10/14/2014	650	144	8.75	140	316	<20.0	<20.0	316	148.0	--	**1,670**	**4,310**
	4/21/2015	517	156	7.41	140	328	<20.0	<20.0	328	166.0	--	**1,790**	**3,070**
	12/8/2015	497	189	7.42	128	314	<20.0	<20.0	314	133.0	--	**1,980**	**3,220**
MW-18	5/20/2013	--	--	--	--	--	--	--	--	**734.0**	--	**1,610**	**3,660**
	10/15/2013	724	136	4.73	69.4	121	<12.5	<12.5	121	**606.0**	--	**1,470**	**3,130**
	5/13/2014	763	140	5.18	68.6	155	<10.0	<10.0	155	**585.0**	--	**1,580**	**2,490**
	10/14/2014	750	138	4.71	56.6	199	<20.0	<20.0	199	**408.0**	--	**1,470**	**3,850**
	4/21/2015	679	151	4.70	78.1	131	<20.0	<20.0	131	**691.0**	--	**1,550**	**3,830**
	12/8/2015	638	137	4.34	57.2	202	<20.0	<20.0	202	**385.0**	--	**1,720**	**3,100**
MW-19	5/22/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/14/2014	LNAPL Present, No Sample Collected											
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/8/2015	LNAPL Present, No Sample Collected											
MW-20	5/20/2013	LNAPL Present, No Sample Collected											
	10/15/2013	LNAPL Present, No Sample Collected											
	5/13/2014	LNAPL Present, No Sample Collected											
	10/15/2014	666	130	10.50	274	624	<10	<10	624	196.0	--	**1,680**	**3,830**
	4/22/2015	537	138	5.07	279	558	<20.0	<20.0	558	165.0	--	**1,900**	**3,470**
	12/8/2015	556	137	5.23	270	553	<20.0	<20.0	553	136.0	--	**2,020**	**3,280**
MW-21	5/22/2013	LNAPL Present, No Sample Collected											
	10/16/2013	LNAPL Present, No Sample Collected											
	5/14/2014	LNAPL Present, No Sample Collected											

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**250**	**10**	**600**	**1,000**
	10/15/2014	LNAPL Present, No Sample Collected											
	4/23/2015	LNAPL Present, No Sample Collected											
	12/8/2015	LNAPL Present, No Sample Collected											
MW-22	5/23/2013	--	--	--	--	--	--	--	--	76.3	--	**1,790**	**3,450**
	10/16/2013	652	157	4.84	63.7	578	<12.5	<12.5	578	72.9	--	**1,630**	**3,120**
	5/15/2014	692	179	5.20	71	637	<10.0	<10.0	637	54.6	--	**1,870**	**2,060**
	10/15/2014	707	195	5.07	72.2	626	<10.0	<10.0	626	57.7	--	**1,580**	**3,640**
	4/22/2015	564	178	4.06	52.7	563	<20.0	<20.0	563	43.4	--	**1,750**	**3,280**
	12/9/2015	605	185	4.11	56.4	611	<20.0	<20.0	611	68.4	--	**1,650**	**3,310**
MW-23	5/21/2013	--	--	--	--	--	--	--	--	**326.0**	--	**1,750**	**3,700**
	10/16/2013	591	129	6.36	169	548	<50.0	<50.0	548	**333.0**	--	**1,630**	**3,070**
	5/13/2014	650	138	7.38	191	454	<10.0	<10.0	545	**262.0**	--	**1,780**	**2,520**
	10/14/2014	743	167	8.46	210	622	<10.0	<10.0	622	237.0	--	**1,610**	**4,070**
	4/21/2015	565	163	7.00	205	577	<20.0	<20.0	577	245.0	--	**1,780**	**7,420**
	12/8/2015	586	138	6.78	178	499	<20.0	<20.0	499	198.0	--	**1,840**	**2,410**
MW-24	5/21/2013	No Sample Collected											
	10/16/2013	No Sample Collected											
	5/13/2014	Insufficient Water For Sample Collection											
	10/14/2014	682	405	7.21	78.6	781	<10.0	<10.0	781	79.2	--	**2,080**	**4,740**
	4/23/2015	592	304	3.8	83.4	1,370	<20.0	<20.0	1,370	90.1	--	**2,050**	**3,440**
	12/8/2015	578	293	3.61	73.7	817	<20.0	<20.0	817	84.9	--	**2,100**	**2,960**
EB-01	5/21/2013	Dry											
	10/16/2013	Dry											
	5/13/2014	Dry											
	10/14/2014	Dry											
	4/23/2015	Dry											
	12/8/2015	Dry											
EB-02	5/20/2013	--	--	--	--	--	--	--	--	124.0	--	**2,140**	**3,680**

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	--	--	--	--	**250**	**10**	**600**	**1,000**
	10/15/2013	550	263	10.3	151	336	<12.5	<12.5	336	108.0	--	**2,200**	**3,340**
	5/13/2014	582	262	12	159	344	<10.0	<10.0	344	105.0	--	**2,400**	**2,600**
	10/14/2014	596	298	10.8	166	335	<20.0	<20.0	335	102.0	--	**2,100**	**4,210**
	4/21/2015	494	259	10.4	170	345	<20.0	<20.0	345	108.0	--	**2,250**	**4,190**
	12/8/2015	498	293	9.57	157	302	<20.0	<20.0	302	83.5	--	**2,850**	**3,990**
EB-03	5/20/2013	LNAPL Present, No Sample Collected											
	10/15/2013	631	99	4.31	110	700	<12.5	<12.5	700	110.0	--	**1,420**	**2,790**
	5/13/2014	LNAPL Present, No Sample Collected											
	10/14/2014	656	92	5.03	111	576	<20.0	<20.0	576	105.0	--	**1,410**	**3,330**
	4/21/2015	574	115	4.11	138	714	<20.0	<20.0	714	132.0	--	**1,530**	**3,500**
	12/8/2015	LNAPL Present, No Sample Collected											
EB-04	5/20/2013	--	--	--	--	--	--	--	--	**481.0**	--	**1,750**	**3,600**
	10/15/2013	607	138.0	6.05	143	176	<12.5	<12.5	176	**387.0**	--	**1,750**	**3,180**
	5/13/2014	Dry											
	10/14/2014	Dry											
	4/21/2015	Dry											
	12/8/2015	Dry											
EB-05	5/20/2013	--	--	--	--	--	--	--	--	208.0	--	**1,630**	**2,970**
	10/15/2013	635	53.8	5.48	66.5	337	<12.5	<12.5	337	161.0	--	**1,440**	**2,550**
	5/13/2014	Insufficient Water for Sample Collection											
	10/14/2014	724	58.0	6.00	75.9	325	<20.0	<20.0	325	96.0	--	**1,450**	**3,020**
	4/21/2015	579	72.7	5.47	79.8	339	<20.0	<20.0	339	119.0	--	**1,630**	**2,810**
	12/8/2015	606	59.5	5.44	75.9	363	<20.0	<20.0	363	124.0	--	**1,640**	**2,730**
EB-06	5/20/2013	--	--	--	--	--	--	--	--	193.0	--	**1,760**	**3,150**
	10/15/2013	Insufficient Water for Sample Collection											
	5/14/2014	615	134	5.30	51.8	106	<10.0	<10.0	106	164.0	--	**1,810**	**2,040**
	10/14/2014	649	140	5.09	50	109	<20.0	<20.0	109	149.0	--	**1,560**	**3,540**
	4/21/2015	530	139	4.47	48.1	96.3	<20.0	<20.0	96.3	166.0	--	**1,740**	**2,910**
	12/8/2015	530	132	4.97	46.6	104	<20.0	<20.0	104	147.0	--	**1,790**	**2,640**

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

Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	--	--	--	--	250	10	600	1,000
EB-07	5/20/2013	--	--	--	--	--	--	--	--	140.0	--	**1,910**	**3,510**
	10/15/2013	Insufficient Water for Sample Collection											
	5/13/2014	Insufficient Water for Sample Collection											
	10/14/2014	733	111	4.28	147	379	<20.0	<20.0	379	234.0	--	**1,630**	**3,640**
	4/21/2015	574	117	3.57	123	365	<20.0	<20.0	365	209.0	--	**1,690**	**3,480**
	12/8/2015	Insufficient Water for Sample Collection											
EB-08	5/20/2013	LNAPL Present, No Sample Collected											
	10/15/2013	LNAPL Present, No Sample Collected											
	5/13/2014	LNAPL Present, No Sample Collected											
	10/14/2014	LNAPL Present, No Sample Collected											
	4/21/2015	LNAPL Present, No Sample Collected											
	12/8/2015	LNAPL Present, No Sample Collected											
P-01	5/20/2013	--	--	--	--	--	--	--	--	158.0	--	**2,790**	**4,530**
	10/15/2013	584	319	4.67	102	378	<12.5	<12.5	378	**251.0**	--	**2,180**	**3,630**
	5/13/2014	564	448	5.58	76.2	302	<10.0	<10.0	302	146.0	--	**2,960**	**3,120**
	10/14/2014	616	445	5.40	87.8	314	<10.0	<10.0	314	175.0	--	**2,370**	**3,600**
	4/21/2015	461	535	5.69	84.1	195	<20.0	<20.0	195	124.0	--	**3,290**	**5,290**
	12/8/2015	454	592	8.13	64.8	<20.0	<20.0	<20.0	<20.0	97.9	--	**4,480**	**6,600**
P-02	5/21/2013	--	--	--	--	--	--	--	--	75.4	--	**2,020**	**3,540**
	10/16/2013	584	202	5.22	43.8	429	<12.5	<12.5	429	60.4	--	**1,750**	**2,880**
	5/15/2014	628	235	4.41	50.3	585	<10.0	<10.0	585	109.0	--	**1,890**	**2,300**
	10/14/2014	652	203	5.43	38.2	474	<20.0	<20.0	474	45.2	--	**1,730**	**3,670**
	4/21/2015	549	203	4.60	40.3	458	<20.0	<20.0	458	67.8	--	**1,860**	**3,360**
	12/8/2015	567	189	4.47	43.6	395	<20.0	<20.0	395	74.2	--	**1,930**	**3,030**
P-03	5/21/2013	--	--	--	--	--	--	--	--	216.0	--	**2,850**	**4,740**
	10/16/2013	Insufficient Water for Sample Collection											
	5/13/2014	Insufficient Water for Sample Collection											
	10/14/2014	656	210	4.34	108	363	<20.0	<20.0	363	163.0	--	**1,770**	**3,800**

Table 4
Groundwater Inorganics Other Than Metal Summary
Frontier Field Services - Empire Abo Gas Plant (GW-022)
257 Empire Road
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Well	Collection Date	Calcium	Magnesium	Potassium	Sodium	Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Hydroxide	Alkalinity, Total	Chloride	Nitrate	Sulfate	Total Dissolved Solids
NMWQCC Standard (mg/L)		--	--	--	--	--	--	--	--	**250**	**10**	**600**	**1,000**
	4/21/2015	521	154	3.09	83	277	<20.0	<20.0	277	131.0	--	**1,790**	**3,360**
	12/8/2015	536	120	3.02	63.4	246	<20.0	<20.0	246	88.6	--	**1,810**	**2,660**
P-04	5/21/2013	Dry											
	10/16/2013	Dry											
	5/13/2014	Dry											
	10/14/2014	695	248	7.53	237	527	<20.0	<20.0	527	**323.0**	--	**1,860**	**4,590**
	4/21/2015	Insufficient Water for Sample Collection											
	12/8/2015	Dry											
P-05	5/21/2013	Insufficient Water for Sample Collection											
	10/16/2013	Insufficient Water for Sample Collection											
	5/13/2014	Insufficient Water for Sample Collection											
	10/14/2014	Insufficient Water for Sample Collection											
	4/21/2015	Insufficient Water for Sample Collection											
	12/8/2015	Insufficient Water for Sample Collection											

Notes: Analysis performed by DHL Analytical, Round Rock, Texas
Alkalinity analyzed by EPA Method 310.0
Anions analyzed via EPA Method 300
TDS analyzed by EPA Method 160.1
All values reported in milligrams per liter (mg/L) equivelent to parts per million (ppm)
< - Indicates analyte concentration is less than method detection limit (MDL)
Blue and bold indicates analyte concentration exceeds Water Quality Control Commission (WQCC) domestic water water quality standard

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 Anaytical 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 Anaytical 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.

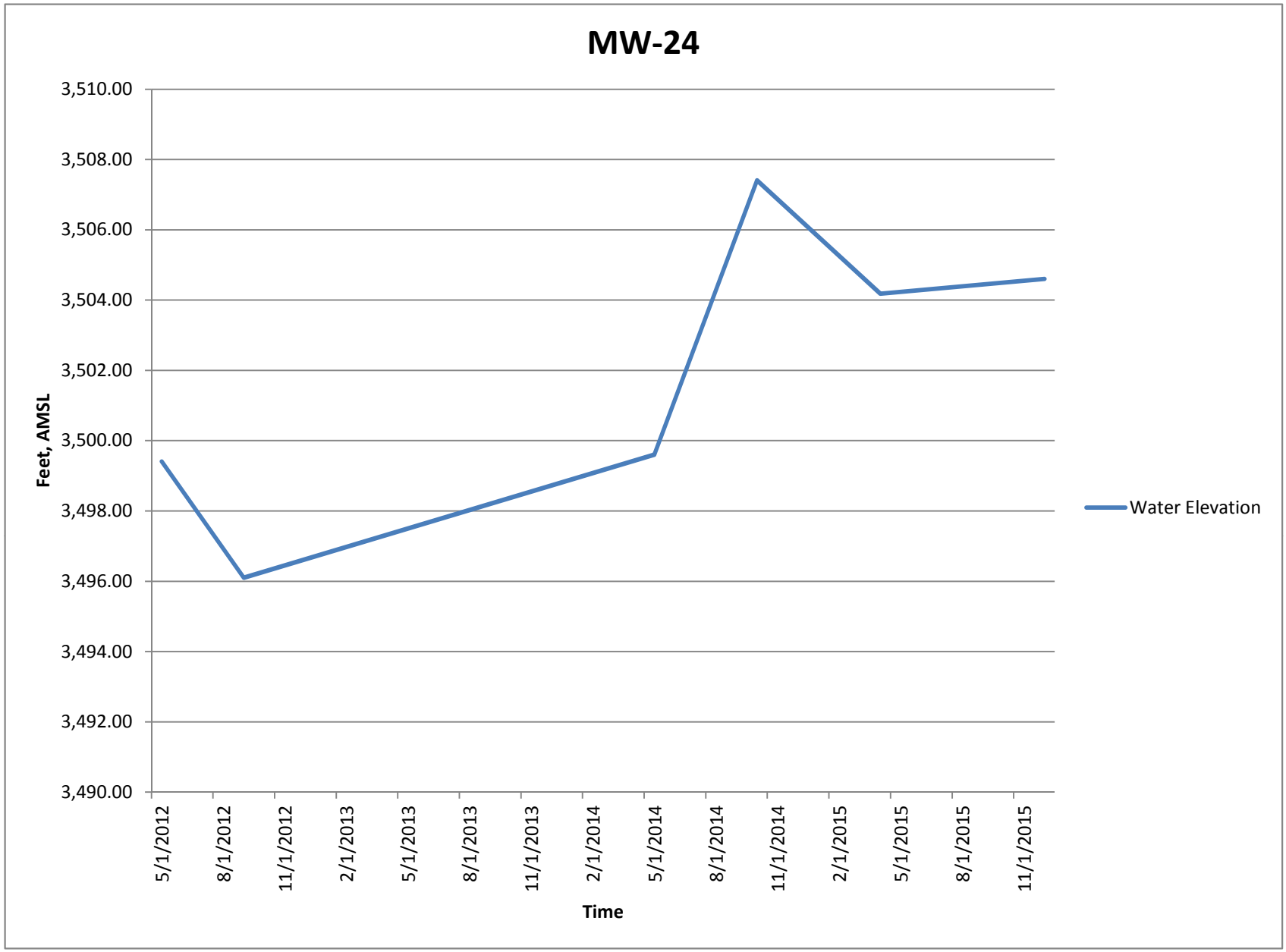


Figure 4c - MW-24 Water Elevation

Date	Water Elevation
5/30/2012	3,499.41
9/24/2012	3,496.10
5/14/2014	3,499.60
10/13/2014	3,507.41
4/20/2015	3,504.18
12/7/2015	3,504.60

Figure 4c - MW-24 Water Elevation

Figures

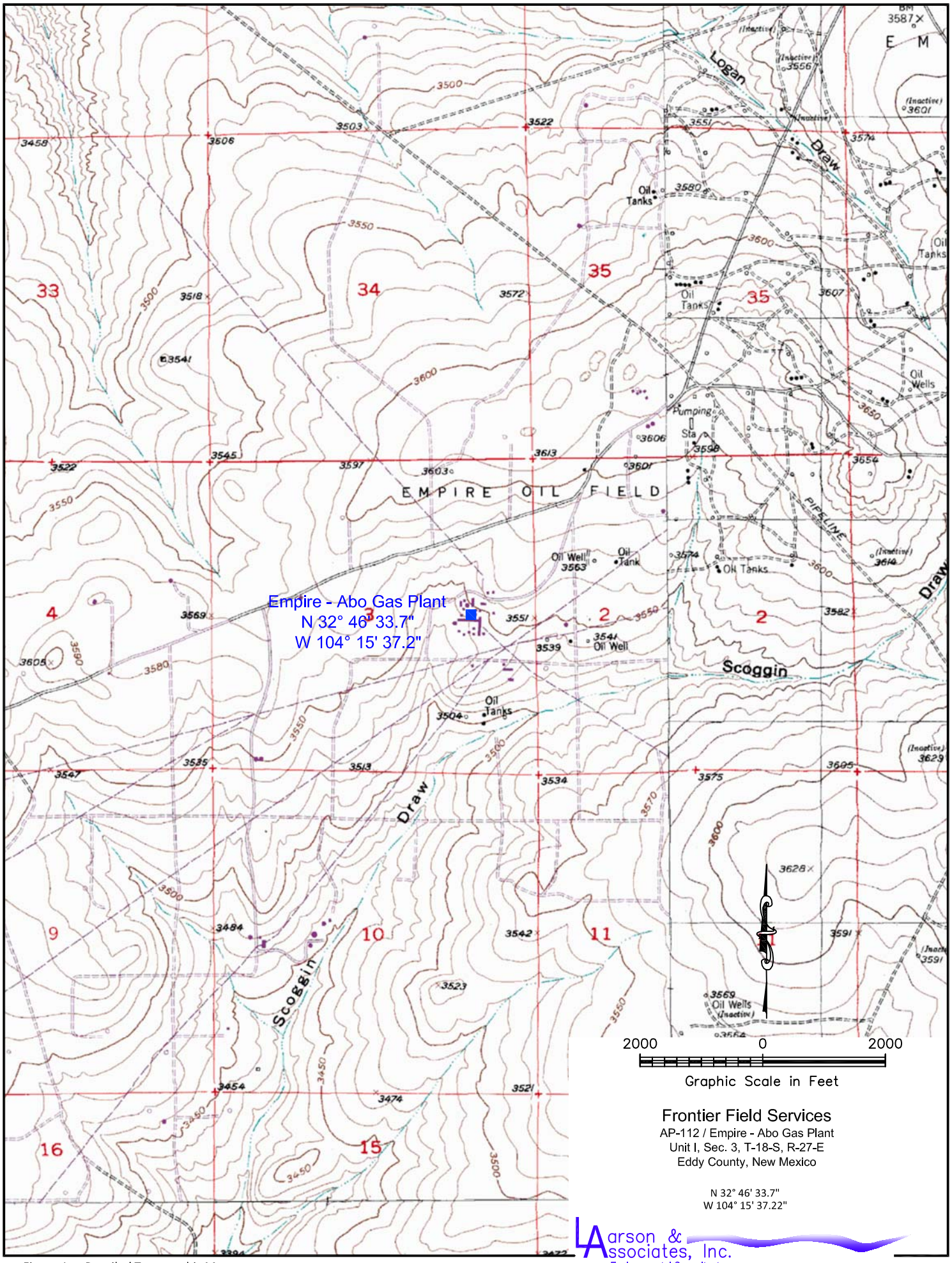


Figure 1a - Detailed Topographic Map

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

300 0 300

Graphic Scale in Feet

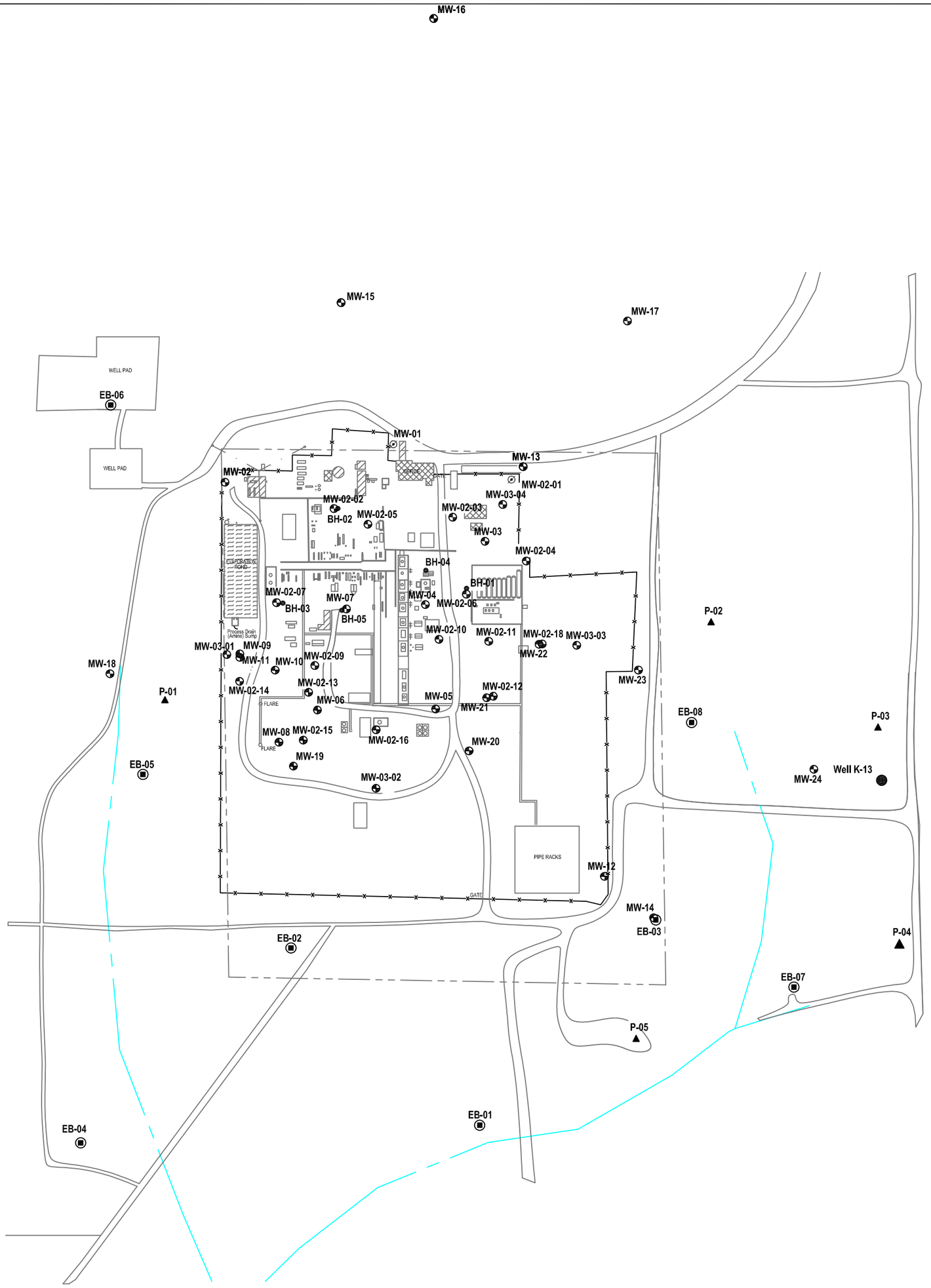
FRONTIER FIELD SERVICES, LLC

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

Larson & Associates, Inc.
Environmental Consultants

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

300 0 300

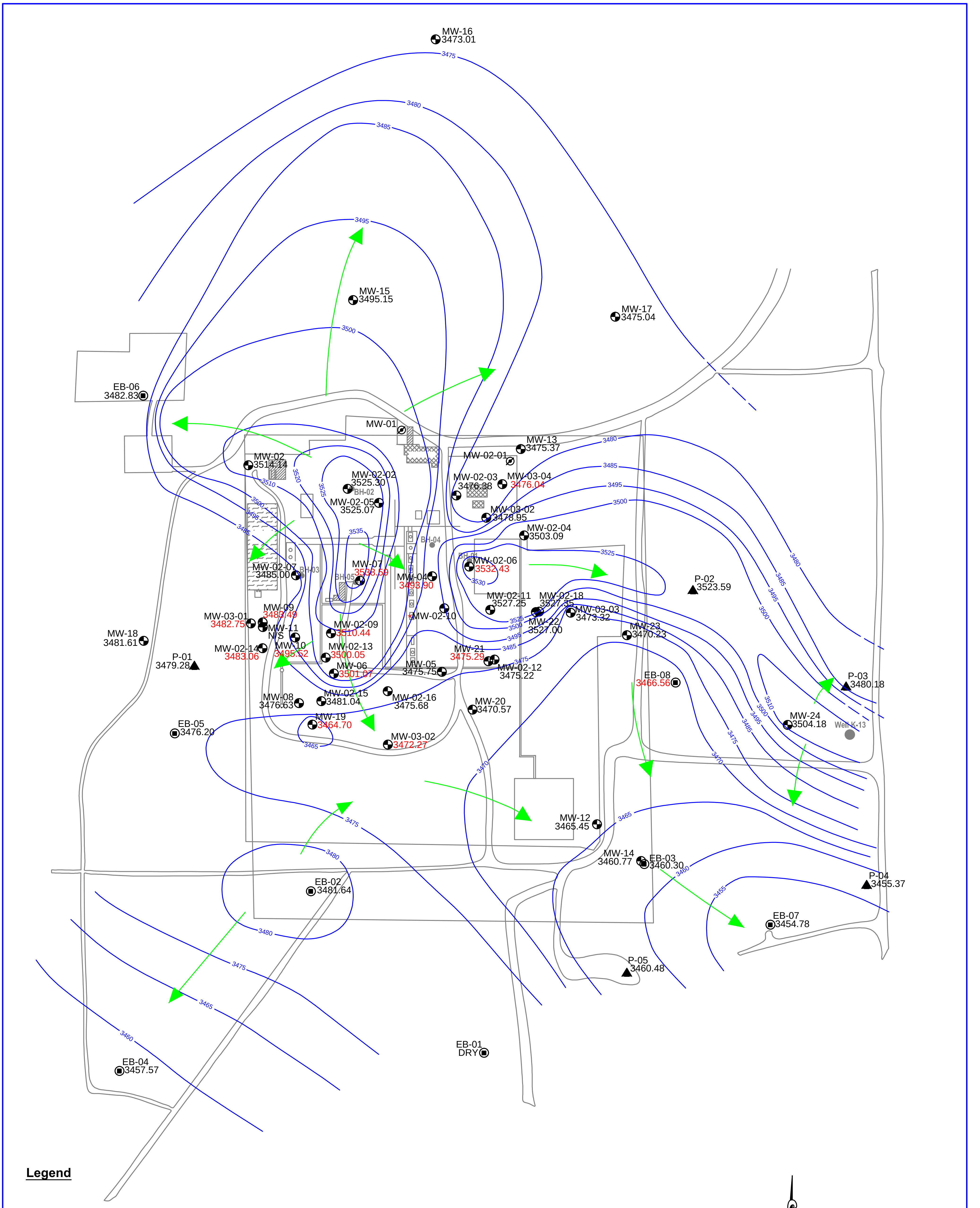
Graphic Scale in Feet

FRONTIER FIELD SERVICES, LLC

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

Larson & Associates, Inc.
Environmental Consultants

Figure 3 - Facility Drawing



Legend

MW-18 3481.61	- Monitoring Well Location and Groundwater Potentiometric Surface Elevation, Feet, ASML, April 20-21, 2015
MW-19 3464.70	- Groundwater Elevation Corrected for LNAPL Assuming 0.7 Surface Gravity
MW-01	- Plugged and Abandoned Monitoring Well
EB-02 3481.64	- Monitoring Well Location and Groundwater Potentiometric Surface Elevation, Feet, ASML, April 20-21, 2015
P-03 3480.18	- Piezometer (Fluid Level) Location and Groundwater Potentiometric Surface Elevation, Feet, ASML, April 20-21, 2015
3475	- Contour of Groundwater Potentiometric Surface Elevation, Feet, ASML, April 20-21, 2015 (Dashed where inferred)
	- Groundwater Flow Direction
*	- Groundwater Not Observed - LNAPL Present as Emulsion
N/S	- Not Sampled

Fence

Property Line

Draw

Road

300 0 300

Graphic Scale in Feet

Frontier Field Services, LLC

AP - 112 / Empire - Abo Gas Plant

Unit I, (NE/4, SE/4)- 18 - S, R - 27 - E

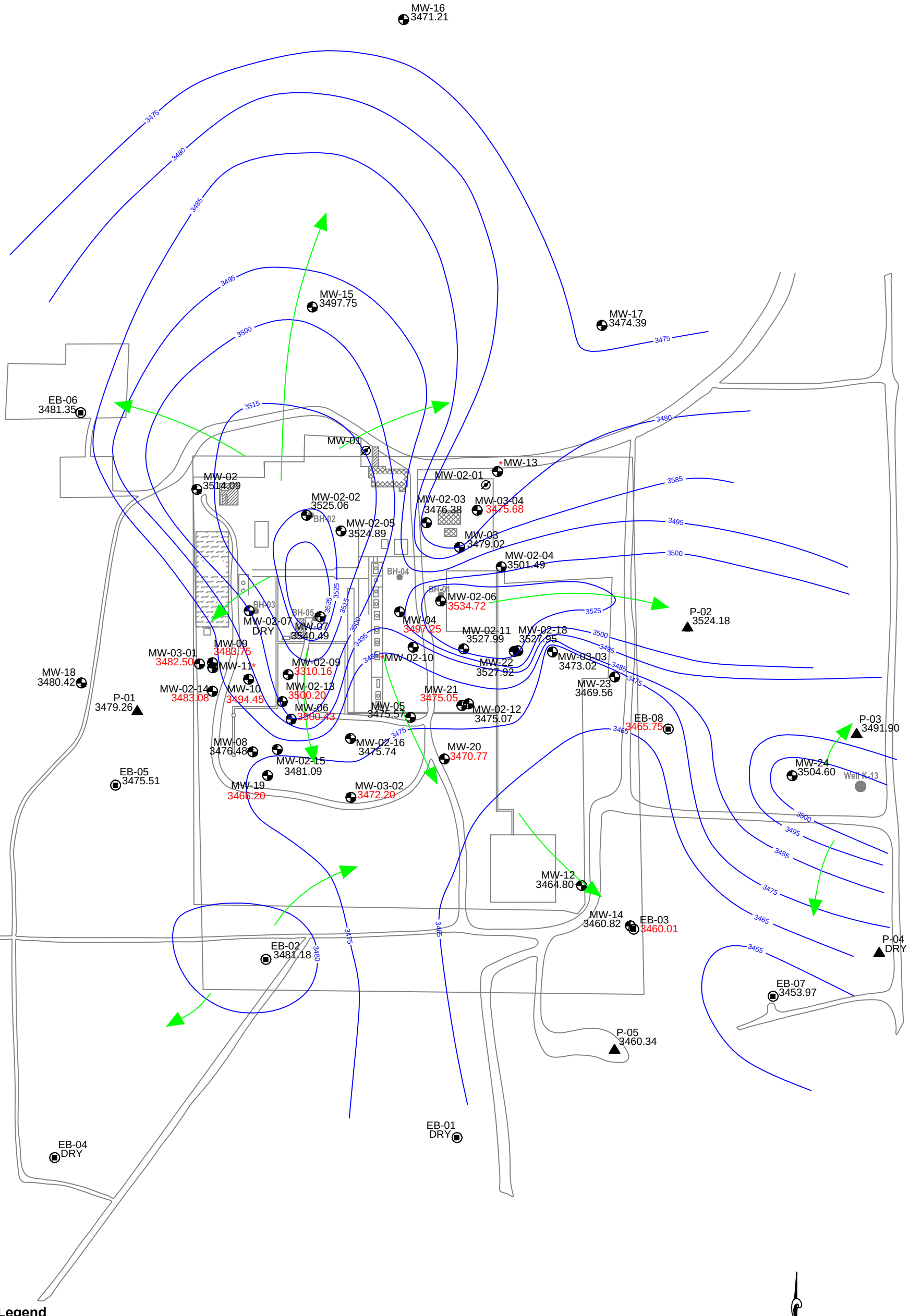
Eddy County, New Mexico

32°46'33.7"N
104°15'37.22"W

Larson & Associates, Inc.
Environmental Consultants

Figure 4a - Groundwater Potentiometric Surface Map, April 20-21, 2015

11" x 17"



Legend

- MW-18 3480.42 - Monitoring Well Location and Groundwater Potentiometric Surface Elevation, Feet, ASML, December 7-8, 2015
- MW-19 3466.20 - Groundwater Elevation Corrected for LNAPL Assuming 0.7 Surface Gravity
- MW-01 - Plugged and Abandoned Monitoring Well
- EB-02 3481.18 - Monitoring Well Location and Groundwater Potentiometric Surface Elevation, Feet, ASML, December 7-8, 2015
- P-03 3419.90 - Piezometer (Fluid Level) Location and Groundwater Potentiometric Surface Elevation, Feet, ASML, December 7-8, 2015
- 3480 - Contour of Groundwater Potentiometric Surface Elevation, Feet, ASML, December 7-8, 2015 (Dashed where inferred)
- Groundwater Flow Direction
- * - Groundwater Not Observed - LNAPL Present as Emulsion

Fence

Property Line

Draw

Road

300 0 300

Graphic Scale in Feet

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, December 7-8, 2015

11" x 17"

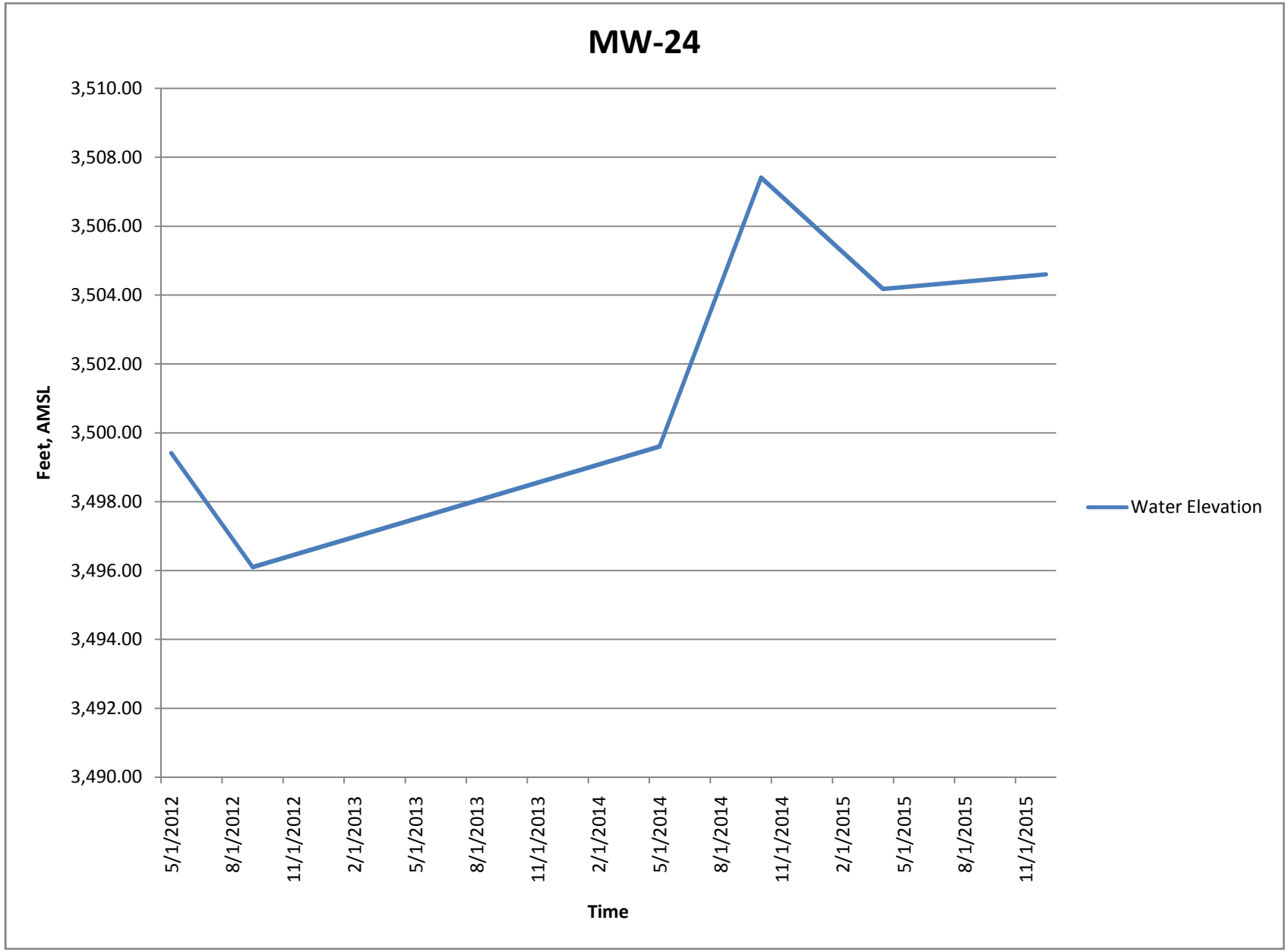
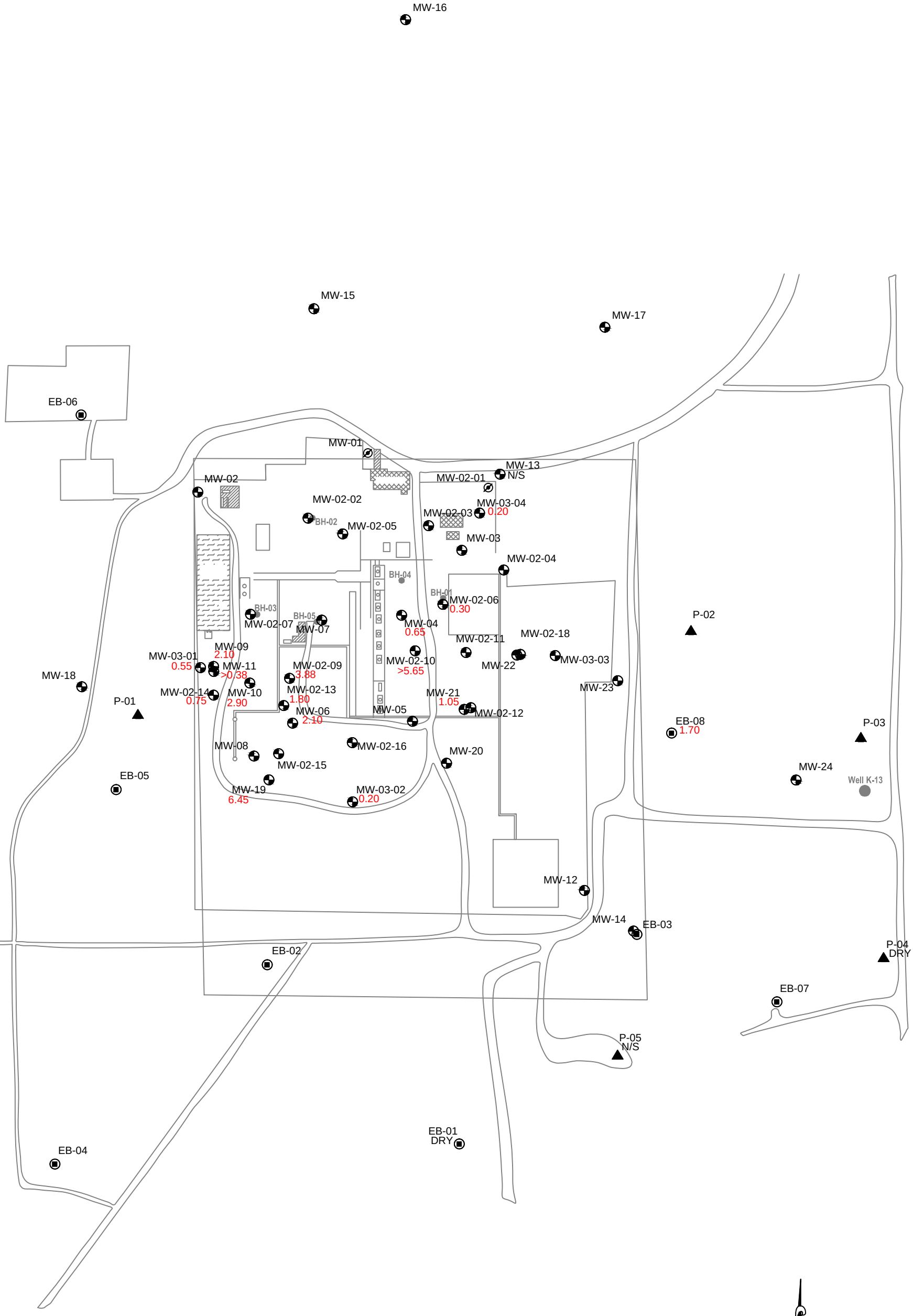


Figure 4c - MW-24 Water Elevation

Date	Water Elevation
5/30/2012	3,499.41
9/24/2012	3,496.10
5/14/2014	3,499.60
10/13/2014	3,507.41
4/20/2015	3,504.18
12/7/2015	3,504.60

Figure 4c - MW-24 Water Elevation



Legend

MW-10 2.90	- Monitoring Well Location and Apparent LNAPL Thickness, Feet, April 20-21, 2015
MW-01	- Plugged and Abandoned Monitoring Well
EB-08 1.70	- Monitoring Well Location and Apparent LNAPL Thickness, Feet, April 20-21, 2015
P-03	- Piezometer (Fluid Level) Location
N/S	- Not Sampled - Insufficient Water for Sample

Fence

Property Line

Draw

Road

300 0 300

Graphic Scale in Feet

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 5a - Apparent LNAPL Thickness, April 20-21, 2015

11" x 17"

MW-16

MW-15

MW-17

EB-06

MW-01

MW-02

MW-13
>5.64

MW-02-01

MW-02-02

MW-03-04
0.25

MW-02-03

BH-02

MW-02-05

MW-03

MW-02-04

BH-04

BH-01

MW-02-06

MW-02-07
DRY

BH-03

BH-05

MW-07

MW-04
0.65

P-02

MW-09
0.75

MW-03-01
1.34

MW-11
>0.58

MW-02-09
2.20

MW-02-10
>5.85

MW-02-11

MW-02-18

MW-03-03

MW-22

MW-18

MW-02-14
0.35

MW-10
4.30

MW-02-13
2.15

MW-21
1.00

MW-23

P-01

MW-06
3.40

MW-05

MW-02-12

EB-08
1.10

P-03

MW-08

MW-02-16

MW-20

MW-02-15

MW-24

EB-05

Well K-13

MW-19
3.10

MW-03-02
0.45

MW-12

MW-14

EB-03
0.80

EB-02

P-04
DRY

EB-07

P-05
N/S

EB-01
DRY

EB-04
DRY

Legend

MW-10 4.30 - Monitoring Well Location and Apparent LNAPL Thickness, Feet, December 7-8, 2015

MW-01 - Plugged and Abandoned Monitoring Well

EB-08 1.10 - Monitoring Well Location and Apparent LNAPL Thickness, Feet, December 7-8, 2015

P-03 - Piezometer (Fluid Level) Location

N/S - Not Sampled - Insufficient Water for Sample

Fence

Property Line

Draw

Road

300 0 300

Graphic Scale in Feet

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

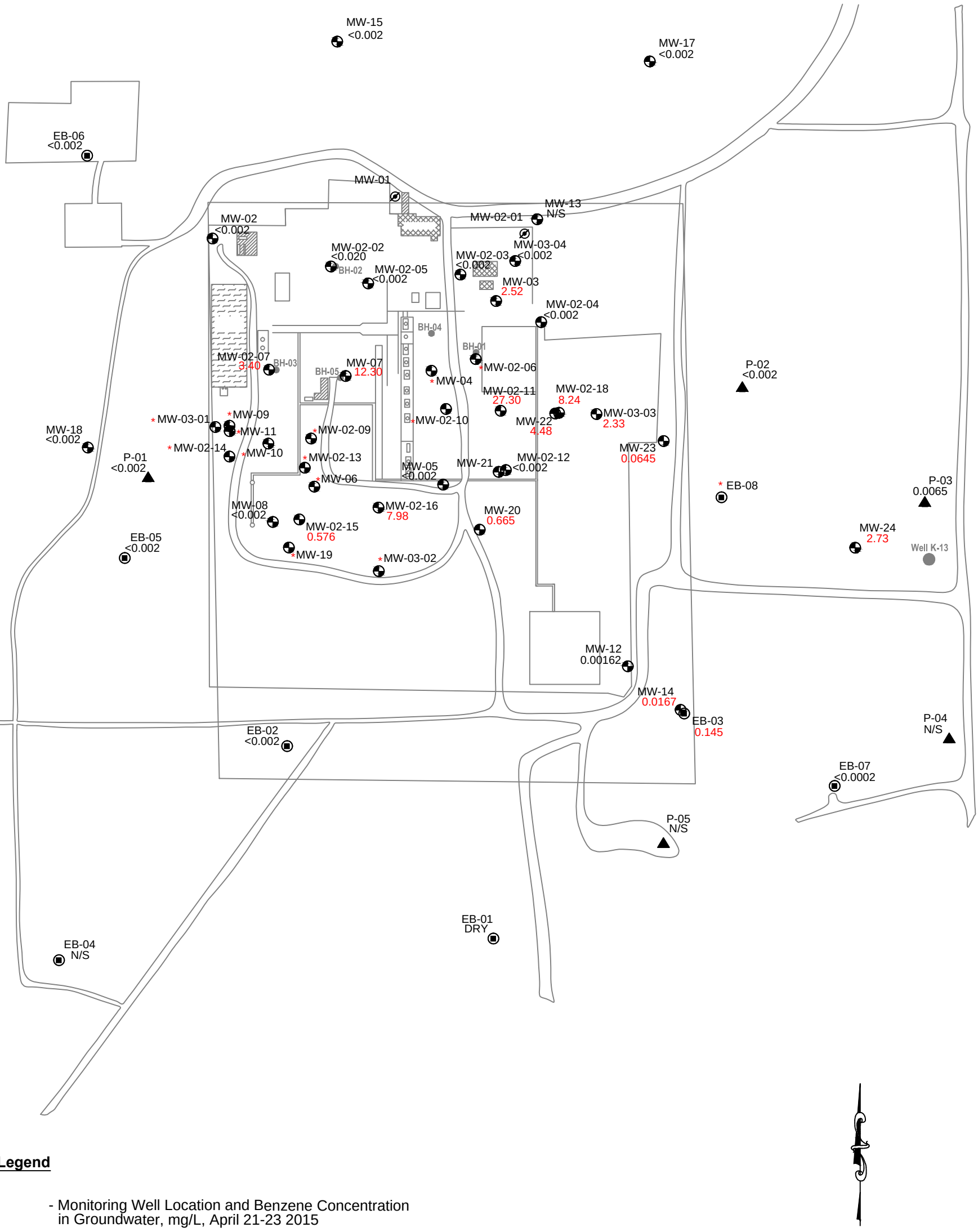
32°46'33.7"N

104°15'37.22"W

Larson & Associates, Inc.
Environmental Consultants

Figure 5b - Apparent LNAPL Thickness, December 7-8, 2015

11" x 17"



Legend

MW-18 <0.002 - Monitoring Well Location and Benzene Concentration in Groundwater, mg/L, April 21-23 2015

MW-20 0.665 - Concentration Exceeds WQCC Human HealthStandard: 0.01 mg/L

MW-01 - Plugged and Abandoned Monitoring Well

EB-02 <0.002 - Monitoring Well Location and Benzene Concentration in Groundwater, mg/L, April 21-23, 2015

P-03 0.0065 - Piezometer (Fluid Level) Location and Benzene Concentration in Groundwater, mg/L, April 21-23, 2015

N/S - Not Sampled - Insufficient Water for Sample

* - Hydrocarbon Product Present in Well

< - Concentration Less than Method Detection Limit (MDL)

Fence

Property Line

Draw

Road

300 0 300

Graphic Scale in Feet

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 6a - Benzene Concentration in Groundwater, April 21-23, 2015

11" x 17"

MW-16
<0.002

MW-15
<0.002

MW-17
<0.002

EB-06
<0.002

MW-01

MW-13

MW-02
<0.002

MW-02-01

MW-02-02
<0.02

MW-02-03
<0.002

MW-03-04

BH-02

MW-02-05
<0.002

MW-03
2.12

MW-02-04
<0.002

BH-04

BH-01

MW-02-07
DRY

BH-03

BH-05

MW-07
7.26

MW-04

MW-02-06
0.721

MW-02-11
29.60

MW-02-18
10.5

P-02
<0.002

MW-03-01

MW-09

MW-02-09

MW-02-10

MW-03-03
2.52

MW-18
<0.002

MW-11

MW-22
3.54

MW-02-14

MW-10

MW-23
0.009

P-01
<0.002

MW-02-13

MW-05
0.0011

MW-21

MW-02-12
0.0028

EB-08

P-03
0.0024

MW-06

MW-08
<0.002

MW-02-16
8.22

MW-20
0.556

MW-02-15
0.448

MW-24
2.14

EB-05
<0.002

MW-19

MW-03-02

Well K-13

MW-12
0.0122

MW-14
0.111

EB-03

P-04
DRY

EB-02
<0.002

EB-07
<0.002

P-05
N/S

EB-01
DRY

EB-04
N/S

Legend

MW-18 <0.0008 - Monitoring Well Location and Benzene Concentration in Groundwater, mg/L, December 8-9, 2015

MW-20 0.556 - Concentration Exceeds WQCC Human HealthStandard: 0.01 mg/L

MW-01 - Plugged and Abandoned Monitoring Well

EB-02 <0.002 - Monitoring Well Location and Benzene Concentration in Groundwater, mg/L, December 8-9, 2015

P-03 0.0024 - Piezometer (Fluid Level) Location and Benzene Concentration in Groundwater, mg/L, December 8-9, 2015

N/S - Not Sampled - Insufficient Water for Sample

* - Hydrocarbon Product Present in Well

< - Concentration Less than Method Reporting Limit (RL)

Fence

Property Line

Draw

Road

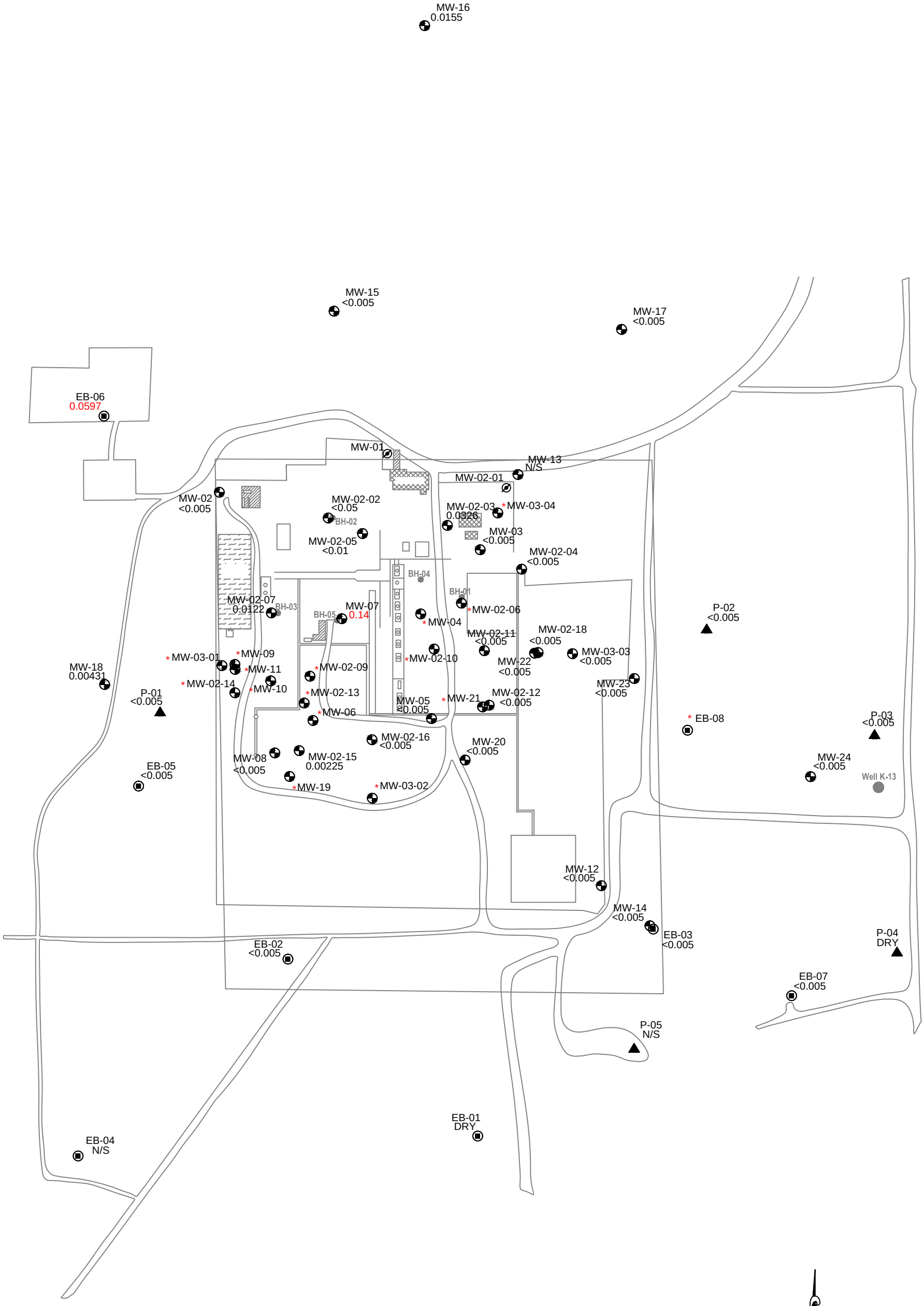
300 0 300
Graphic Scale in Feet

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 - Benzene Concentration in Groundwater, December 8-9, 2015

11" x 17"



Legend

MW-18 0.00431	- Monitoring Well Location and Chromium Concentration in Groundwater, mg/L, April 21-23, 2015
MW-07 0.14	- Concentration Exceeds WQCC Human Health Standard: 0.05 mg/L
MW-01	- Plugged and Abandoned Monitoring Well
EB-02 <0.005	- Monitoring Well Location and Chromium Concentration in Groundwater, mg/L, April 21-23, 2015
P-03	- Piezometer (Fluid Level) Location and Chromium Concentration, mg/L, April 21-23, 2015
N/S	- Not Sampled - Insufficient Water for Sample
*	- Hydrocarbon Product Present in Well - No Sample Collected
<	- Concentration Less than Method Detection Limit (MDL)

Fence

Property Line

Draw

Road

300 0 300

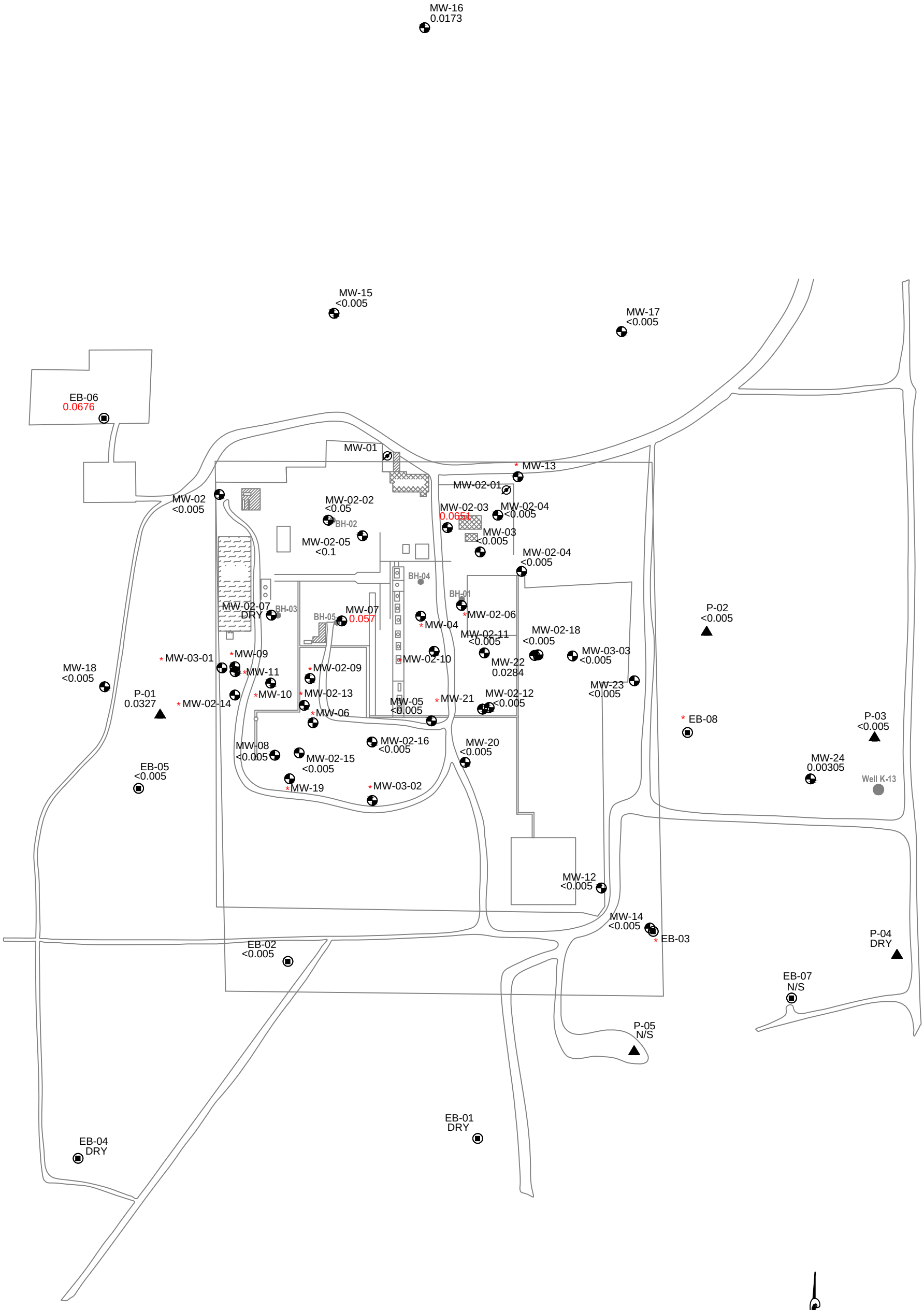
Graphic Scale in Feet

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 7a - Dissolved Chromium Concentration, April 21-23, 2015

11" x 17"



Legend

- MW-18 <0.005 - Monitoring Well Location and Chromium Concentration in Groundwater, mg/L, December 8-9, 2015
- MW-07 0.057 - Concentration Exceeds WQCC Human Health Standard: 0.05 mg/L
- MW-01 - Plugged and Abandoned Monitoring Well
- EB-02 <0.005 - Monitoring Well Location and Chromium Concentration in Groundwater, mg/L, December 8-9, 2015
- P-03 - Piezometer (Fluid Level) Location and Chromium Concentration, mg/L, December 8-9, 2015
- N/S - Not Sampled - Insufficient Water for Sample
- * - Hydrocarbon Product Present in Well - No Sample Collected
- < - Concentration Less than Method Reporting Limit (RL)

Fence

Property Line

Draw

Road

300 0 300

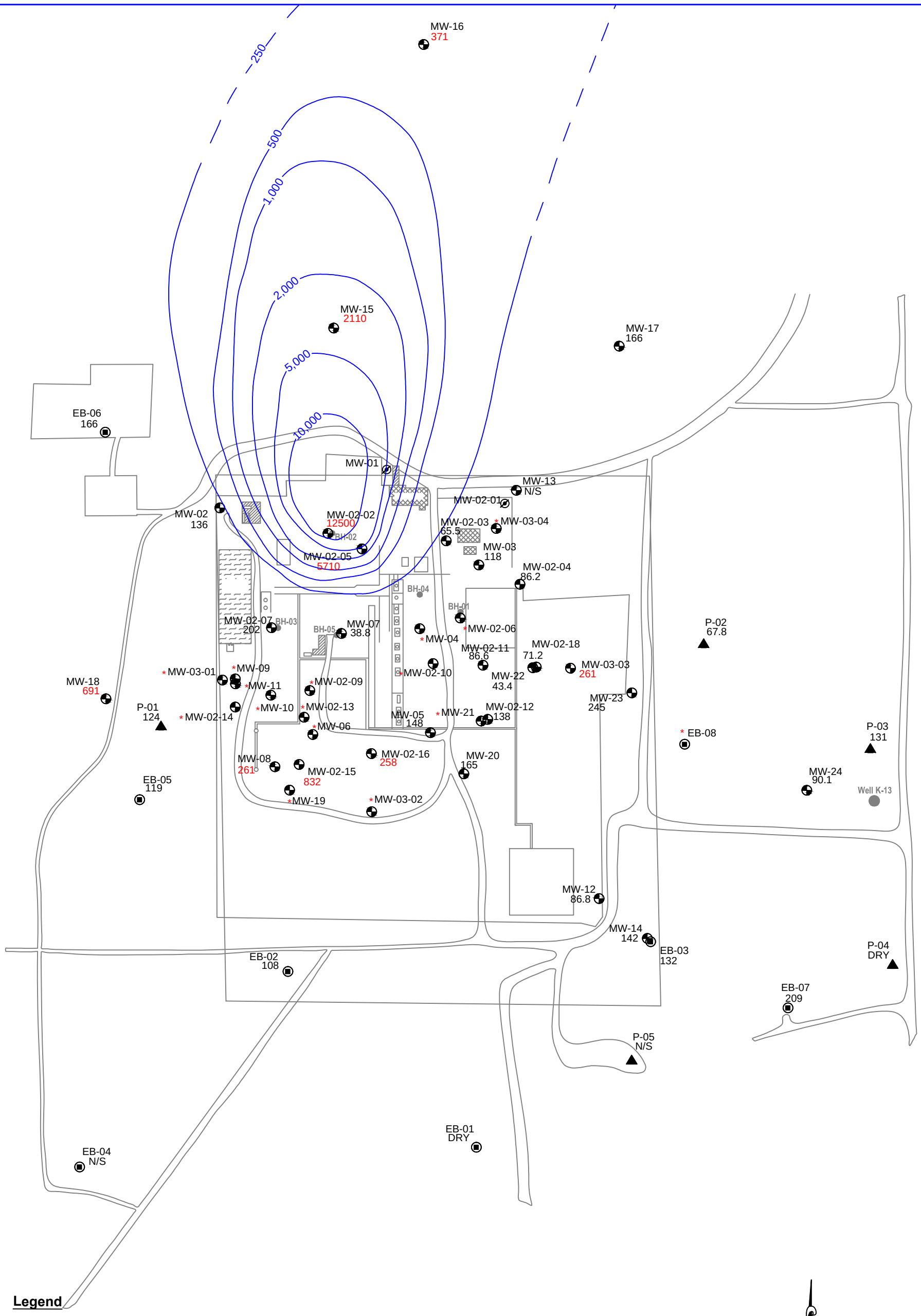
Graphic Scale in Feet

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 7b - Dissolved Chromium Concentration, December 8-9, 2015

11" x 17"



Legend

- MW-17 166 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, April 21-23, 2015
- MW-18 691 - Concentration Exceeds WQCC Domestic Water Quality Standard: 250 mg/L
- MW-01 - Plugged and Abandoned Monitoring Well
- EB-02 108 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, April 21-23, 2015
- P-03 131 - Piezometer (Fluid Level) Location and Chloride Concentration in Groundwater, mg/L, April 21-23, 2015
- 500 - Contour of Chloride Concentration in Groundwater, mg/L, April 21-23, 2015 (Dashed where inferred)
- N/S - Not Sampled - Insufficient Water for Sample
- * - Hydrocarbon Product Present in Well - No Sample Collected
- < - Concentration Less than Method Detection Limit (MDL)

Fence
Property Line
Draw
Road

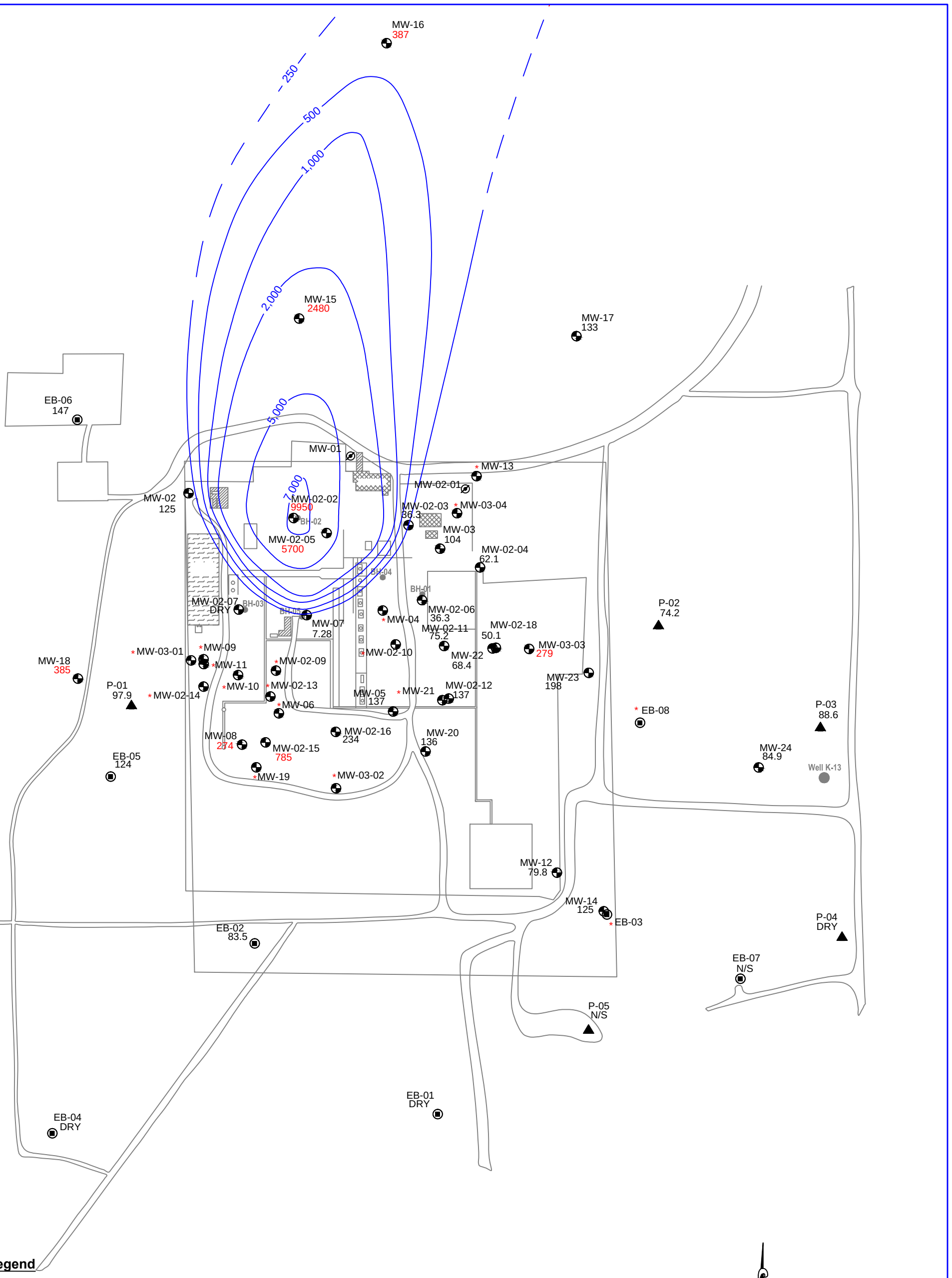
300 0 300
Graphic Scale in Feet

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 8a - Chloride Concentration in Groundwater, April 21-23, 2015

11" x 17"



Legend

- MW-17 / 133 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, December 8-9, 2015
- MW-18 / 385 - Concentration Exceeds WQCC Domestic Water Quality Standard: 250 mg/L
- MW-01 - Plugged and Abandoned Monitoring Well
- EB-02 / 83.5 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, December 8-9, 2015
- P-03 / 88.6 - Piezometer (Fluid Level) Location and Chloride Concentration in Groundwater, mg/L, December 8-9, 2015
- 500 - Contour of Chloride Concentration in Groundwater, mg/L, December 8-9, 2015 (Dashed where inferred)
- N/S - Not Sampled - Insufficient Water for Sample
- * - Hydrocarbon Product Present in Well - No Sample Collected
- < - Concentration Less than Method Detection Limit (MDL)

- Fence
- Property Line
- Draw
- Road

300 0 300
Graphic Scale in Feet

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 8b - Chloride Concentration in Groundwater, December 8-9, 2015

11" x 17"

MW-16
2,240

MW-15
29,100

MW-17
1,790

2,000
5,000
25,000
100,000
200,000
300,000

EB-06
1,740

MW-01

MW-13
N/S

MW-02
1,800

MW-02-01

MW-02-02
301,000

MW-02-03
1,790

MW-03-04

BH-02

MW-03
1,110

MW-02-05
333,000

MW-02-04
1,710

BH-04

BH-01

MW-02-06

MW-02-07
1,520

BH-03

BH-05

MW-07
2,130

MW-04

MW-02-11
1,850

MW-02-18
1,840

P-02
1,860

MW-03-01

MW-09

MW-02-10

MW-03-03
1,200

MW-18
1,550

MW-11

MW-02-09

MW-22
1,750

MW-23
1,780

P-01
3,290

MW-10

MW-02-13

MW-02-14

MW-05
1,770

MW-21

MW-02-12
1,910

MW-06

EB-08

P-03
1,790

MW-08
1,560

MW-02-16
1,690

MW-20
1,900

MW-02-15
1,640

MW-24
2,050

EB-05
1,630

MW-19

MW-03-02

Well K-13

2,000

MW-12
2,090

2,000

MW-14
1,790

EB-03
1,530

P-04
N/S

EB-02
2,250

EB-07
1,690

2,000

P-05
N/S

EB-01
DRY

EB-04
N/S

Legend

MW-18 1,550 - Monitoring Well Location and Sulfate Concentration in Groundwater, mg/L, April 21-23, 2015

MW-20 1,900 - Concentration Exceeds WQCC Domestic Water Quality Standard: 600 mg/L

MW-01 - Plugged and Abandoned Monitoring Well

EB-02 2,250 - Monitoring Well Location and Sulfate Concentration in Groundwater, mg/L, April 21-23, 2015

P-03 1,790 - Piezometer (Fluid Level) Location and Chloride Concentration in Groundwater, mg/L, April 21-23, 2015

2,000 - Contour of Sulfate Concentration in Groundwater, mg/L, April 21-23, 2015

N/S - Not Sampled - Insufficient Water for Sample

* - Hydrocarbon Product Present in Well - No Sample Collected

Fence

Property Line

Draw

Road

300 0 300
Graphic Scale in Feet

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 - Sulfate Concentration in Groundwater, April 21-23, 2016

11" x 17"

MW-16
2,430

2,000
5,000
25,000
100,000
200,000

MW-15
39,800

MW-17
1,980

EB-06
1,790

MW-01

MW-13
N/S

MW-02-01

MW-02
1,650

MW-02-02
296,000

MW-03-04

MW-02-03
2,020

BH-02

MW-03
1,220

MW-02-05
290,000

MW-02-04
1,480

BH-04

BH-01

MW-02-06
1,620

P-02
1,930

MW-02-07
DRY

BH-03

BH-05

MW-07
1,210

MW-04

MW-02-11
1,710

MW-02-18
1,610

MW-03-03
1,150

MW-18
1,720

MW-03-01

MW-09

MW-11

MW-02-09

MW-02-10

MW-22
1,650

MW-23
1,840

P-01
4,480

MW-10

MW-02-13

MW-02-14

MW-05
1,640

MW-21

MW-02-12
1,710

MW-06

EB-08

P-03
1,810

MW-08
1,550

MW-02-16
1,660

MW-20
2,020

MW-24
2,100

EB-05
1,640

MW-02-15
1,660

Well K-13

MW-19

MW-03-02

MW-12
1,970

MW-14
1,720

EB-03

P-04
DRY

EB-02
2,850

EB-07
1,690

P-05
N/S

EB-01
DRY

EB-04
DRY

Legend

MW-18 1,720 - Monitoring Well Location and Sulfate Concentration in Groundwater, mg/L, December 08-09, 2015

MW-20 2,020 - Concentration Exceeds WQCC Domestic Water Quality Standard: 600 mg/L

MW-01 - Plugged and Abandoned Monitoring Well

EB-02 2,850 - Monitoring Well Location and Sulfate Concentration in Groundwater, mg/L, December 08-09, 2015

P-03 1,810 - Piezometer (Fluid Level) Location and Chloride Concentration in Groundwater, mg/L, December 08-09, 2015

2,000 - Contour of Sulfate Concentration in Groundwater, mg/L, December 08-09, 2015

N/S - Not Sampled - Insufficient Water for Sample

* - Hydrocarbon Product Present in Well - No Sample Collected

Fence

Property Line

Draw

Road

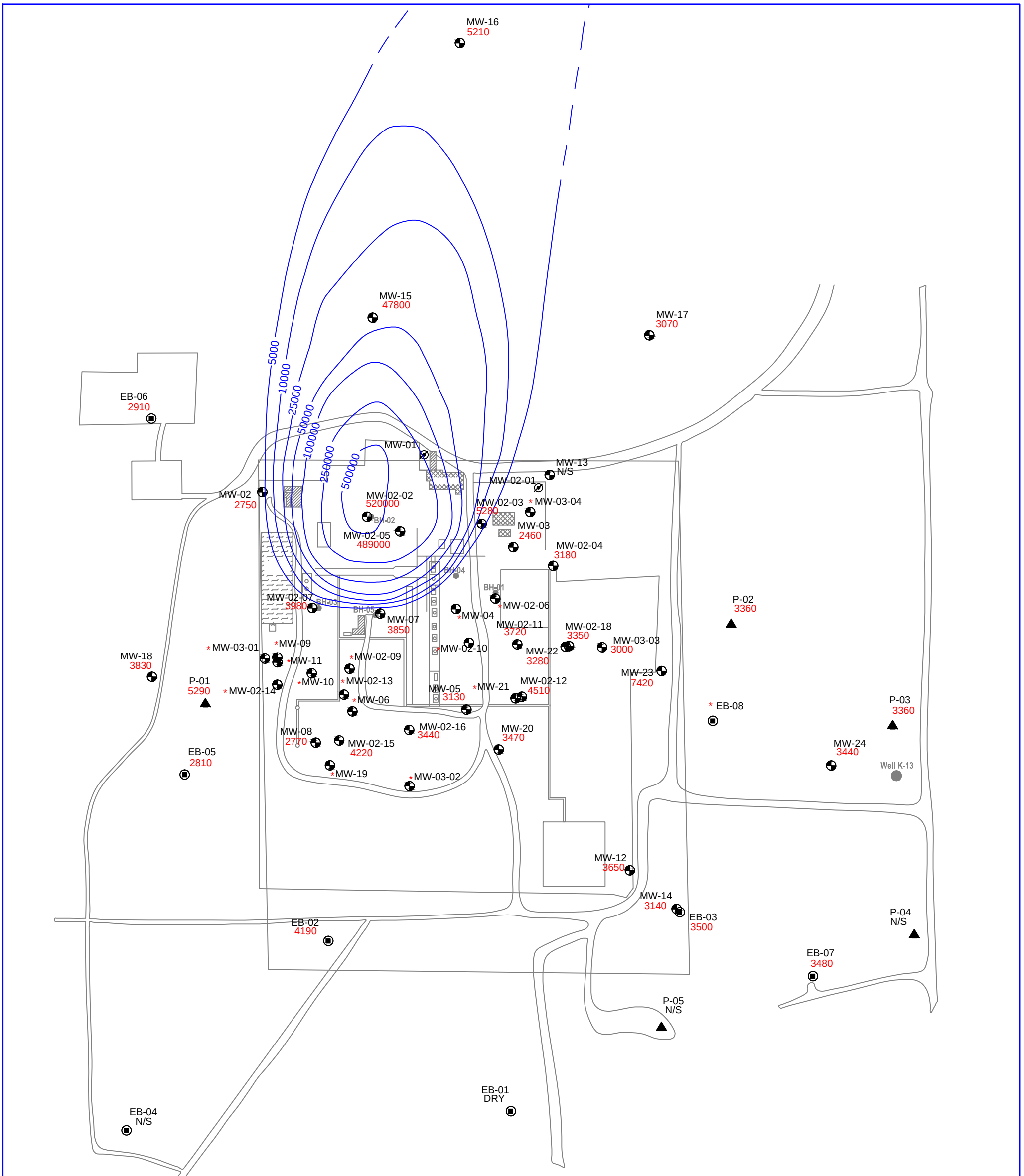
300 0 300
Graphic Scale in Feet

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 - Sulfate Concentration in Groundwater, December 08-09, 2016

11" x 17"



Legend

- MW-13 N/S — Monitoring Well Location and TDS Concentration in Groundwater, mg/L, April 21-23, 2015
- MW-18 3830 — Concentration Exceeds WQCC Domestic Water Quality Standard: 1000 mg/L
- MW-01 — Plugged and Abandoned Monitoring Well
- EB-02 4190 — Monitoring Well Location and TDS Concentration in Groundwater, mg/L, April 21-23, 2015
- P-03 3360 — Piezometer (Fluid Level) Location and TDS Concentration in Groundwater, mg/L, April 21-23, 2015
- 10000 — Contour of TDS Concentration in Groundwater, mg/L, April 21-23, 2015 (Dashed where inferred)
- N/S — Not Sampled - Insufficient Water for Sample
- * — Hydrocarbon Product Present in Well - No Sample Collected

Fence

Property Line

Draw

Road

300 0 300

Graphic Scale in Feet

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 10a - Total Dissolved Solids in Groundwater, April 21-23, 2015

11" x 17"

MW-16
3760
5000
10000
25000
50000
MW-15
59400
100000
200000
300000
400000
500000
MW-17
3220
EB-06
2640
MW-01
MW-13
MW-02-01
MW-02
3020
MW-02-02
529000
MW-03-04
BH-02
MW-02-05
545000
MW-03
2640
MW-02-03
1830
MW-02-04
2580
BH-04
BH-01
MW-02-07
DRY
BH-03
BH-05
MW-07
2350
MW-02-06
MW-04
MW-02-11
3720
MW-02-18
3560
P-02
3030
MW-03-03
3090
MW-03-01
MW-09
MW-18
3100
MW-11
MW-02-09
MW-02-10
MW-22
3310
MW-23
2410
P-01
6600
MW-02-14
MW-10
MW-02-13
MW-02-12
3450
MW-21
MW-05
3290
MW-06
EB-08
P-03
2660
MW-08
3060
MW-02-16
3350
MW-20
3280
MW-24
2960
EB-05
2730
MW-02-15
4250
Well K-13
MW-19
MW-03-02
MW-12
3590
MW-14
2960
EB-03
EB-02
3990
P-04
DRY
EB-07
N/S
P-05
N/S
EB-01
DRY
EB-04
DRY

Legend

- MW-02-07 DRY — Monitoring Well Location and TDS Concentration in Groundwater, mg/L, December 8-9, 2015
- MW-18 3100 — Concentration Exceeds WQCC Domestic Water Quality Standard: 1000 mg/L
- MW-01 — Plugged and Abandoned Monitoring Well
- EB-02 3990 — Monitoring Well Location and TDS Concentration in Groundwater, mg/L, December 8-9, 2015
- P-03 2660 — Piezometer (Fluid Level) Location and TDS Concentration in Groundwater, mg/L, December 8-9, 2015
- 5000 — Contour of TDS Concentration in Groundwater, mg/L, December 8-9, 2015 (Dashed where inferred)
- N/S — Not Sampled - Insufficient Water for Sample
- * — Hydrocarbon Product Present in Well - No Sample Collected

Fence

Property Line

Draw

Road

300 0 300
Graphic Scale in Feet

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 10b - Total Dissolved Solids in Groundwater, December 8-9, 2015

11" x 17"

Appendix A

Laboratory Reports

February 24, 2016

Jeremy Cannady
Larson & Associates
507 N. Marienfeld #205
Midland, TX 79701

TEL: (432) 687-0901

FAX (432) 687-0456

Order No.: 1504245

RE: Artesia, NM Abo Empire Gas Plant

Dear Jeremy Cannady:

DHL Analytical, Inc. received 25 sample(s) on 4/23/2015 for the analyses presented in the following report.

Revision Number 1 for Work Order 1504245: This revision consists of correcting the sample identification of DHL WO# 1504245-13 to 'MW-16'. Please replace the original Data Report with this revision.

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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-15-14

Table of Contents

DHL ANALYTICAL

2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: *www.dhlanalytical.com*
E-Mail: *login@dhlanalytical.com*

№ 66626

CHAIN-OF-CUSTODY

CLIENT: Larson and Associates
ADDRESS: 507 N. Marienfeld Ste. 200 Midland, TX 79701
PHONE: (432) 687-0901 FAX/E-MAIL:
DATA REPORTED TO: Jeremy Cannady
ADDITIONAL REPORT COPIES TO:

DATE: 4-22-15 PAGE 1 OF 1
PO #:
DHL WORK ORDER #: 1504245
PROJECT LOCATION OR NAME: Artesia, NM Abo Empire Gas Plant
CLENT PROJECT #: 6-0141 COLLECTOR: Kim Huckaba / Sarah Shssd

Authorize 5% surcharge for TRRP Report? ☐ Yes ☐ No

S=SOIL P=PAINT W=WATER SL=SLUDGE A=AIR O=OTHER L=LIQUID SO=SOLID SE=SEDIMENT

ANALYSES:
1. BTEX ☒ MTBE ☐ [METHOD 8021]
2. TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐
3. GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐
4. VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐
5. SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐
6. 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐
7. 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐
8. 8321 HERB ☐ T PHOS, AMMONIA ☐
9. METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐
10. RCRA ☒ TX11 ☐ ____ ☐
11. PH ☐ HEX CHROM ☐ ALKALINITY ☒ COD ☐
12. CHLORIDE ☐ ANIONS ____ ☒
13. TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐
14. TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐
15. RCI ☐ FLASHPOINT ☐ DGAS ☐
16. TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	FIELD NOTES
EB-06	1	4-21-15	854	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-18	2	4-21-15	948	W	VOA/Poly	5	X			X		X									X	X	X				X	
P-01	3	4-21-15	1006	W	VOA/Poly	5	X			X		X									X	X	X				X	
EB-05	4	4-21-15	1025	W	VOA/Poly	5	X			X		X									X	X	X				X	
EB-02	5	4-21-15	1048	W	VOA/Poly	5	X			X		X									X	X	X				X	
~~EB-04~~ KH EB-03	6	4-21-15	1134	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-14	7	4-21-15	1211	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-23	8	4-21-15	1305	W	VOA/Poly	5	X			X		X									X	X	X				X	
EB-07	9	4-21-15	1331	W	VOA/Poly	5	X			X		X									X	X	X				X	
P-03	10	4-21-15	1406	W	VOA/Poly	5	X			X		X									X	X	X				X	
P-02	11	4-21-15	1418	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-17	12	4-21-15	1450	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-~~[illegible]~~ 16 KH	13	4-21-15	1548	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-15	14	4-21-15	1638	W	VOA/Poly	5	X			X		X									X	X	X				X	
	~~15~~			~~W~~	~~VOA/Poly~~	~~5~~	~~X~~			~~X~~		~~X~~									~~X~~	~~X~~	~~X~~				~~X~~	

RELINQUISHED BY: (Signature) K Huckaba DATE/TIME 4-22-15 RECEIVED BY: (Signature) FedEx
RELINQUISHED BY: (Signature) FedEx DATE/TIME 4/23/15 910 RECEIVED BY: (Signature) [signature]
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ *DHL DISPOSAL @ $5.00 each* ☐ *Return* 3

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☐
OTHER ☐ ____

LABORATORY USE ONLY:
RECEIVING TEMP: 2.0, 1.5, 2.9, 2.5 THERM #: 57
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 66632

CHAIN-OF-CUSTODY

CLIENT: Larson and Associates
ADDRESS: 507 N. Marienfeld Ste. 200 Midland, TX 79701
PHONE: (432) 687-0901 FAX/E-MAIL:
DATA REPORTED TO: Jeremy Cannady
ADDITIONAL REPORT COPIES TO:

DATE: 4-22-15 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 1524245
PROJECT LOCATION OR NAME: Artesia, NM Abo Empire Gas Plant
CLENT PROJECT #: COLLECTOR: Kim Huckaba/Sarah Sisk

Authorize 5% surcharge for TRRP Report? ❑ Yes ❑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl | HNO_3 | H_2SO_4 ❑ NaOH ❑ | ICE | UNPRESERVED

ANALYSES: BTEX X MTBE ❑ (METHOD 8021) | TPH 1005 ❑ TPH 1006 ❑ HOLD 1006 ❑ | GRO (METHOD 8015) ❑ DRO (METHOD 8105) ❑ | VOC 8260 ❑ VOC 624 ❑ VOC 8260/5035 ❑ | SVOC 8270 ❑ PAH 8270 ❑ HOLD PAH ❑ SVOC 625 ❑ | 8270 PEST ❑ 625 PEST/PCB ❑ 608 PCB ❑ 8270 PCB ❑ | 8270 O-P PEST ❑ 8082 PCB ❑ 8270 PCB ❑ | 8321 HERB ❑ T PHOS, AMMONIA ❑ | METALS 6020 ❑ METALS 200.8 ❑ DISS. METALS ❑ | RCRA X TX11 ❑ | PH ❑ HEX CHROM ❑ ALKALINITY X COD ❑ | CHLORIDE ❑ ANIONS | TCLP-SVOC ❑ VOC ❑ PEST ❑ HERB ❑ | TCLP-METALS ❑ RCRA 8 ❑ TX-11 ❑ Pb ❑ | RCI ❑ FLASHPOINT ❑ DGAS ❑ | TDS X TSS ❑ % MOISTURE ❑ CYANIDE ❑

Field Sample I.D.	DHL Lab # (24hr)	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	BTEX	TPH 1005	GRO	VOC 8260	SVOC 8270	8270 PEST	8270 O-P PEST	8321 HERB	METALS 6020	RCRA	PH	CHLORIDE	TCLP-SVOC	TCLP-METALS	RCI	TDS	FIELD NOTES
MW-03 15	1	4-22-15	754	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-02-03 16	2	4-22-15	826	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-02-11 17	3	4-22-15	911	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-22 18	4	4-22-15	941	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-02-18 19	5	4-22-15	1001	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-03-03 20	6	4-22-15	1041	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-02-04 21	7	4-22-15	1110	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-02-12 22	8	4-22-15	1151	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-20 23	9	4-22-15	1229	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-12 24	10	4-22-15	1303	W	VOA/Poly	5	X			X		X									X	X	X				X	
MW-02-16 25	11	4-22-15	1338	W	VOA/Poly	5	X			X		X									X	X	X				X	

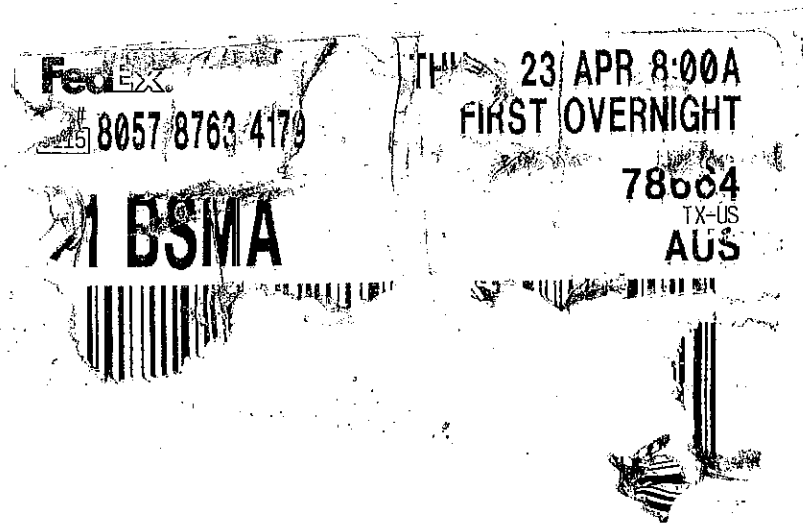
RELINQUISHED BY: (Signature) L Huckaba DATE/TIME 4-22-15 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)
4/23/15 915

❑ DHL DISPOSAL @ $5.00 each ❑ Return

TURN AROUND TIME
RUSH ❑ CALL FIRST
1 DAY ❑ CALL FIRST
2 DAY ❑
NORMAL ❑
OTHER ❑

LABORATORY USE ONLY:
RECEIVING TEMP: 20.1-29.2-5 THERM #: 57
CUSTODY SEALS: ❑ BROKEN ❑ INTACT ❑ NOT USED
CARRIER: ❑ LONE STAR ❑ FEDEX ❑ UPS ❑ OTHER
❑ COURIER DELIVERY
❑ HAND DELIVERED


FedEx
8057 8763 415
1 BSMA
23 APR 8:00A
FIRST OVERNIGHT
78664
TX-US
AUS
958389 22APR15 ROWA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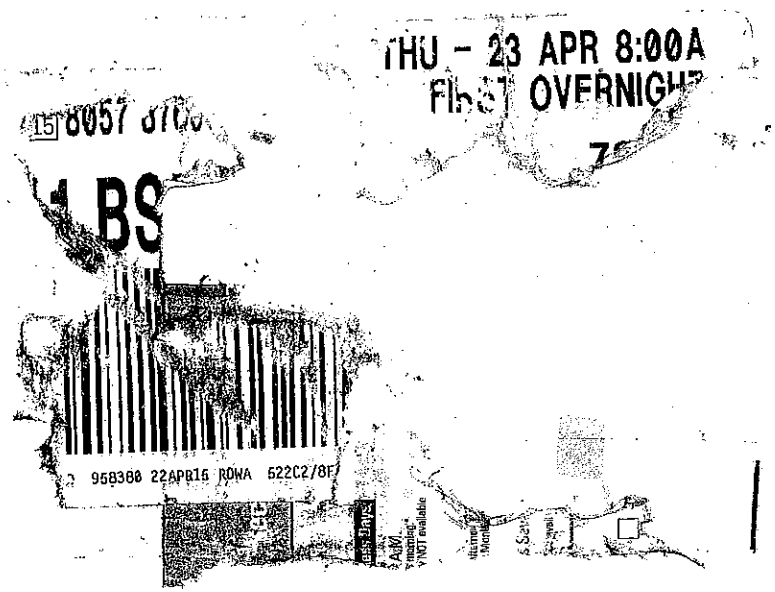
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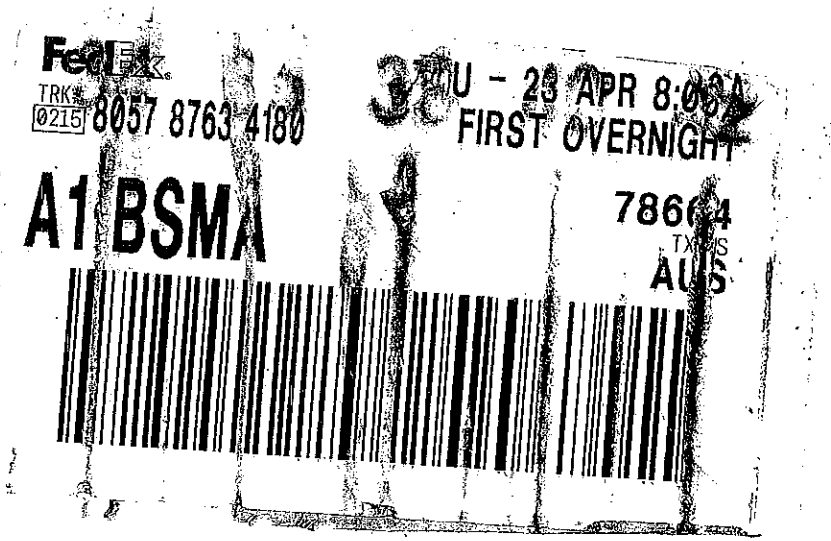
FedEx
TRK#
0215 8057 8763 4180
A1 BSMA
FIRST OVERNIGHT
AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Larson & Associates** Date Received: **4/23/2015**

Work Order Number **1504245** Received by **JB**

Checklist completed by: Signature 4/23/2015 Date Reviewed by DL Initials 4/23/2015 Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 ☐	2.0 °C, 1.5, 2.9, 2.5
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 _____

DHL Analytical, Inc. **Date:** *06-May-15*

CLIENT: Larson & Associates
Project: Artesia, NM Abo Empire Gas Plant
Lab Order: 1504245

CASE NARRATIVE

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

Method SW7470A - Mercury Analysis
Method SW8021B - Volatile Organics by GC Analysis
Method SW6020A - Metals Analysis
Method E300 - Anions Analysis
Method M2320 B - Alkalinity Analysis
Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 4/23/2015. A total of 25 sample were received and analyzed. The samples arrived in good condition and were properly packaged. The samples were collected in Mountain Standard Time.

METALS ANALYSIS

For Metals Analysis, for Batches 69423 and 69431, the recoveries of three analytes for the Matrix Spike and Matrix Spike Duplicate (1504245-01, -24 MS/MSD) were above the method control limits. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated LCS(s). No further corrective action was taken.

For Metals Analysis, the recovery of Potassium for the Low Level Calibration Verification (LCVL4 - 150505) was slightly above the method control limits. This analyte was within method control limits in the subsequent LCVL and was detected in the associated samples at greater than 10x the amount detected in the LCVL. No further corrective action was taken.

DHL Analytical, Inc.

Date: *24-Feb-16*

CLIENT: Larson & Associates
Project: Artesia, NM Abo Empire Gas Plant
Lab Order: 1504245

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1504245-01	EB-06		04/21/15 08:54 AM	4/23/2015
1504245-02	MW-18		04/21/15 09:48 AM	4/23/2015
1504245-03	P-01		04/21/15 10:06 AM	4/23/2015
1504245-04	EB-05		04/21/15 10:25 AM	4/23/2015
1504245-05	EB-02		04/21/15 10:48 AM	4/23/2015
1504245-06	EB-03		04/21/15 11:34 AM	4/23/2015
1504245-07	MW-14		04/21/15 12:11 PM	4/23/2015
1504245-08	MW-23		04/21/15 01:05 PM	4/23/2015
1504245-09	EB-07		04/21/15 01:31 PM	4/23/2015
1504245-10	P-03		04/21/15 02:06 PM	4/23/2015
1504245-11	P-02		04/21/15 02:18 PM	4/23/2015
1504245-12	MW-17		04/21/15 02:56 PM	4/23/2015
1504245-13	MW-16		04/21/15 03:48 PM	4/23/2015
1504245-14	MW-15		04/21/15 04:38 PM	4/23/2015
1504245-15	MW-03		04/22/15 07:54 AM	4/23/2015
1504245-16	MW-02-03		04/22/15 08:26 AM	4/23/2015
1504245-17	MW-02-11		04/22/15 09:11 AM	4/23/2015
1504245-18	MW-22		04/22/15 09:41 AM	4/23/2015
1504245-19	MW-02-18		04/22/15 10:01 AM	4/23/2015
1504245-20	MW-03-03		04/22/15 10:41 AM	4/23/2015
1504245-21	MW-02-04		04/22/15 11:10 AM	4/23/2015
1504245-22	MW-02-12		04/22/15 11:51 AM	4/23/2015
1504245-23	MW-20		04/22/15 12:29 PM	4/23/2015
1504245-24	MW-12		04/22/15 01:03 PM	4/23/2015
1504245-25	MW-02-16		04/22/15 01:38 PM	4/23/2015

Lab Order: 1504245
Client: Larson & Associates
Project: Artesia, NM Abo Empire Gas Plan

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1504245-01A	EB-06	04/21/15 08:54 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-01B	EB-06	04/21/15 08:54 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-06	04/21/15 08:54 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-06	04/21/15 08:54 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-01D	EB-06	04/21/15 08:54 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	EB-06	04/21/15 08:54 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	EB-06	04/21/15 08:54 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:11 AM	69316
1504245-02A	MW-18	04/21/15 09:48 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-02B	MW-18	04/21/15 09:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-18	04/21/15 09:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-18	04/21/15 09:48 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-02D	MW-18	04/21/15 09:48 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-18	04/21/15 09:48 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-18	04/21/15 09:48 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:11 AM	69316
1504245-03A	P-01	04/21/15 10:06 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-03B	P-01	04/21/15 10:06 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	P-01	04/21/15 10:06 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	P-01	04/21/15 10:06 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-03D	P-01	04/21/15 10:06 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	P-01	04/21/15 10:06 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	P-01	04/21/15 10:06 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:11 AM	69316
1504245-04A	EB-05	04/21/15 10:25 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-04B	EB-05	04/21/15 10:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-05	04/21/15 10:25 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-05	04/21/15 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-04D	EB-05	04/21/15 10:25 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	EB-05	04/21/15 10:25 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	EB-05	04/21/15 10:25 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:11 AM	69316

Lab Order: 1504245
Client: Larson & Associates
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PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1504245-05A	EB-02	04/21/15 10:48 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-05B	EB-02	04/21/15 10:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-02	04/21/15 10:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-02	04/21/15 10:48 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-05D	EB-02	04/21/15 10:48 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	EB-02	04/21/15 10:48 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	EB-02	04/21/15 10:48 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:11 AM	69316
1504245-06A	EB-03	04/21/15 11:34 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-06B	EB-03	04/21/15 11:34 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-03	04/21/15 11:34 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-03	04/21/15 11:34 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-06D	EB-03	04/21/15 11:34 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	EB-03	04/21/15 11:34 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	EB-03	04/21/15 11:34 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:11 AM	69316
1504245-07A	MW-14	04/21/15 12:11 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
	MW-14	04/21/15 12:11 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-07B	MW-14	04/21/15 12:11 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-14	04/21/15 12:11 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-14	04/21/15 12:11 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-07D	MW-14	04/21/15 12:11 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-14	04/21/15 12:11 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-14	04/21/15 12:11 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:11 AM	69316
1504245-08A	MW-23	04/21/15 01:05 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-08B	MW-23	04/21/15 01:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-23	04/21/15 01:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-23	04/21/15 01:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-08D	MW-23	04/21/15 01:05 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-23	04/21/15 01:05 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421

Lab Order: 1504245
Client: Larson & Associates
Project: Artesia, NM Abo Empire Gas Plan

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1504245-08D	MW-23	04/21/15 01:05 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-09A	EB-07	04/21/15 01:31 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-09B	EB-07	04/21/15 01:31 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-07	04/21/15 01:31 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	EB-07	04/21/15 01:31 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-09D	EB-07	04/21/15 01:31 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	EB-07	04/21/15 01:31 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	EB-07	04/21/15 01:31 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-10A	P-03	04/21/15 02:06 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-10B	P-03	04/21/15 02:06 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	P-03	04/21/15 02:06 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	P-03	04/21/15 02:06 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-10D	P-03	04/21/15 02:06 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	P-03	04/21/15 02:06 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	P-03	04/21/15 02:06 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-11A	P-02	04/21/15 02:18 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-11B	P-02	04/21/15 02:18 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	P-02	04/21/15 02:18 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	P-02	04/21/15 02:18 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-11D	P-02	04/21/15 02:18 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	P-02	04/21/15 02:18 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	P-02	04/21/15 02:18 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-12A	MW-17	04/21/15 02:56 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-12B	MW-17	04/21/15 02:56 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-17	04/21/15 02:56 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-17	04/21/15 02:56 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-12D	MW-17	04/21/15 02:56 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-17	04/21/15 02:56 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421

Lab Order: 1504245
Client: Larson & Associates
Project: Artesia, NM Abo Empire Gas Plan

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1504245-12D	MW-17	04/21/15 02:56 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-13A	MW-16	04/21/15 03:48 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-13B	MW-16	04/21/15 03:48 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-16	04/21/15 03:48 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-16	04/21/15 03:48 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-13D	MW-16	04/21/15 03:48 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-16	04/21/15 03:48 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-16	04/21/15 03:48 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-14A	MW-15	04/21/15 04:38 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-14B	MW-15	04/21/15 04:38 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-15	04/21/15 04:38 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-15	04/21/15 04:38 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-15	04/21/15 04:38 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-14D	MW-15	04/21/15 04:38 PM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-15	04/21/15 04:38 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-15	04/21/15 04:38 PM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-15	04/21/15 04:38 PM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-15A	MW-03	04/22/15 07:54 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
	MW-03	04/22/15 07:54 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-15B	MW-03	04/22/15 07:54 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-03	04/22/15 07:54 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-03	04/22/15 07:54 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-15D	MW-03	04/22/15 07:54 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-03	04/22/15 07:54 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-03	04/22/15 07:54 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-16A	MW-02-03	04/22/15 08:26 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-16B	MW-02-03	04/22/15 08:26 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-02-03	04/22/15 08:26 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423

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Client: Larson & Associates
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PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1504245-16B	MW-02-03	04/22/15 08:26 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-16D	MW-02-03	04/22/15 08:26 AM	Aqueous	M2320 B	Alkalinity Preparation	04/24/15 08:47 AM	69292
	MW-02-03	04/22/15 08:26 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-02-03	04/22/15 08:26 AM	Aqueous	M2540C	TDS Preparation	04/27/15 09:17 AM	69317
1504245-17A	MW-02-11	04/22/15 09:11 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
	MW-02-11	04/22/15 09:11 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-17B	MW-02-11	04/22/15 09:11 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-02-11	04/22/15 09:11 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-02-11	04/22/15 09:11 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-17D	MW-02-11	04/22/15 09:11 AM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-02-11	04/22/15 09:11 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-02-11	04/22/15 09:11 AM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-18A	MW-22	04/22/15 09:41 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-18B	MW-22	04/22/15 09:41 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-22	04/22/15 09:41 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-22	04/22/15 09:41 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-18D	MW-22	04/22/15 09:41 AM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-22	04/22/15 09:41 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-22	04/22/15 09:41 AM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-19A	MW-02-18	04/22/15 10:01 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-19B	MW-02-18	04/22/15 10:01 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-02-18	04/22/15 10:01 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-02-18	04/22/15 10:01 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-19D	MW-02-18	04/22/15 10:01 AM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-02-18	04/22/15 10:01 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-02-18	04/22/15 10:01 AM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-20A	MW-03-03	04/22/15 10:41 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/27/15 08:40 AM	69310
1504245-20B	MW-03-03	04/22/15 10:41 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423

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PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1504245-20B	MW-03-03	04/22/15 10:41 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 08:07 AM	69423
	MW-03-03	04/22/15 10:41 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:42 AM	69399
1504245-20D	MW-03-03	04/22/15 10:41 AM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-03-03	04/22/15 10:41 AM	Aqueous	E300	Anion Preparation	05/02/15 08:56 AM	69421
	MW-03-03	04/22/15 10:41 AM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-21A	MW-02-04	04/22/15 11:10 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/28/15 03:22 PM	69348
1504245-21B	MW-02-04	04/22/15 11:10 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-02-04	04/22/15 11:10 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-02-04	04/22/15 11:10 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:44 AM	69400
1504245-21D	MW-02-04	04/22/15 11:10 AM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-02-04	04/22/15 11:10 AM	Aqueous	E300	Anion Preparation	05/02/15 04:19 PM	69422
	MW-02-04	04/22/15 11:10 AM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-22A	MW-02-12	04/22/15 11:51 AM	Aqueous	SW5030C	Purge and Trap Water GC	04/28/15 03:22 PM	69348
1504245-22B	MW-02-12	04/22/15 11:51 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-02-12	04/22/15 11:51 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-02-12	04/22/15 11:51 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:44 AM	69400
1504245-22D	MW-02-12	04/22/15 11:51 AM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-02-12	04/22/15 11:51 AM	Aqueous	E300	Anion Preparation	05/02/15 04:19 PM	69422
	MW-02-12	04/22/15 11:51 AM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-23A	MW-20	04/22/15 12:29 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/28/15 03:22 PM	69348
1504245-23B	MW-20	04/22/15 12:29 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-20	04/22/15 12:29 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-20	04/22/15 12:29 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:44 AM	69400
1504245-23D	MW-20	04/22/15 12:29 PM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-20	04/22/15 12:29 PM	Aqueous	E300	Anion Preparation	05/02/15 04:19 PM	69422
	MW-20	04/22/15 12:29 PM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-24A	MW-12	04/22/15 01:03 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/28/15 03:22 PM	69348
1504245-24B	MW-12	04/22/15 01:03 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431

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Client: Larson & Associates
Project: Artesia, NM Abo Empire Gas Plan

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1504245-24B	MW-12	04/22/15 01:03 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-12	04/22/15 01:03 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:44 AM	69400
1504245-24D	MW-12	04/22/15 01:03 PM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-12	04/22/15 01:03 PM	Aqueous	E300	Anion Preparation	05/02/15 04:19 PM	69422
	MW-12	04/22/15 01:03 PM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330
1504245-25A	MW-02-16	04/22/15 01:38 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/28/15 03:22 PM	69348
	MW-02-16	04/22/15 01:38 PM	Aqueous	SW5030C	Purge and Trap Water GC	04/28/15 03:22 PM	69348
1504245-25B	MW-02-16	04/22/15 01:38 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-02-16	04/22/15 01:38 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/04/15 09:10 AM	69431
	MW-02-16	04/22/15 01:38 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	04/30/15 11:44 AM	69400
1504245-25D	MW-02-16	04/22/15 01:38 PM	Aqueous	M2320 B	Alkalinity Preparation	04/28/15 09:09 AM	69333
	MW-02-16	04/22/15 01:38 PM	Aqueous	E300	Anion Preparation	05/02/15 04:19 PM	69422
	MW-02-16	04/22/15 01:38 PM	Aqueous	M2540C	TDS Preparation	04/29/15 08:59 AM	69330

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ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1504245-01A	EB-06	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 03:41 PM	GC8_150427B
1504245-01B	EB-06	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:00 PM	ICP-MS4_150505B
	EB-06	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 07:57 PM	ICP-MS4_150505B
	EB-06	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:06 AM	CETAC2_HG_150505C
1504245-01D	EB-06	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 11:42 AM	TITRATOR_150424A
	EB-06	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 10:17 AM	IC2_150502A
	EB-06	Aqueous	M2540C	Total Dissolved Solids	69316	1	04/28/15 08:50 AM	WC_150427A
1504245-02A	MW-18	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 04:03 PM	GC8_150427B
1504245-02B	MW-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:04 PM	ICP-MS4_150505B
	MW-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:01 PM	ICP-MS4_150505B
	MW-18	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:09 AM	CETAC2_HG_150505C
1504245-02D	MW-18	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 11:48 AM	TITRATOR_150424A
	MW-18	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 10:31 AM	IC2_150502A
	MW-18	Aqueous	M2540C	Total Dissolved Solids	69316	1	04/28/15 08:50 AM	WC_150427A
1504245-03A	P-01	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 04:26 PM	GC8_150427B
1504245-03B	P-01	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:06 PM	ICP-MS4_150505B
	P-01	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:03 PM	ICP-MS4_150505B
	P-01	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:11 AM	CETAC2_HG_150505C
1504245-03D	P-01	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 11:56 AM	TITRATOR_150424A
	P-01	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 10:46 AM	IC2_150502A
	P-01	Aqueous	M2540C	Total Dissolved Solids	69316	1	04/28/15 08:50 AM	WC_150427A
1504245-04A	EB-05	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 05:34 PM	GC8_150427B
1504245-04B	EB-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:05 PM	ICP-MS4_150505B
	EB-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:08 PM	ICP-MS4_150505B
	EB-05	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 10:55 AM	CETAC2_HG_150505C
1504245-04D	EB-05	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 12:07 PM	TITRATOR_150424A

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ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1504245-04D	EB-05	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 11:00 AM	IC2_150502A
	EB-05	Aqueous	M2540C	Total Dissolved Solids	69316	1	04/28/15 08:50 AM	WC_150427A
1504245-05A	EB-02	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 05:57 PM	GC8_150427B
1504245-05B	EB-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:10 PM	ICP-MS4_150505B
	EB-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:07 PM	ICP-MS4_150505B
	EB-02	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:13 AM	CETAC2_HG_150505C
1504245-05D	EB-02	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 12:17 PM	TITRATOR_150424A
	EB-02	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 11:15 AM	IC2_150502A
	EB-02	Aqueous	M2540C	Total Dissolved Solids	69316	1	04/28/15 08:50 AM	WC_150427A
1504245-06A	EB-03	Aqueous	SW8021B	Volatile Organics by GC	69310	5	04/27/15 06:19 PM	GC8_150427B
1504245-06B	EB-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:12 PM	ICP-MS4_150505B
	EB-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:08 PM	ICP-MS4_150505B
	EB-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:15 AM	CETAC2_HG_150505C
1504245-06D	EB-03	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 12:42 PM	TITRATOR_150424A
	EB-03	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 11:29 AM	IC2_150502A
	EB-03	Aqueous	M2540C	Total Dissolved Solids	69316	1	04/28/15 08:50 AM	WC_150427A
1504245-07A	MW-14	Aqueous	SW8021B	Volatile Organics by GC	69310	10	04/27/15 06:42 PM	GC8_150427B
	MW-14	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/28/15 10:22 AM	GC8_150427B
1504245-07B	MW-14	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	100	05/05/15 05:14 PM	ICP-MS4_150505B
	MW-14	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:10 PM	ICP-MS4_150505B
	MW-14	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:18 AM	CETAC2_HG_150505C
1504245-07D	MW-14	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 12:54 PM	TITRATOR_150424A
	MW-14	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 11:44 AM	IC2_150502A
	MW-14	Aqueous	M2540C	Total Dissolved Solids	69316	1	04/28/15 08:50 AM	WC_150427A
1504245-08A	MW-23	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 07:05 PM	GC8_150427B
1504245-08B	MW-23	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:16 PM	ICP-MS4_150505B

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Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1504245-08B	MW-23	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:12 PM	ICP-MS4_150505B
	MW-23	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:20 AM	CETAC2_HG_150505C
1504245-08D	MW-23	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 01:09 PM	TITRATOR_150424A
	MW-23	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 11:59 AM	IC2_150502A
	MW-23	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-09A	EB-07	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 07:27 PM	GC8_150427B
1504245-09B	EB-07	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:18 PM	ICP-MS4_150505B
	EB-07	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:14 PM	ICP-MS4_150505B
	EB-07	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:22 AM	CETAC2_HG_150505C
1504245-09D	EB-07	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 01:20 PM	TITRATOR_150424A
	EB-07	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 12:13 PM	IC2_150502A
	EB-07	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-10A	P-03	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 07:50 PM	GC8_150427B
1504245-10B	P-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:16 PM	ICP-MS4_150505B
	P-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:20 PM	ICP-MS4_150505B
	P-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:24 AM	CETAC2_HG_150505C
1504245-10D	P-03	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 01:28 PM	TITRATOR_150424A
	P-03	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 12:28 PM	IC2_150502A
	P-03	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-11A	P-02	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 08:58 PM	GC8_150427B
1504245-11B	P-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:38 PM	ICP-MS4_150505B
	P-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:28 PM	ICP-MS4_150505B
	P-02	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:31 AM	CETAC2_HG_150505C
1504245-11D	P-02	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 01:40 PM	TITRATOR_150424A
	P-02	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 12:57 PM	IC2_150502A
	P-02	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B

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Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1504245-12A	MW-17	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 09:21 PM	GC8_150427B
1504245-12B	MW-17	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:30 PM	ICP-MS4_150505B
	MW-17	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:40 PM	ICP-MS4_150505B
	MW-17	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:34 AM	CETAC2_HG_150505C
1504245-12D	MW-17	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 01:50 PM	TITRATOR_150424A
	MW-17	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 01:11 PM	IC2_150502A
	MW-17	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-13A	MW-16	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 09:44 PM	GC8_150427B
1504245-13B	MW-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:42 PM	ICP-MS4_150505B
	MW-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:32 PM	ICP-MS4_150505B
	MW-16	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:36 AM	CETAC2_HG_150505C
1504245-13D	MW-16	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 01:55 PM	TITRATOR_150424A
	MW-16	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 01:26 PM	IC2_150502A
	MW-16	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-14A	MW-15	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 10:06 PM	GC8_150427B
1504245-14B	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	100	05/05/15 05:44 PM	ICP-MS4_150505B
	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1000	05/05/15 07:01 PM	ICP-MS4_150505B
	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:45 PM	ICP-MS4_150505B
	MW-15	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:38 AM	CETAC2_HG_150505C
1504245-14D	MW-15	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 02:03 PM	TITRATOR_150424A
	MW-15	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 01:41 PM	IC2_150502A
	MW-15	Aqueous	E300	Anions by IC method - Water	69421	1000	05/02/15 05:02 PM	IC2_150502A
	MW-15	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-15A	MW-03	Aqueous	SW8021B	Volatile Organics by GC	69310	10	04/28/15 10:45 AM	GC8_150427B
	MW-03	Aqueous	SW8021B	Volatile Organics by GC	69310	20	04/28/15 11:31 AM	GC8_150427B
1504245-15B	MW-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:46 PM	ICP-MS4_150505B

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Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1504245-15B	MW-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:34 PM	ICP-MS4_150505B
	MW-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:40 AM	CETAC2_HG_150505C
1504245-15D	MW-03	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 02:19 PM	TITRATOR_150424A
	MW-03	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 01:55 PM	IC2_150502A
	MW-03	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-16A	MW-02-03	Aqueous	SW8021B	Volatile Organics by GC	69310	1	04/27/15 10:52 PM	GC8_150427B
1504245-16B	MW-02-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:35 PM	ICP-MS4_150505B
	MW-02-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:48 PM	ICP-MS4_150505B
	MW-02-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:43 AM	CETAC2_HG_150505C
1504245-16D	MW-02-03	Aqueous	M2320 B	Alkalinity	69292	1	04/24/15 02:37 PM	TITRATOR_150424A
	MW-02-03	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 02:10 PM	IC2_150502A
	MW-02-03	Aqueous	M2540C	Total Dissolved Solids	69317	1	04/28/15 08:50 AM	WC_150427B
1504245-17A	MW-02-11	Aqueous	SW8021B	Volatile Organics by GC	69310	20	04/28/15 11:08 AM	GC8_150427B
	MW-02-11	Aqueous	SW8021B	Volatile Organics by GC	69310	200	04/28/15 12:39 PM	GC8_150427B
1504245-17B	MW-02-11	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:50 PM	ICP-MS4_150505B
	MW-02-11	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:37 PM	ICP-MS4_150505B
	MW-02-11	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:45 AM	CETAC2_HG_150505C
1504245-17D	MW-02-11	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 11:29 AM	TITRATOR_150428B
	MW-02-11	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 02:30 PM	IC2_150502A
	MW-02-11	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-18A	MW-22	Aqueous	SW8021B	Volatile Organics by GC	69310	200	04/27/15 11:38 PM	GC8_150427B
1504245-18B	MW-22	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:52 PM	ICP-MS4_150505B
	MW-22	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:39 PM	ICP-MS4_150505B
	MW-22	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:47 AM	CETAC2_HG_150505C
1504245-18D	MW-22	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 11:46 AM	TITRATOR_150428B
	MW-22	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 02:44 PM	IC2_150502A

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Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1504245-18D	MW-22	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-19A	MW-02-18	Aqueous	SW8021B	Volatile Organics by GC	69310	100	04/28/15	GC8_150427B
1504245-19B	MW-02-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:54 PM	ICP-MS4_150505B
	MW-02-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:41 PM	ICP-MS4_150505B
	MW-02-18	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:49 AM	CETAC2_HG_150505C
1504245-19D	MW-02-18	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 12:06 PM	TITRATOR_150428B
	MW-02-18	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 02:59 PM	IC2_150502A
	MW-02-18	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-20A	MW-03-03	Aqueous	SW8021B	Volatile Organics by GC	69310	50	04/28/15 12:23 AM	GC8_150427B
1504245-20B	MW-03-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	50	05/05/15 05:56 PM	ICP-MS4_150505B
	MW-03-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69423	1	05/05/15 08:43 PM	ICP-MS4_150505B
	MW-03-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69399	1	05/05/15 11:52 AM	CETAC2_HG_150505C
1504245-20D	MW-03-03	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 12:25 PM	TITRATOR_150428B
	MW-03-03	Aqueous	E300	Anions by IC method - Water	69421	100	05/02/15 03:14 PM	IC2_150502A
	MW-03-03	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-21A	MW-02-04	Aqueous	SW8021B	Volatile Organics by GC	69348	1	04/28/15 09:23 PM	GC8_150428B
1504245-21B	MW-02-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	50	05/05/15 06:22 PM	ICP-MS4_150505B
	MW-02-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	1	05/05/15 08:59 PM	ICP-MS4_150505B
	MW-02-04	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69400	1	05/05/15 12:40 PM	CETAC2_HG_150505C
1504245-21D	MW-02-04	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 12:33 PM	TITRATOR_150428B
	MW-02-04	Aqueous	E300	Anions by IC method - Water	69422	100	05/02/15 06:17 PM	IC2_150502B
	MW-02-04	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-22A	MW-02-12	Aqueous	SW8021B	Volatile Organics by GC	69348	1	04/28/15 09:46 PM	GC8_150428B
1504245-22B	MW-02-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	50	05/05/15 06:24 PM	ICP-MS4_150505B
	MW-02-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	1	05/05/15 09:01 PM	ICP-MS4_150505B
	MW-02-12	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69400	1	05/05/15 12:28 PM	CETAC2_HG_150505C

Lab Order: 1504245
Client: Larson & Associates
Project: Artesia, NM Abo Empire Gas Plan

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1504245-22D	MW-02-12	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 12:47 PM	TITRATOR_150428B
	MW-02-12	Aqueous	E300	Anions by IC method - Water	69422	100	05/02/15 06:31 PM	IC2_150502B
	MW-02-12	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-23A	MW-20	Aqueous	SW8021B	Volatile Organics by GC	69348	25	04/28/15 10:08 PM	GC8_150428B
1504245-23B	MW-20	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	50	05/05/15 06:26 PM	ICP-MS4_150505B
	MW-20	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	1	05/05/15 09:03 PM	ICP-MS4_150505B
	MW-20	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69400	1	05/05/15 12:42 PM	CETAC2_HG_150505C
1504245-23D	MW-20	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 01:02 PM	TITRATOR_150428B
	MW-20	Aqueous	E300	Anions by IC method - Water	69422	100	05/02/15 06:46 PM	IC2_150502B
	MW-20	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-24A	MW-12	Aqueous	SW8021B	Volatile Organics by GC	69348	1	04/28/15 10:31 PM	GC8_150428B
1504245-24B	MW-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	1	05/05/15 08:55 PM	ICP-MS4_150505B
	MW-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	50	05/05/15 06:16 PM	ICP-MS4_150505B
	MW-12	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69400	1	05/05/15 12:44 PM	CETAC2_HG_150505C
1504245-24D	MW-12	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 01:17 PM	TITRATOR_150428B
	MW-12	Aqueous	E300	Anions by IC method - Water	69422	100	05/02/15 07:01 PM	IC2_150502B
	MW-12	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A
1504245-25A	MW-02-16	Aqueous	SW8021B	Volatile Organics by GC	69348	25	04/28/15 10:54 PM	GC8_150428B
	MW-02-16	Aqueous	SW8021B	Volatile Organics by GC	69348	100	04/29/15 11:18 AM	GC8_150428B
1504245-25B	MW-02-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	50	05/05/15 06:28 PM	ICP-MS4_150505B
	MW-02-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	69431	1	05/05/15 09:05 PM	ICP-MS4_150505B
	MW-02-16	Aqueous	SW7470A	Mercury Filtered (0.45µ)	69400	1	05/05/15 12:47 PM	CETAC2_HG_150505C
1504245-25D	MW-02-16	Aqueous	M2320 B	Alkalinity	69333	1	04/28/15 01:35 PM	TITRATOR_150428B
	MW-02-16	Aqueous	E300	Anions by IC method - Water	69422	100	05/02/15 07:15 PM	IC2_150502B
	MW-02-16	Aqueous	M2540C	Total Dissolved Solids	69330	1	04/30/15 09:00 AM	WC_150429A

DHL Analytical, Inc.

Date: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-06
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-01
Project No:	6-0141	**Collection Date:**	04/21/15 08:54 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 03:41 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 03:41 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 03:41 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 03:41 PM
Surr: a,a,a-Trifluorotoluene	96.9	0	87-113		%REC	1	04/27/15 03:41 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:06 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 07:57 PM
Barium	0.0117	0.00300	0.0100		mg/L	1	05/05/15 07:57 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 07:57 PM
Calcium	530	5.00	15.0		mg/L	50	05/05/15 05:00 PM
Chromium	0.0597	0.00200	0.00500		mg/L	1	05/05/15 07:57 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 07:57 PM
Magnesium	139	5.00	15.0		mg/L	50	05/05/15 05:00 PM
Potassium	4.47	0.100	0.300		mg/L	1	05/05/15 07:57 PM
Selenium	0.00311	0.00200	0.00500	J	mg/L	1	05/05/15 07:57 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 07:57 PM
Sodium	48.1	5.00	15.0		mg/L	50	05/05/15 05:00 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	166	30.0	100		mg/L	100	05/02/15 10:17 AM
Sulfate	1740	100	300		mg/L	100	05/02/15 10:17 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	96.3	10.0	20.0		mg/L @ pH 4.52	1	04/24/15 11:42 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	04/24/15 11:42 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	04/24/15 11:42 AM
Alkalinity, Total (As CaCO3)	96.3	20.0	20.0		mg/L @ pH 4.52	1	04/24/15 11:42 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	2910	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-18
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-02
Project No:	6-0141	**Collection Date:**	04/21/15 09:48 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 04:03 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 04:03 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 04:03 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 04:03 PM
Surr: a,a,a-Trifluorotoluene	97.7	0	87-113		%REC	1	04/27/15 04:03 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:09 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:01 PM
Barium	0.0148	0.00300	0.0100		mg/L	1	05/05/15 08:01 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:01 PM
Calcium	679	5.00	15.0		mg/L	50	05/05/15 05:04 PM
Chromium	0.00431	0.00200	0.00500	J	mg/L	1	05/05/15 08:01 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:01 PM
Magnesium	151	5.00	15.0		mg/L	50	05/05/15 05:04 PM
Potassium	4.70	0.100	0.300		mg/L	1	05/05/15 08:01 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:01 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:01 PM
Sodium	78.1	5.00	15.0		mg/L	50	05/05/15 05:04 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	691	30.0	100		mg/L	100	05/02/15 10:31 AM
Sulfate	1550	100	300		mg/L	100	05/02/15 10:31 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	131	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 11:48 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 11:48 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 11:48 AM
Alkalinity, Total (As CaCO3)	131	20.0	20.0		mg/L @ pH 4.53	1	04/24/15 11:48 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3830	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	P-01
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-03
Project No:	6-0141	**Collection Date:**	04/21/15 10:06 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 04:26 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 04:26 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 04:26 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 04:26 PM
Surr: a,a,a-Trifluorotoluene	96.7	0	87-113		%REC	1	04/27/15 04:26 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:11 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00244	0.00200	0.00500	J	mg/L	1	05/05/15 08:03 PM
Barium	0.0133	0.00300	0.0100		mg/L	1	05/05/15 08:03 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:03 PM
Calcium	461	5.00	15.0		mg/L	50	05/05/15 05:06 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:03 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:03 PM
Magnesium	535	5.00	15.0		mg/L	50	05/05/15 05:06 PM
Potassium	5.69	0.100	0.300		mg/L	1	05/05/15 08:03 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:03 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:03 PM
Sodium	84.1	5.00	15.0		mg/L	50	05/05/15 05:06 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	124	30.0	100		mg/L	100	05/02/15 10:46 AM
Sulfate	3290	100	300		mg/L	100	05/02/15 10:46 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	195	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 11:56 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 11:56 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 11:56 AM
Alkalinity, Total (As CaCO3)	195	20.0	20.0		mg/L @ pH 4.54	1	04/24/15 11:56 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	5290	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-05
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-04
Project No:	6-0141	**Collection Date:**	04/21/15 10:25 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 05:34 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 05:34 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 05:34 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 05:34 PM
Surr: a,a,a-Trifluorotoluene	95.2	0	87-113		%REC	1	04/27/15 05:34 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 10:55 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:05 PM
Barium	0.0198	0.00300	0.0100		mg/L	1	05/05/15 08:05 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:05 PM
Calcium	579	5.00	15.0		mg/L	50	05/05/15 05:08 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:05 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:05 PM
Magnesium	72.7	5.00	15.0		mg/L	50	05/05/15 05:08 PM
Potassium	5.47	0.100	0.300		mg/L	1	05/05/15 08:05 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:05 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:05 PM
Sodium	79.8	5.00	15.0		mg/L	50	05/05/15 05:08 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	119	30.0	100		mg/L	100	05/02/15 11:00 AM
Sulfate	1630	100	300		mg/L	100	05/02/15 11:00 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	339	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 12:07 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 12:07 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 12:07 PM
Alkalinity, Total (As CaCO3)	339	20.0	20.0		mg/L @ pH 4.53	1	04/24/15 12:07 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	2810	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-02
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-05
Project No:	6-0141	**Collection Date:**	04/21/15 10:48 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 05:57 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 05:57 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 05:57 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 05:57 PM
Surr: a,a,a-Trifluorotoluene	97.6	0	87-113		%REC	1	04/27/15 05:57 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:13 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:07 PM
Barium	0.0106	0.00300	0.0100		mg/L	1	05/05/15 08:07 PM
Cadmium	0.00114	0.000300	0.00100		mg/L	1	05/05/15 08:07 PM
Calcium	494	5.00	15.0		mg/L	50	05/05/15 05:10 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:07 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:07 PM
Magnesium	259	5.00	15.0		mg/L	50	05/05/15 05:10 PM
Potassium	10.4	0.100	0.300		mg/L	1	05/05/15 08:07 PM
Selenium	0.00211	0.00200	0.00500	J	mg/L	1	05/05/15 08:07 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:07 PM
Sodium	170	5.00	15.0		mg/L	50	05/05/15 05:10 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	108	30.0	100		mg/L	100	05/02/15 11:15 AM
Sulfate	2250	100	300		mg/L	100	05/02/15 11:15 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	345	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:17 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:17 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:17 PM
Alkalinity, Total (As CaCO3)	345	20.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:17 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	4190	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-03
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-06
Project No:	6-0141	**Collection Date:**	04/21/15 11:34 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.145	0.00400	0.0100		mg/L	5	04/27/15 06:19 PM
Ethylbenzene	<0.0300	0.0100	0.0300		mg/L	5	04/27/15 06:19 PM
Toluene	<0.0300	0.0100	0.0300		mg/L	5	04/27/15 06:19 PM
Xylenes, Total	0.0722	0.0150	0.0450		mg/L	5	04/27/15 06:19 PM
Surr: a,a,a-Trifluorotoluene	98.4	0	87-113		%REC	5	04/27/15 06:19 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:15 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:08 PM
Barium	0.0222	0.00300	0.0100		mg/L	1	05/05/15 08:08 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:08 PM
Calcium	574	5.00	15.0		mg/L	50	05/05/15 05:12 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:08 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:08 PM
Magnesium	115	5.00	15.0		mg/L	50	05/05/15 05:12 PM
Potassium	4.11	0.100	0.300		mg/L	1	05/05/15 08:08 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:08 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:08 PM
Sodium	138	5.00	15.0		mg/L	50	05/05/15 05:12 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	132	30.0	100		mg/L	100	05/02/15 11:29 AM
Sulfate	1530	100	300		mg/L	100	05/02/15 11:29 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	714	10.0	20.0		mg/L @ pH 4.55	1	04/24/15 12:42 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.55	1	04/24/15 12:42 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.55	1	04/24/15 12:42 PM
Alkalinity, Total (As CaCO3)	714	20.0	20.0		mg/L @ pH 4.55	1	04/24/15 12:42 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3500	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-14
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-07
Project No:	6-0141	**Collection Date:**	04/21/15 12:11 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.0167	0.000800	0.00200		mg/L	1	04/28/15 10:22 AM
Ethylbenzene	0.0191	0.00200	0.00600		mg/L	1	04/28/15 10:22 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/28/15 10:22 AM
Xylenes, Total	0.0159	0.00300	0.00900		mg/L	1	04/28/15 10:22 AM
Surr: a,a,a-Trifluorotoluene	98.2	0	87-113		%REC	1	04/28/15 10:22 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:18 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00422	0.00200	0.00500	J	mg/L	1	05/05/15 08:10 PM
Barium	0.0224	0.00300	0.0100		mg/L	1	05/05/15 08:10 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:10 PM
Calcium	579	10.0	30.0		mg/L	100	05/05/15 05:14 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:10 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:10 PM
Magnesium	121	10.0	30.0		mg/L	100	05/05/15 05:14 PM
Potassium	4.45	0.100	0.300		mg/L	1	05/05/15 08:10 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:10 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:10 PM
Sodium	163	10.0	30.0		mg/L	100	05/05/15 05:14 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	142	30.0	100		mg/L	100	05/02/15 11:44 AM
Sulfate	1790	100	300		mg/L	100	05/02/15 11:44 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	468	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:54 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:54 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:54 PM
Alkalinity, Total (As CaCO3)	468	20.0	20.0		mg/L @ pH 4.54	1	04/24/15 12:54 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3140	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-23
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-08
Project No:	6-0141	**Collection Date:**	04/21/15 01:05 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.0645	0.000800	0.00200		mg/L	1	04/27/15 07:05 PM
Ethylbenzene	0.00215	0.00200	0.00600	J	mg/L	1	04/27/15 07:05 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 07:05 PM
Xylenes, Total	0.00304	0.00300	0.00900	J	mg/L	1	04/27/15 07:05 PM
Surr: a,a,a-Trifluorotoluene	96.4	0	87-113		%REC	1	04/27/15 07:05 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:20 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:12 PM
Barium	0.0156	0.00300	0.0100		mg/L	1	05/05/15 08:12 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:12 PM
Calcium	565	5.00	15.0		mg/L	50	05/05/15 05:16 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:12 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:12 PM
Magnesium	163	5.00	15.0		mg/L	50	05/05/15 05:16 PM
Potassium	7.00	0.100	0.300		mg/L	1	05/05/15 08:12 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:12 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:12 PM
Sodium	205	5.00	15.0		mg/L	50	05/05/15 05:16 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	245	30.0	100		mg/L	100	05/02/15 11:59 AM
Sulfate	1780	100	300		mg/L	100	05/02/15 11:59 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	577	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:09 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:09 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:09 PM
Alkalinity, Total (As CaCO3)	577	20.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:09 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	7420	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-07
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-09
Project No:	6-0141	**Collection Date:**	04/21/15 01:31 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 07:27 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 07:27 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 07:27 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 07:27 PM
Surr: a,a,a-Trifluorotoluene	96.4	0	87-113		%REC	1	04/27/15 07:27 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:22 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00277	0.00200	0.00500	J	mg/L	1	05/05/15 08:14 PM
Barium	0.0163	0.00300	0.0100		mg/L	1	05/05/15 08:14 PM
Cadmium	0.000451	0.000300	0.00100	J	mg/L	1	05/05/15 08:14 PM
Calcium	574	5.00	15.0		mg/L	50	05/05/15 05:18 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:14 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:14 PM
Magnesium	117	5.00	15.0		mg/L	50	05/05/15 05:18 PM
Potassium	3.57	0.100	0.300		mg/L	1	05/05/15 08:14 PM
Selenium	0.00427	0.00200	0.00500	J	mg/L	1	05/05/15 08:14 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:14 PM
Sodium	123	5.00	15.0		mg/L	50	05/05/15 05:18 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	209	30.0	100		mg/L	100	05/02/15 12:13 PM
Sulfate	1690	100	300		mg/L	100	05/02/15 12:13 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	365	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:20 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:20 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:20 PM
Alkalinity, Total (As CaCO3)	365	20.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:20 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3480	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	P-03
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-10
Project No:	6-0141	**Collection Date:**	04/21/15 02:06 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.00650	0.000800	0.00200		mg/L	1	04/27/15 07:50 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 07:50 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 07:50 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 07:50 PM
Surr: a,a,a-Trifluorotoluene	96.7	0	87-113		%REC	1	04/27/15 07:50 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:24 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:16 PM
Barium	0.0206	0.00300	0.0100		mg/L	1	05/05/15 08:16 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:16 PM
Calcium	521	5.00	15.0		mg/L	50	05/05/15 05:20 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:16 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:16 PM
Magnesium	154	5.00	15.0		mg/L	50	05/05/15 05:20 PM
Potassium	3.09	0.100	0.300		mg/L	1	05/05/15 08:16 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:16 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:16 PM
Sodium	83.0	5.00	15.0		mg/L	50	05/05/15 05:20 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	131	30.0	100		mg/L	100	05/02/15 12:28 PM
Sulfate	1790	100	300		mg/L	100	05/02/15 12:28 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	277	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:28 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:28 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:28 PM
Alkalinity, Total (As CaCO3)	277	20.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:28 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3360	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	P-02
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-11
Project No:	6-0141	**Collection Date:**	04/21/15 02:18 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 08:58 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 08:58 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 08:58 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 08:58 PM
Surr: a,a,a-Trifluorotoluene	97.5	0	87-113		%REC	1	04/27/15 08:58 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:31 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:28 PM
Barium	0.0164	0.00300	0.0100		mg/L	1	05/05/15 08:28 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:28 PM
Calcium	549	5.00	15.0		mg/L	50	05/05/15 05:38 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:28 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:28 PM
Magnesium	203	5.00	15.0		mg/L	50	05/05/15 05:38 PM
Potassium	4.60	0.100	0.300		mg/L	1	05/05/15 08:28 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:28 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:28 PM
Sodium	40.3	5.00	15.0		mg/L	50	05/05/15 05:38 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	67.8	30.0	100	J	mg/L	100	05/02/15 12:57 PM
Sulfate	1860	100	300		mg/L	100	05/02/15 12:57 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	458	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:40 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:40 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:40 PM
Alkalinity, Total (As CaCO3)	458	20.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3360	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-17
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-12
Project No:	6-0141	**Collection Date:**	04/21/15 02:56 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 09:21 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 09:21 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 09:21 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 09:21 PM
Surr: a,a,a-Trifluorotoluene	96.3	0	87-113		%REC	1	04/27/15 09:21 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:34 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00353	0.00200	0.00500	J	mg/L	1	05/05/15 08:30 PM
Barium	0.0165	0.00300	0.0100		mg/L	1	05/05/15 08:30 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:30 PM
Calcium	517	5.00	15.0		mg/L	50	05/05/15 05:40 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:30 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:30 PM
Magnesium	156	5.00	15.0		mg/L	50	05/05/15 05:40 PM
Potassium	7.41	0.100	0.300		mg/L	1	05/05/15 08:30 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:30 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:30 PM
Sodium	140	5.00	15.0		mg/L	50	05/05/15 05:40 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	166	30.0	100		mg/L	100	05/02/15 01:11 PM
Sulfate	1790	100	300		mg/L	100	05/02/15 01:11 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	328	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:50 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:50 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:50 PM
Alkalinity, Total (As CaCO3)	328	20.0	20.0		mg/L @ pH 4.54	1	04/24/15 01:50 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3070	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-16
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-13
Project No:	6-0141	**Collection Date:**	04/21/15 03:48 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 09:44 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 09:44 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 09:44 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 09:44 PM
Surr: a,a,a-Trifluorotoluene	96.0	0	87-113		%REC	1	04/27/15 09:44 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:36 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00223	0.00200	0.00500	J	mg/L	1	05/05/15 08:32 PM
Barium	0.00920	0.00300	0.0100	J	mg/L	1	05/05/15 08:32 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:32 PM
Calcium	500	5.00	15.0		mg/L	50	05/05/15 05:42 PM
Chromium	0.0155	0.00200	0.00500		mg/L	1	05/05/15 08:32 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:32 PM
Magnesium	262	5.00	15.0		mg/L	50	05/05/15 05:42 PM
Potassium	8.99	0.100	0.300		mg/L	1	05/05/15 08:32 PM
Selenium	0.00580	0.00200	0.00500		mg/L	1	05/05/15 08:32 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:32 PM
Sodium	245	5.00	15.0		mg/L	50	05/05/15 05:42 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	371	30.0	100		mg/L	100	05/02/15 01:26 PM
Sulfate	2240	100	300		mg/L	100	05/02/15 01:26 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	68.1	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:55 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:55 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:55 PM
Alkalinity, Total (As CaCO3)	68.1	20.0	20.0		mg/L @ pH 4.53	1	04/24/15 01:55 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	5210	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-15
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-14
Project No:	6-0141	**Collection Date:**	04/21/15 04:38 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/27/15 10:06 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 10:06 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 10:06 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 10:06 PM
Surr: a,a,a-Trifluorotoluene	97.1	0	87-113		%REC	1	04/27/15 10:06 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:38 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00611	0.00200	0.00500		mg/L	1	05/05/15 08:45 PM
Barium	0.0145	0.00300	0.0100		mg/L	1	05/05/15 08:45 PM
Cadmium	0.000516	0.000300	0.00100	J	mg/L	1	05/05/15 08:45 PM
Calcium	424	10.0	30.0		mg/L	100	05/05/15 05:44 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:45 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:45 PM
Magnesium	4940	100	300		mg/L	1000	05/05/15 07:01 PM
Potassium	173	10.0	30.0		mg/L	100	05/05/15 05:44 PM
Selenium	0.00459	0.00200	0.00500	J	mg/L	1	05/05/15 08:45 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:45 PM
Sodium	6280	100	300		mg/L	1000	05/05/15 07:01 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	2110	30.0	100		mg/L	100	05/02/15 01:41 PM
Sulfate	29100	1000	3000		mg/L	1000	05/02/15 05:02 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	881	10.0	20.0		mg/L @ pH 4.25	1	04/24/15 02:03 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.25	1	04/24/15 02:03 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.25	1	04/24/15 02:03 PM
Alkalinity, Total (As CaCO3)	881	20.0	20.0		mg/L @ pH 4.25	1	04/24/15 02:03 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	47800	1000	1000		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-03
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-15
Project No:	6-0141	**Collection Date:**	04/22/15 07:54 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	2.52	0.0160	0.0400		mg/L	20	04/28/15 11:31 AM
Ethylbenzene	0.273	0.0200	0.0600		mg/L	10	04/28/15 10:45 AM
Toluene	<0.0600	0.0200	0.0600		mg/L	10	04/28/15 10:45 AM
Xylenes, Total	0.296	0.0300	0.0900		mg/L	10	04/28/15 10:45 AM
Surr: a,a,a-Trifluorotoluene	101	0	87-113		%REC	10	04/28/15 10:45 AM
Surr: a,a,a-Trifluorotoluene	99.4	0	87-113		%REC	20	04/28/15 11:31 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:40 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00431	0.00200	0.00500	J	mg/L	1	05/05/15 08:34 PM
Barium	0.0261	0.00300	0.0100		mg/L	1	05/05/15 08:34 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:34 PM
Calcium	428	5.00	15.0		mg/L	50	05/05/15 05:46 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:34 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:34 PM
Magnesium	98.0	5.00	15.0		mg/L	50	05/05/15 05:46 PM
Potassium	11.3	0.100	0.300		mg/L	1	05/05/15 08:34 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:34 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:34 PM
Sodium	110	5.00	15.0		mg/L	50	05/05/15 05:46 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	118	30.0	100		mg/L	100	05/02/15 01:55 PM
Sulfate	1110	100	300		mg/L	100	05/02/15 01:55 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	563	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 02:19 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 02:19 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/24/15 02:19 PM
Alkalinity, Total (As CaCO3)	563	20.0	20.0		mg/L @ pH 4.54	1	04/24/15 02:19 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	2460	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-03
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-16
Project No:	6-0141	**Collection Date:**	04/22/15 08:26 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.00200	0.000800	0.00200	J	mg/L	1	04/27/15 10:52 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 10:52 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/27/15 10:52 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/27/15 10:52 PM
Surr: a,a,a-Trifluorotoluene	97.4	0	87-113		%REC	1	04/27/15 10:52 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:43 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00218	0.00200	0.00500	J	mg/L	1	05/05/15 08:35 PM
Barium	0.0103	0.00300	0.0100		mg/L	1	05/05/15 08:35 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:35 PM
Calcium	496	5.00	15.0		mg/L	50	05/05/15 05:48 PM
Chromium	0.0328	0.00200	0.00500		mg/L	1	05/05/15 08:35 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:35 PM
Magnesium	131	5.00	15.0		mg/L	50	05/05/15 05:48 PM
Potassium	5.59	0.100	0.300		mg/L	1	05/05/15 08:35 PM
Selenium	0.00336	0.00200	0.00500	J	mg/L	1	05/05/15 08:35 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:35 PM
Sodium	80.3	5.00	15.0		mg/L	50	05/05/15 05:48 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	65.5	30.0	100	J	mg/L	100	05/02/15 02:10 PM
Sulfate	1790	100	300		mg/L	100	05/02/15 02:10 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	186	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 02:37 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 02:37 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/24/15 02:37 PM
Alkalinity, Total (As CaCO3)	186	20.0	20.0		mg/L @ pH 4.53	1	04/24/15 02:37 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	5280	50.0	50.0		mg/L	1	04/28/15 08:50 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-11
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-17
Project No:	6-0141	**Collection Date:**	04/22/15 09:11 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	27.3	0.160	0.400		mg/L	200	04/28/15 12:39 PM
Ethylbenzene	0.774	0.0400	0.120		mg/L	20	04/28/15 11:08 AM
Toluene	<0.120	0.0400	0.120		mg/L	20	04/28/15 11:08 AM
Xylenes, Total	1.43	0.0600	0.180		mg/L	20	04/28/15 11:08 AM
Surr: a,a,a-Trifluorotoluene	98.4	0	87-113		%REC	200	04/28/15 12:39 PM
Surr: a,a,a-Trifluorotoluene	103	0	87-113		%REC	20	04/28/15 11:08 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:45 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:37 PM
Barium	0.0153	0.00300	0.0100		mg/L	1	05/05/15 08:37 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:37 PM
Calcium	616	5.00	15.0		mg/L	50	05/05/15 05:50 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:37 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:37 PM
Magnesium	240	5.00	15.0		mg/L	50	05/05/15 05:50 PM
Potassium	3.94	0.100	0.300		mg/L	1	05/05/15 08:37 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:37 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:37 PM
Sodium	101	5.00	15.0		mg/L	50	05/05/15 05:50 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	86.6	30.0	100	J	mg/L	100	05/02/15 02:30 PM
Sulfate	1850	100	300		mg/L	100	05/02/15 02:30 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	803	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:29 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:29 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:29 AM
Alkalinity, Total (As CaCO3)	803	20.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:29 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3720	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-22
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-18
Project No:	6-0141	**Collection Date:**	04/22/15 09:41 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	4.48	0.160	0.400		mg/L	200	04/27/15 11:38 PM
Ethylbenzene	<1.20	0.400	1.20		mg/L	200	04/27/15 11:38 PM
Toluene	<1.20	0.400	1.20		mg/L	200	04/27/15 11:38 PM
Xylenes, Total	<1.80	0.600	1.80		mg/L	200	04/27/15 11:38 PM
Surr: a,a,a-Trifluorotoluene	97.9	0	87-113		%REC	200	04/27/15 11:38 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:47 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:39 PM
Barium	0.0187	0.00300	0.0100		mg/L	1	05/05/15 08:39 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:39 PM
Calcium	564	5.00	15.0		mg/L	50	05/05/15 05:52 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:39 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:39 PM
Magnesium	178	5.00	15.0		mg/L	50	05/05/15 05:52 PM
Potassium	4.06	0.100	0.300		mg/L	1	05/05/15 08:39 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:39 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:39 PM
Sodium	52.7	5.00	15.0		mg/L	50	05/05/15 05:52 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	43.4	30.0	100	J	mg/L	100	05/02/15 02:44 PM
Sulfate	1750	100	300		mg/L	100	05/02/15 02:44 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	563	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:46 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:46 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:46 AM
Alkalinity, Total (As CaCO3)	563	20.0	20.0		mg/L @ pH 4.54	1	04/28/15 11:46 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3280	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-18
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-19
Project No:	6-0141	**Collection Date:**	04/22/15 10:01 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	8.24	0.0800	0.200		mg/L	100	04/28/15
Ethylbenzene	<0.600	0.200	0.600		mg/L	100	04/28/15
Toluene	<0.600	0.200	0.600		mg/L	100	04/28/15
Xylenes, Total	<0.900	0.300	0.900		mg/L	100	04/28/15
Surr: a,a,a-Trifluorotoluene	97.8	0	87-113		%REC	100	04/28/15
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:49 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:41 PM
Barium	0.0145	0.00300	0.0100		mg/L	1	05/05/15 08:41 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:41 PM
Calcium	556	5.00	15.0		mg/L	50	05/05/15 05:54 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:41 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:41 PM
Magnesium	218	5.00	15.0		mg/L	50	05/05/15 05:54 PM
Potassium	3.14	0.100	0.300		mg/L	1	05/05/15 08:41 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:41 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:41 PM
Sodium	80.0	5.00	15.0		mg/L	50	05/05/15 05:54 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	71.2	30.0	100	J	mg/L	100	05/02/15 02:59 PM
Sulfate	1840	100	300		mg/L	100	05/02/15 02:59 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	652	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:06 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:06 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:06 PM
Alkalinity, Total (As CaCO3)	652	20.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:06 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3350	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-03-03
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-20
Project No:	6-0141	**Collection Date:**	04/22/15 10:41 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	2.33	0.0400	0.100		mg/L	50	04/28/15 12:23 AM
Ethylbenzene	<0.300	0.100	0.300		mg/L	50	04/28/15 12:23 AM
Toluene	<0.300	0.100	0.300		mg/L	50	04/28/15 12:23 AM
Xylenes, Total	0.246	0.150	0.450	J	mg/L	50	04/28/15 12:23 AM
Surr: a,a,a-Trifluorotoluene	98.0	0	87-113		%REC	50	04/28/15 12:23 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 11:52 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.0128	0.00200	0.00500		mg/L	1	05/05/15 08:43 PM
Barium	0.0237	0.00300	0.0100		mg/L	1	05/05/15 08:43 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:43 PM
Calcium	501	5.00	15.0		mg/L	50	05/05/15 05:56 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:43 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:43 PM
Magnesium	105	5.00	15.0		mg/L	50	05/05/15 05:56 PM
Potassium	9.73	0.100	0.300		mg/L	1	05/05/15 08:43 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:43 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:43 PM
Sodium	212	5.00	15.0		mg/L	50	05/05/15 05:56 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	261	30.0	100		mg/L	100	05/02/15 03:14 PM
Sulfate	1200	100	300		mg/L	100	05/02/15 03:14 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	751	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:25 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:25 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:25 PM
Alkalinity, Total (As CaCO3)	751	20.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:25 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3000	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-04
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-21
Project No:	6-0141	**Collection Date:**	04/22/15 11:10 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/28/15 09:23 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/28/15 09:23 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/28/15 09:23 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/28/15 09:23 PM
Surr: a,a,a-Trifluorotoluene	97.3	0	87-113		%REC	1	04/28/15 09:23 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 12:40 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:59 PM
Barium	0.0195	0.00300	0.0100		mg/L	1	05/05/15 08:59 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:59 PM
Calcium	495	5.00	15.0		mg/L	50	05/05/15 06:22 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:59 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:59 PM
Magnesium	96.0	5.00	15.0		mg/L	50	05/05/15 06:22 PM
Potassium	11.1	0.100	0.300		mg/L	1	05/05/15 08:59 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:59 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:59 PM
Sodium	62.9	5.00	15.0		mg/L	50	05/05/15 06:22 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	86.2	30.0	100	J	mg/L	100	05/02/15 06:17 PM
Sulfate	1710	100	300		mg/L	100	05/02/15 06:17 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	274	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 12:33 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 12:33 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 12:33 PM
Alkalinity, Total (As CaCO3)	274	20.0	20.0		mg/L @ pH 4.53	1	04/28/15 12:33 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3180	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-12
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-22
Project No:	6-0141	**Collection Date:**	04/22/15 11:51 AM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	04/28/15 09:46 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/28/15 09:46 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/28/15 09:46 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/28/15 09:46 PM
Surr: a,a,a-Trifluorotoluene	97.9	0	87-113		%REC	1	04/28/15 09:46 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 12:28 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00365	0.00200	0.00500	J	mg/L	1	05/05/15 09:01 PM
Barium	0.0152	0.00300	0.0100		mg/L	1	05/05/15 09:01 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 09:01 PM
Calcium	525	5.00	15.0		mg/L	50	05/05/15 06:24 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 09:01 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 09:01 PM
Magnesium	135	5.00	15.0		mg/L	50	05/05/15 06:24 PM
Potassium	8.90	0.100	0.300		mg/L	1	05/05/15 09:01 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 09:01 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 09:01 PM
Sodium	244	5.00	15.0		mg/L	50	05/05/15 06:24 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	138	30.0	100		mg/L	100	05/02/15 06:31 PM
Sulfate	1910	100	300		mg/L	100	05/02/15 06:31 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	497	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:47 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:47 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:47 PM
Alkalinity, Total (As CaCO3)	497	20.0	20.0		mg/L @ pH 4.54	1	04/28/15 12:47 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	4510	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-20
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-23
Project No:	6-0141	**Collection Date:**	04/22/15 12:29 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.665	0.0200	0.0500		mg/L	25	04/28/15 10:08 PM
Ethylbenzene	<0.150	0.0500	0.150		mg/L	25	04/28/15 10:08 PM
Toluene	<0.150	0.0500	0.150		mg/L	25	04/28/15 10:08 PM
Xylenes, Total	<0.225	0.0750	0.225		mg/L	25	04/28/15 10:08 PM
Surr: a,a,a-Trifluorotoluene	98.7	0	87-113		%REC	25	04/28/15 10:08 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 12:42 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.0106	0.00200	0.00500		mg/L	1	05/05/15 09:03 PM
Barium	0.0126	0.00300	0.0100		mg/L	1	05/05/15 09:03 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 09:03 PM
Calcium	537	5.00	15.0		mg/L	50	05/05/15 06:26 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 09:03 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 09:03 PM
Magnesium	138	5.00	15.0		mg/L	50	05/05/15 06:26 PM
Potassium	5.07	0.100	0.300		mg/L	1	05/05/15 09:03 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 09:03 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 09:03 PM
Sodium	279	5.00	15.0		mg/L	50	05/05/15 06:26 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	165	30.0	100		mg/L	100	05/02/15 06:46 PM
Sulfate	1900	100	300		mg/L	100	05/02/15 06:46 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	558	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:02 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:02 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:02 PM
Alkalinity, Total (As CaCO3)	558	20.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:02 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3470	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-12
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-24
Project No:	6-0141	**Collection Date:**	04/22/15 01:03 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.00162	0.000800	0.00200	J	mg/L	1	04/28/15 10:31 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	04/28/15 10:31 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	04/28/15 10:31 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	04/28/15 10:31 PM
Surr: a,a,a-Trifluorotoluene	97.5	0	87-113		%REC	1	04/28/15 10:31 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 12:44 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:55 PM
Barium	0.0185	0.00300	0.0100		mg/L	1	05/05/15 08:55 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 08:55 PM
Calcium	529	5.00	15.0		mg/L	50	05/05/15 06:16 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:55 PM
Lead	0.000387	0.000300	0.00100	J	mg/L	1	05/05/15 08:55 PM
Magnesium	249	5.00	15.0		mg/L	50	05/05/15 06:16 PM
Potassium	5.68	0.100	0.300		mg/L	1	05/05/15 08:55 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 08:55 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 08:55 PM
Sodium	93.6	5.00	15.0		mg/L	50	05/05/15 06:16 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	86.8	30.0	100	J	mg/L	100	05/02/15 07:01 PM
Sulfate	2090	100	300		mg/L	100	05/02/15 07:01 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	497	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:17 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:17 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:17 PM
Alkalinity, Total (As CaCO3)	497	20.0	20.0		mg/L @ pH 4.53	1	04/28/15 01:17 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3650	50.0	50.0		mg/L	1	04/30/15 09:00 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: *24-Feb-16*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-16
Project:	Artesia, NM Abo Empire Gas Plant	**Lab ID:**	1504245-25
Project No:	6-0141	**Collection Date:**	04/22/15 01:38 PM
Lab Order:	1504245	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	7.98	0.0800	0.200		mg/L	100	04/29/15 11:18 AM
Ethylbenzene	0.715	0.0500	0.150		mg/L	25	04/28/15 10:54 PM
Toluene	0.836	0.0500	0.150		mg/L	25	04/28/15 10:54 PM
Xylenes, Total	0.513	0.0750	0.225		mg/L	25	04/28/15 10:54 PM
Surr: a,a,a-Trifluorotoluene	98.4	0	87-113		%REC	100	04/29/15 11:18 AM
Surr: a,a,a-Trifluorotoluene	98.9	0	87-113		%REC	25	04/28/15 10:54 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **SM**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	05/05/15 12:47 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00473	0.00200	0.00500	J	mg/L	1	05/05/15 09:05 PM
Barium	0.0263	0.00300	0.0100		mg/L	1	05/05/15 09:05 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 09:05 PM
Calcium	605	5.00	15.0		mg/L	50	05/05/15 06:28 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 09:05 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	05/05/15 09:05 PM
Magnesium	96.8	5.00	15.0		mg/L	50	05/05/15 06:28 PM
Potassium	16.4	0.100	0.300		mg/L	1	05/05/15 09:05 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	05/05/15 09:05 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	05/05/15 09:05 PM
Sodium	277	5.00	15.0		mg/L	50	05/05/15 06:28 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	258	30.0	100		mg/L	100	05/02/15 07:15 PM
Sulfate	1690	100	300		mg/L	100	05/02/15 07:15 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	680	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 01:35 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 01:35 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	04/28/15 01:35 PM
Alkalinity, Total (As CaCO3)	680	20.0	20.0		mg/L @ pH 4.54	1	04/28/15 01:35 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **PT**
Total Dissolved Solids (Residue, Filterable)	3440	50.0	50.0		mg/L	1	04/30/15 09:00 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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_150427B

The QC data in batch 69310 applies to the following samples: 1504245-01A, 1504245-02A, 1504245-03A, 1504245-04A, 1504245-05A, 1504245-06A, 1504245-07A, 1504245-08A, 1504245-09A, 1504245-10A, 1504245-11A, 1504245-12A, 1504245-13A, 1504245-14A, 1504245-15A, 1504245-16A, 1504245-17A, 1504245-18A, 1504245-19A, 1504245-20A

Sample ID **LCS-69310** Batch ID: **69310** TestNo: **SW8021B** Units: **mg/L**
SampType: **LCS** Run ID: **GC8_150427B** Analysis Date: **4/27/2015 10:49:54 AM** Prep Date: **4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0478	0.00200	0.0464	0	103	81	125			
Toluene	0.0475	0.00600	0.0464	0	102	84	123			
Ethylbenzene	0.0480	0.00600	0.0464	0	103	83	119			
Xylenes, Total	0.149	0.00900	0.139	0	107	81	117			
Surr: a,a,a-Trifluorotoluene	194		200.0		97.2	87	113			

Sample ID **MB-69310** Batch ID: **69310** TestNo: **SW8021B** Units: **mg/L**
SampType: **MBLK** Run ID: **GC8_150427B** Analysis Date: **4/27/2015 11:35:20 AM** Prep Date: **4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Toluene	<0.00600	0.00600								
Ethylbenzene	<0.00600	0.00600								
Xylenes, Total	<0.00900	0.00900								
Surr: a,a,a-Trifluorotoluene	194		200.0		96.8	87	113			

Sample ID **1504245-03AMS** Batch ID: **69310** TestNo: **SW8021B** Units: **mg/L**
SampType: **MS** Run ID: **GC8_150427B** Analysis Date: **4/27/2015 4:49:08 PM** Prep Date: **4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0464	0.00200	0.0464	0	100	81	125			
Toluene	0.0454	0.00600	0.0464	0	97.9	84	123			
Ethylbenzene	0.0452	0.00600	0.0464	0	97.4	83	119			
Xylenes, Total	0.137	0.00900	0.139	0	98.4	81	117			
Surr: a,a,a-Trifluorotoluene	193		200.0		96.7	87	113			

Sample ID **1504245-03AMSD** Batch ID: **69310** TestNo: **SW8021B** Units: **mg/L**
SampType: **MSD** Run ID: **GC8_150427B** Analysis Date: **4/27/2015 5:11:50 PM** Prep Date: **4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0454	0.00200	0.0464	0	97.9	81	125	2.27	20	
Toluene	0.0441	0.00600	0.0464	0	95.1	84	123	2.88	20	
Ethylbenzene	0.0441	0.00600	0.0464	0	95.0	83	119	2.40	20	
Xylenes, Total	0.134	0.00900	0.139	0	96.2	81	117	2.18	20	
Surr: a,a,a-Trifluorotoluene	193		200.0		96.5	87	113	0	0	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_150427B

Sample ID **MB-150428**	Batch ID: **69310**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC8_150427B**	Analysis Date: **4/28/2015 10:00:09 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Toluene	<0.00600	0.00600								
Ethylbenzene	<0.00600	0.00600								
Xylenes, Total	<0.00900	0.00900								
Surr: a,a,a-Trifluorotoluene	198		200.0		99.1	87	113			

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_150427B

Sample ID **ICV-150427**	Batch ID: **R79358**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_150427B**	Analysis Date: **4/27/2015 10:04:18 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0949	0.00200	0.0928	0	102	80	120			
Toluene	0.0953	0.00600	0.0928	0	103	80	120			
Ethylbenzene	0.0967	0.00600	0.0928	0	104	80	120			
Xylenes, Total	0.298	0.00900	0.278	0	107	80	120			
Surr: a,a,a-Trifluorotoluene	196		200.0		97.8	87	113			

Sample ID **CCV1-150427**	Batch ID: **R79358**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_150427B**	Analysis Date: **4/27/2015 2:12:36 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0467	0.00200	0.0464	0	101	80	120			
Toluene	0.0461	0.00600	0.0464	0	99.4	80	120			
Ethylbenzene	0.0469	0.00600	0.0464	0	101	80	120			
Xylenes, Total	0.144	0.00900	0.139	0	104	80	120			
Surr: a,a,a-Trifluorotoluene	195		200.0		97.6	87	113			

Sample ID **CCV2-150427**	Batch ID: **R79358**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_150427B**	Analysis Date: **4/27/2015 8:36:03 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0472	0.00200	0.0464	0	102	80	120			
Toluene	0.0468	0.00600	0.0464	0	101	80	120			
Ethylbenzene	0.0471	0.00600	0.0464	0	102	80	120			
Xylenes, Total	0.146	0.00900	0.139	0	105	80	120			
Surr: a,a,a-Trifluorotoluene	196		200.0		98.0	87	113			

Sample ID **CCV3-150427**	Batch ID: **R79358**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_150427B**	Analysis Date: **4/28/2015 1:09:04 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0475	0.00200	0.0464	0	102	80	120			
Toluene	0.0467	0.00600	0.0464	0	101	80	120			
Ethylbenzene	0.0473	0.00600	0.0464	0	102	80	120			
Xylenes, Total	0.146	0.00900	0.139	0	105	80	120			
Surr: a,a,a-Trifluorotoluene	196		200.0		98.2	87	113			

Sample ID **ICV-150428**	Batch ID: **R79358**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_150427B**	Analysis Date: **4/28/2015 9:37:27 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0939	0.00200	0.0928	0	101	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_150427B

Sample ID **ICV-150428**	Batch ID: **R79358**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_150427B**	Analysis Date: **4/28/2015 9:37:27 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	0.0938	0.00600	0.0928	0	101	80	120			
Ethylbenzene	0.0957	0.00600	0.0928	0	103	80	120			
Xylenes, Total	0.294	0.00900	0.278	0	106	80	120			
Surr: a,a,a-Trifluorotoluene	198		200.0		98.9	87	113			

Sample ID **CCV4-150428**	Batch ID: **R79358**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_150427B**	Analysis Date: **4/28/2015 1:24:43 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0472	0.00200	0.0464	0	102	80	120			
Toluene	0.0465	0.00600	0.0464	0	100	80	120			
Ethylbenzene	0.0469	0.00600	0.0464	0	101	80	120			
Xylenes, Total	0.145	0.00900	0.139	0	105	80	120			
Surr: a,a,a-Trifluorotoluene	195		200.0		97.7	87	113			

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_150428B

The QC data in batch 69348 applies to the following samples: 1504245-21A, 1504245-22A, 1504245-23A, 1504245-24A, 1504245-25A

Sample ID **LCS-69348**	Batch ID: **69348**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC8_150428B**	Analysis Date: **4/28/2015 6:44:55 PM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0474	0.00200	0.0464	0	102	81	125			
Toluene	0.0469	0.00600	0.0464	0	101	84	123			
Ethylbenzene	0.0476	0.00600	0.0464	0	103	83	119			
Xylenes, Total	0.147	0.00900	0.139	0	106	81	117			
Surr: a,a,a-Trifluorotoluene	197		200.0		98.3	87	113			

Sample ID **MB-69348**	Batch ID: **69348**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC8_150428B**	Analysis Date: **4/28/2015 7:30:12 PM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Toluene	<0.00600	0.00600								
Ethylbenzene	<0.00600	0.00600								
Xylenes, Total	<0.00900	0.00900								
Surr: a,a,a-Trifluorotoluene	198		200.0		99.1	87	113			

Sample ID **1504261-06AMS**	Batch ID: **69348**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MS**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 12:01:57 AM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0478	0.00200	0.0464	0	103	81	125			
Toluene	0.0471	0.00600	0.0464	0	101	84	123			
Ethylbenzene	0.0475	0.00600	0.0464	0	102	83	119			
Xylenes, Total	0.146	0.00900	0.139	0	105	81	117			
Surr: a,a,a-Trifluorotoluene	197		200.0		98.4	87	113			

Sample ID **1504261-06AMSD**	Batch ID: **69348**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 12:24:39 AM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0466	0.00200	0.0464	0	100	81	125	2.55	20	
Toluene	0.0460	0.00600	0.0464	0	99.2	84	123	2.28	20	
Ethylbenzene	0.0466	0.00600	0.0464	0	100	83	119	2.06	20	
Xylenes, Total	0.143	0.00900	0.139	0	103	81	117	2.05	20	
Surr: a,a,a-Trifluorotoluene	196		200.0		97.9	87	113	0	0	

Sample ID **MB-150429**	Batch ID: **69348**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 10:33:32 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_150428B

Sample ID **MB-150429**	Batch ID: **69348**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 10:33:32 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Surr: a,a,a-Trifluorotoluene	198		200.0		99.2	87	113			

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_150428B

Sample ID **ICV-150428**	Batch ID: **R79371**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_150428B**	Analysis Date: **4/28/2015 5:59:47 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0939	0.00200	0.0928	0	101	80	120			
Toluene	0.0942	0.00600	0.0928	0	102	80	120			
Ethylbenzene	0.0957	0.00600	0.0928	0	103	80	120			
Xylenes, Total	0.294	0.00900	0.278	0	106	80	120			
Surr: a,a,a-Trifluorotoluene	197		200.0		98.5	87	113			

Sample ID **CCV2-150428**	Batch ID: **R79371**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 3:48:08 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0486	0.00200	0.0464	0	105	80	120			
Toluene	0.0480	0.00600	0.0464	0	103	80	120			
Ethylbenzene	0.0487	0.00600	0.0464	0	105	80	120			
Xylenes, Total	0.150	0.00900	0.139	0	108	80	120			
Surr: a,a,a-Trifluorotoluene	195		200.0		97.6	87	113			

Sample ID **ICV-150429**	Batch ID: **R79371**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 10:10:49 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0935	0.00200	0.0928	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	198		200.0		99.1	87	113			

Sample ID **CCV3-150429**	Batch ID: **R79371**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 12:04:31 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0471	0.00200	0.0464	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	197		200.0		98.7	87	113			

Sample ID **CCV1-150428**	Batch ID: **R79371**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_150428B**	Analysis Date: **4/29/2015 1:09:50 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0468	0.00200	0.0464	0	101	80	120			
Toluene	0.0460	0.00600	0.0464	0	99.2	80	120			
Ethylbenzene	0.0466	0.00600	0.0464	0	101	80	120			
Xylenes, Total	0.143	0.00900	0.139	0	103	80	120			
Surr: a,a,a-Trifluorotoluene	197		200.0		98.4	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_150505C

The QC data in batch 69399 applies to the following samples: 1504245-01B, 1504245-02B, 1504245-03B, 1504245-04B, 1504245-05B, 1504245-06B, 1504245-07B, 1504245-08B, 1504245-09B, 1504245-10B, 1504245-11B, 1504245-12B, 1504245-13B, 1504245-14B, 1504245-15B, 1504245-16B, 1504245-17B, 1504245-18B, 1504245-19B, 1504245-20B

Sample ID **FB-150427** Batch ID: **69399** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_150505C** Analysis Date: **5/5/2015 10:43:18 AM** Prep Date: **4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000200	0.000200								

Sample ID **FB-150428** Batch ID: **69399** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_150505C** Analysis Date: **5/5/2015 10:45:34 AM** Prep Date: **4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000200	0.000200								

Sample ID **LCS-69399** Batch ID: **69399** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCS** Run ID: **CETAC2_HG_150505C** Analysis Date: **5/5/2015 10:50:57 AM** Prep Date: **4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00217	0.000200	0.00200	0	108	85	115			

Sample ID **LCSD-69399** Batch ID: **69399** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCSD** Run ID: **CETAC2_HG_150505C** Analysis Date: **5/5/2015 10:53:13 AM** Prep Date: **4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00218	0.000200	0.00200	0	109	85	115	0.460	15	

Sample ID **1504245-04B SD** Batch ID: **69399** TestNo: **SW7470A** Units: **mg/L**
SampType: **SD** Run ID: **CETAC2_HG_150505C** Analysis Date: **5/5/2015 10:57:46 AM** Prep Date: **4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00100	0.00100	0	0				0	10	

Sample ID **1504245-04B PDS** Batch ID: **69399** TestNo: **SW7470A** Units: **mg/L**
SampType: **PDS** Run ID: **CETAC2_HG_150505C** Analysis Date: **5/5/2015 11:00:01 AM** Prep Date: **4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00254	0.000200	0.00250	0	102	85	115			

Sample ID **1504245-04B MS** Batch ID: **69399** TestNo: **SW7470A** Units: **mg/L**
SampType: **MS** Run ID: **CETAC2_HG_150505C** Analysis Date: **5/5/2015 11:02:16 AM** Prep Date: **4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00228	0.000200	0.00200	0	114	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_150505C

Sample ID	**1504245-04B MSD**	Batch ID:	**69399**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 11:04:32 AM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00227	0.000200	0.00200	0	114	80	120	0.440	15	

The QC data in batch 69399 applies to the following samples: 1504245-01B, 1504245-02B, 1504245-03B, 1504245-04B, 1504245-05B, 1504245-06B, 1504245-07B, 1504245-08B, 1504245-09B, 1504245-10B, 1504245-11B, 1504245-12B, 1504245-13B, 1504245-14B, 1504245-15B, 1504245-16B, 1504245-17B, 1504245-18B, 1504245-19B, 1504245-20B

Sample ID	**MB-69399**	Batch ID:	**69399**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 10:41:01 AM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000200	0.000200								

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_150505C

The QC data in batch 69400 applies to the following samples: 1504245-21B, 1504245-22B, 1504245-23B, 1504245-24B, 1504245-25B

Sample ID	**1504245-22B SD**	Batch ID:	**69400**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**SD**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 12:31:16 PM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00100	0.00100	0	0				0	10	

Sample ID	**1504245-22B PDS**	Batch ID:	**69400**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**PDS**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 12:33:33 PM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00243	0.000200	0.00250	0	97.2	85	115			

Sample ID	**1504245-22B MS**	Batch ID:	**69400**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 12:35:50 PM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00221	0.000200	0.00200	0	110	80	120			

Sample ID	**1504245-22B MSD**	Batch ID:	**69400**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 12:38:07 PM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00222	0.000200	0.00200	0	111	80	120	0.451	15	

The QC data in batch 69400 applies to the following samples: 1504245-21B, 1504245-22B, 1504245-23B, 1504245-24B, 1504245-25B

Sample ID	**MB-69400**	Batch ID:	**69400**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 12:22:08 PM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000200	0.000200								

Sample ID	**LCS-69400**	Batch ID:	**69400**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 12:24:25 PM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00220	0.000200	0.00200	0	110	85	115			

Sample ID	**LCSD-69400**	Batch ID:	**69400**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 12:26:42 PM**	Prep Date:	**4/30/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00219	0.000200	0.00200	0	110	85	115	0.456	15	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_150505C

Sample ID	**ICV-150505**	Batch ID:	**R79439**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 10:36:27 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00425	0.000200	0.00400	0	106	90	110			

Sample ID	**CCV1-150505**	Batch ID:	**R79439**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 11:27:14 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00209	0.000200	0.00200	0	104	90	110			

Sample ID	**CCV2-150505**	Batch ID:	**R79439**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 11:54:33 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00204	0.000200	0.00200	0	102	90	110			

Sample ID	**CCV3-150505**	Batch ID:	**R79439**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_150505C**	Analysis Date:	**5/5/2015 1:01:02 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00209	0.000200	0.00200	0	104	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

The QC data in batch 69423 applies to the following samples: 1504245-01B, 1504245-02B, 1504245-03B, 1504245-04B, 1504245-05B, 1504245-06B, 1504245-07B, 1504245-08B, 1504245-09B, 1504245-10B, 1504245-11B, 1504245-12B, 1504245-13B, 1504245-14B, 1504245-15B, 1504245-16B, 1504245-17B, 1504245-18B, 1504245-19B, 1504245-20B

Sample ID	**MB-69423**	Batch ID:	**69423**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 4:51:00 PM**	Prep Date:	**5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500								
Barium	<0.0100	0.0100								
Cadmium	<0.00100	0.00100								
Calcium	<0.300	0.300								
Chromium	<0.00500	0.00500								
Lead	<0.00100	0.00100								
Magnesium	<0.300	0.300								
Potassium	<0.300	0.300								
Selenium	<0.00500	0.00500								
Silver	<0.00200	0.00200								
Sodium	<0.300	0.300								

Sample ID	**FB-69423**	Batch ID:	**69423**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 4:53:00 PM**	Prep Date:	**5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500	0							
Barium	<0.0100	0.0100	0							
Cadmium	<0.00100	0.00100	0							
Calcium	<0.300	0.300	0							
Chromium	<0.00500	0.00500	0							
Lead	<0.00100	0.00100	0							
Magnesium	<0.300	0.300	0							
Potassium	<0.300	0.300	0							
Selenium	<0.00500	0.00500	0							
Silver	<0.00200	0.00200	0							
Sodium	<0.300	0.300	0							

Sample ID	**LCS-69423**	Batch ID:	**69423**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 4:54:00 PM**	Prep Date:	**5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.205	0.00500	0.200	0	103	80	120			
Barium	0.204	0.0100	0.200	0	102	80	120			
Cadmium	0.206	0.00100	0.200	0	103	80	120			
Calcium	4.96	0.300	5.00	0	99.3	80	120			
Chromium	0.205	0.00500	0.200	0	103	80	120			
Lead	0.202	0.00100	0.200	0	101	80	120			
Magnesium	5.39	0.300	5.00	0	108	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **LCS-69423**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 4:54:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.33	0.300	5.00	0	107	80	120			
Selenium	0.201	0.00500	0.200	0	100	80	120			
Silver	0.206	0.00200	0.200	0	103	80	120			
Sodium	5.41	0.300	5.00	0	108	80	120			

Sample ID **LCSD-69423**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 4:56:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.206	0.00500	0.200	0	103	80	120	0.235	15	
Barium	0.206	0.0100	0.200	0	103	80	120	1.19	15	
Cadmium	0.208	0.00100	0.200	0	104	80	120	1.06	15	
Calcium	4.98	0.300	5.00	0	99.6	80	120	0.354	15	
Chromium	0.207	0.00500	0.200	0	104	80	120	0.960	15	
Lead	0.205	0.00100	0.200	0	102	80	120	1.53	15	
Magnesium	5.40	0.300	5.00	0	108	80	120	0.196	15	
Potassium	5.38	0.300	5.00	0	108	80	120	0.868	15	
Selenium	0.204	0.00500	0.200	0	102	80	120	1.32	15	
Silver	0.209	0.00200	0.200	0	105	80	120	1.79	15	
Sodium	5.47	0.300	5.00	0	109	80	120	1.11	15	

Sample ID **1504245-01B SD**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:02:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	516	75.0	0	530				2.64	10	
Magnesium	134	75.0	0	139				3.12	10	
Sodium	50.5	75.0	0	48.1				4.77	10	

Sample ID **1504245-01B PDS**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:22:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	758	15.0	250	530	91.4	80	120			
Magnesium	395	15.0	250	139	102	80	120			
Sodium	307	15.0	250	48.1	104	80	120			

Sample ID **1504245-01B MS**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:24:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **1504245-01B MS**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:24:00 PM**	Prep Date: **5/4/2015**

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	0.220	0.500	0.200	0	110	80	120			
Cadmium	0.207	0.0500	0.200	0	103	80	120			
Calcium	540	15.0	5.00	530	201	80	120			S
Chromium	0.271	0.250	0.200	0	135	80	120			S
Lead	0.201	0.0500	0.200	0	100	80	120			
Magnesium	145	15.0	5.00	139	135	80	120			S
Potassium	10.8	15.0	5.00	5.49	105	80	120			
Selenium	0.215	0.250	0.200	0	107	80	120			
Silver	0.206	0.100	0.200	0	103	80	120			
Sodium	53.4	15.0	5.00	48.1	105	80	120			

Sample ID **1504245-01B MSD**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:26:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.250	0.200	0	102	80	120	6.28	15	
Barium	0.223	0.500	0.200	0	111	80	120	1.11	15	
Cadmium	0.203	0.0500	0.200	0	102	80	120	1.66	15	
Calcium	545	15.0	5.00	530	314	80	120	1.04	15	S
Chromium	0.271	0.250	0.200	0	135	80	120	0.073	15	S
Lead	0.197	0.0500	0.200	0	98.6	80	120	1.78	15	
Magnesium	147	15.0	5.00	139	161	80	120	0.880	15	S
Potassium	10.7	15.0	5.00	5.49	105	80	120	0.372	15	
Selenium	0.201	0.250	0.200	0	101	80	120	6.61	15	
Silver	0.208	0.100	0.200	0	104	80	120	0.896	15	
Sodium	54.0	15.0	5.00	48.1	118	80	120	1.19	15	

Sample ID **1504245-01B SD**	Batch ID: **69423**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 7:59:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0250	0.0250	0	0				0	10	
Barium	<0.0500	0.0500	0	0.0117				0	10	
Cadmium	<0.00500	0.00500	0	0				0	10	
Chromium	0.0604	0.0250	0	0.0597				1.05	10	
Lead	<0.00500	0.00500	0	0				0	10	
Potassium	4.43	1.50	0	4.47				0.752	10	
Selenium	<0.0250	0.0250	0	0.00311				0	10	
Silver	<0.0100	0.0100	0	0				0	10	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **1504245-01B PDS** Batch ID: **69423** TestNo: **SW6020A** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_150505B** Analysis Date: **5/5/2015 8:18:00 PM** Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.197	0.00500	0.200	0	98.4	80	120			
Barium	0.211	0.0100	0.200	0.0117	99.5	80	120			
Cadmium	0.188	0.00100	0.200	0	93.9	80	120			
Chromium	0.254	0.00500	0.200	0.0597	97.0	80	120			
Lead	0.194	0.00100	0.200	0	96.9	80	120			
Potassium	9.13	0.300	5.00	4.47	93.3	80	120			
Selenium	0.197	0.00500	0.200	0.00311	96.8	80	120			
Silver	0.172	0.00200	0.200	0	86.0	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

The QC data in batch 69431 applies to the following samples: 1504245-21B, 1504245-22B, 1504245-23B, 1504245-24B, 1504245-25B

Sample ID	**MB-69431**	Batch ID:	**69431**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 6:07:00 PM**	Prep Date:	**5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500								
Barium	<0.0100	0.0100								
Cadmium	<0.00100	0.00100								
Calcium	<0.300	0.300								
Chromium	<0.00500	0.00500								
Lead	<0.00100	0.00100								
Magnesium	<0.300	0.300								
Potassium	<0.300	0.300								
Selenium	<0.00500	0.00500								
Silver	<0.00200	0.00200								
Sodium	<0.300	0.300								

Sample ID	**FB-69431**	Batch ID:	**69431**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 6:09:00 PM**	Prep Date:	**5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500	0							
Barium	<0.0100	0.0100	0							
Cadmium	<0.00100	0.00100	0							
Calcium	<0.300	0.300	0							
Chromium	<0.00500	0.00500	0							
Lead	<0.00100	0.00100	0							
Magnesium	<0.300	0.300	0							
Potassium	<0.300	0.300	0							
Selenium	<0.00500	0.00500	0							
Silver	<0.00200	0.00200	0							
Sodium	<0.300	0.300	0							

Sample ID	**LCS-69431**	Batch ID:	**69431**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 6:11:00 PM**	Prep Date:	**5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.205	0.00500	0.200	0	103	80	120			
Barium	0.204	0.0100	0.200	0	102	80	120			
Cadmium	0.207	0.00100	0.200	0	103	80	120			
Calcium	5.12	0.300	5.00	0	102	80	120			
Chromium	0.206	0.00500	0.200	0	103	80	120			
Lead	0.201	0.00100	0.200	0	100	80	120			
Magnesium	5.54	0.300	5.00	0	111	80	120			
Potassium	5.43	0.300	5.00	0	109	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **LCS-69431**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:11:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.203	0.00500	0.200	0	102	80	120			
Silver	0.206	0.00200	0.200	0	103	80	120			
Sodium	5.55	0.300	5.00	0	111	80	120			

Sample ID **LCSD-69431**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:13:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0	102	80	120	0.559	15	
Barium	0.203	0.0100	0.200	0	102	80	120	0.333	15	
Cadmium	0.205	0.00100	0.200	0	102	80	120	0.895	15	
Calcium	5.02	0.300	5.00	0	100	80	120	1.99	15	
Chromium	0.207	0.00500	0.200	0	103	80	120	0.460	15	
Lead	0.197	0.00100	0.200	0	98.7	80	120	1.56	15	
Magnesium	5.41	0.300	5.00	0	108	80	120	2.28	15	
Potassium	5.33	0.300	5.00	0	107	80	120	1.83	15	
Selenium	0.202	0.00500	0.200	0	101	80	120	0.694	15	
Silver	0.207	0.00200	0.200	0	104	80	120	0.529	15	
Sodium	5.45	0.300	5.00	0	109	80	120	1.84	15	

Sample ID **1504245-24B SD**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:18:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	525	75.0	0	529				0.805	10	
Magnesium	247	75.0	0	249				0.717	10	
Sodium	93.3	75.0	0	93.6				0.301	10	

Sample ID **1504245-24B PDS**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:38:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	768	15.0	250	529	95.4	80	120			
Magnesium	504	15.0	250	249	102	80	120			
Sodium	351	15.0	250	93.6	103	80	120			

Sample ID **1504245-24B MS**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:40:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.220	0.250	0.200	0	110	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **1504245-24B MS**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:40:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.229	0.500	0.200	0	115	80	120			
Cadmium	0.208	0.0500	0.200	0	104	80	120			
Calcium	553	15.0	5.00	529	469	80	120			S
Chromium	0.210	0.250	0.200	0	105	80	120			
Lead	0.200	0.0500	0.200	0	99.9	80	120			
Magnesium	260	15.0	5.00	249	207	80	120			S
Potassium	11.7	15.0	5.00	6.37	107	80	120			
Selenium	0.225	0.250	0.200	0	113	80	120			
Silver	0.210	0.100	0.200	0	105	80	120			
Sodium	101	15.0	5.00	93.6	150	80	120			S

Sample ID **1504245-24B MSD**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:42:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.216	0.250	0.200	0	108	80	120	1.93	15	
Barium	0.228	0.500	0.200	0	114	80	120	0.744	15	
Cadmium	0.209	0.0500	0.200	0	104	80	120	0.336	15	
Calcium	548	15.0	5.00	529	365	80	120	0.946	15	S
Chromium	0.206	0.250	0.200	0	103	80	120	1.92	15	
Lead	0.197	0.0500	0.200	0	98.5	80	120	1.36	15	
Magnesium	260	15.0	5.00	249	221	80	120	0.268	15	S
Potassium	11.9	15.0	5.00	6.37	110	80	120	1.28	15	
Selenium	0.221	0.250	0.200	0	110	80	120	2.04	15	
Silver	0.208	0.100	0.200	0	104	80	120	1.00	15	
Sodium	101	15.0	5.00	93.6	140	80	120	0.452	15	S

Sample ID **1504245-24B SD**	Batch ID: **69431**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 8:57:00 PM**	Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0250	0.0250	0	0				0	10	
Barium	0.0177	0.0500	0	0.0185				4.16	10	
Cadmium	<0.00500	0.00500	0	0				0	10	
Chromium	<0.0250	0.0250	0	0				0	10	
Lead	<0.00500	0.00500	0	0.000387				0	10	
Potassium	5.74	1.50	0	5.68				1.01	10	
Selenium	<0.0250	0.0250	0	0				0	10	
Silver	<0.0100	0.0100	0	0				0	10	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **1504245-24B PDS** Batch ID: **69431** TestNo: **SW6020A** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_150505B** Analysis Date: **5/5/2015 9:16:00 PM** Prep Date: **5/4/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.190	0.00500	0.200	0	95.1	80	120			
Barium	0.221	0.0100	0.200	0.0185	101	80	120			
Cadmium	0.188	0.00100	0.200	0	94.1	80	120			
Chromium	0.196	0.00500	0.200	0	98.0	80	120			
Lead	0.194	0.00100	0.200	0.000387	96.9	80	120			
Potassium	10.4	0.300	5.00	5.68	94.2	80	120			
Selenium	0.185	0.00500	0.200	0	92.6	80	120			
Silver	0.177	0.00200	0.200	0	88.4	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID	**ICV2-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 4:39:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0986	0.00500	0.100	0	98.6	90	110			
Barium	0.0986	0.0100	0.100	0	98.6	90	110			
Cadmium	0.0993	0.00100	0.100	0	99.3	90	110			
Calcium	2.36	0.300	2.50	0	94.4	90	110			
Chromium	0.102	0.00500	0.100	0	102	90	110			
Lead	0.0992	0.00100	0.100	0	99.2	90	110			
Magnesium	2.64	0.300	2.50	0	105	90	110			
Potassium	2.62	0.300	2.50	0	105	90	110			
Selenium	0.0957	0.00500	0.100	0	95.7	90	110			
Silver	0.0969	0.00200	0.100	0	96.9	90	110			
Sodium	2.64	0.300	2.50	0	106	90	110			

Sample ID	**ILCVL2-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**LCVL**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 4:43:00 PM**	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	0.00502	0.0100	0.00500	0	100	70	130			
Cadmium	0.00105	0.00100	0.00100	0	105	70	130			
Calcium	0.0964	0.300	0.100	0	96.4	70	130			
Chromium	0.00528	0.00500	0.00500	0	106	70	130			
Lead	0.00102	0.00100	0.00100	0	102	70	130			
Magnesium	0.102	0.300	0.100	0	102	70	130			
Potassium	0.116	0.300	0.100	0	116	70	130			
Selenium	0.00488	0.00500	0.00500	0	97.6	70	130			
Silver	0.00206	0.00200	0.00200	0	103	70	130			
Sodium	0.109	0.300	0.100	0	109	70	130			

Sample ID	**CCV1-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 5:28:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.202	0.00500	0.200	0	101	90	110			
Barium	0.204	0.0100	0.200	0	102	90	110			
Cadmium	0.205	0.00100	0.200	0	103	90	110			
Calcium	4.70	0.300	5.00	0	94.0	90	110			
Chromium	0.206	0.00500	0.200	0	103	90	110			
Lead	0.201	0.00100	0.200	0	100	90	110			
Magnesium	5.13	0.300	5.00	0	103	90	110			
Potassium	5.02	0.300	5.00	0	100	90	110			
Selenium	0.201	0.00500	0.200	0	101	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **CCV1-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:28:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.203	0.00200	0.200	0	102	90	110			
Sodium	5.20	0.300	5.00	0	104	90	110			

Sample ID **LCVL1-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:32:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00498	0.00500	0.00500	0	99.5	70	130			
Barium	0.00517	0.0100	0.00500	0	103	70	130			
Cadmium	0.000974	0.00100	0.00100	0	97.4	70	130			
Calcium	0.103	0.300	0.100	0	103	70	130			
Chromium	0.00532	0.00500	0.00500	0	106	70	130			
Lead	0.000989	0.00100	0.00100	0	98.9	70	130			
Magnesium	0.101	0.300	0.100	0	101	70	130			
Potassium	0.108	0.300	0.100	0	108	70	130			
Selenium	0.00491	0.00500	0.00500	0	98.2	70	130			
Silver	0.00207	0.00200	0.00200	0	103	70	130			
Sodium	0.103	0.300	0.100	0	103	70	130			

Sample ID **CCV2-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 5:58:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.201	0.00500	0.200	0	101	90	110			
Barium	0.204	0.0100	0.200	0	102	90	110			
Cadmium	0.204	0.00100	0.200	0	102	90	110			
Calcium	4.66	0.300	5.00	0	93.3	90	110			
Chromium	0.204	0.00500	0.200	0	102	90	110			
Lead	0.199	0.00100	0.200	0	99.3	90	110			
Magnesium	5.15	0.300	5.00	0	103	90	110			
Potassium	5.09	0.300	5.00	0	102	90	110			
Selenium	0.200	0.00500	0.200	0	99.9	90	110			
Silver	0.203	0.00200	0.200	0	101	90	110			
Sodium	5.10	0.300	5.00	0	102	90	110			

Sample ID **LCVL2-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:03:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00498	0.00500	0.00500	0	99.7	70	130			
Barium	0.00513	0.0100	0.00500	0	103	70	130			

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **LCVL2-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:03:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.000990	0.00100	0.00100	0	99.0	70	130			
Calcium	0.101	0.300	0.100	0	101	70	130			
Chromium	0.00526	0.00500	0.00500	0	105	70	130			
Lead	0.000974	0.00100	0.00100	0	97.4	70	130			
Magnesium	0.100	0.300	0.100	0	100	70	130			
Potassium	0.113	0.300	0.100	0	113	70	130			
Selenium	0.00515	0.00500	0.00500	0	103	70	130			
Silver	0.00202	0.00200	0.00200	0	101	70	130			
Sodium	0.0994	0.300	0.100	0	99.4	70	130			

Sample ID **CCV3-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:44:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.204	0.00500	0.200	0	102	90	110			
Barium	0.204	0.0100	0.200	0	102	90	110			
Cadmium	0.206	0.00100	0.200	0	103	90	110			
Calcium	4.65	0.300	5.00	0	93.0	90	110			
Chromium	0.205	0.00500	0.200	0	103	90	110			
Lead	0.198	0.00100	0.200	0	98.8	90	110			
Magnesium	5.12	0.300	5.00	0	102	90	110			
Potassium	5.03	0.300	5.00	0	101	90	110			
Selenium	0.201	0.00500	0.200	0	101	90	110			
Silver	0.204	0.00200	0.200	0	102	90	110			
Sodium	5.19	0.300	5.00	0	104	90	110			

Sample ID **LCVL3-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 6:52:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00506	0.00500	0.00500	0	101	70	130			
Barium	0.00499	0.0100	0.00500	0	99.9	70	130			
Cadmium	0.00112	0.00100	0.00100	0	112	70	130			
Calcium	0.101	0.300	0.100	0	101	70	130			
Chromium	0.00526	0.00500	0.00500	0	105	70	130			
Lead	0.000959	0.00100	0.00100	0	95.9	70	130			
Magnesium	0.101	0.300	0.100	0	101	70	130			
Potassium	0.114	0.300	0.100	0	114	70	130			
Selenium	0.00520	0.00500	0.00500	0	104	70	130			
Silver	0.00205	0.00200	0.00200	0	102	70	130			
Sodium	0.106	0.300	0.100	0	106	70	130			

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID **CCV4-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 7:39:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.203	0.00500	0.200	0	102	90	110			
Barium	0.204	0.0100	0.200	0	102	90	110			
Cadmium	0.201	0.00100	0.200	0	100	90	110			
Calcium	4.70	0.300	5.00	0	94.0	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Lead	0.194	0.00100	0.200	0	97.1	90	110			
Magnesium	4.94	0.300	5.00	0	98.9	90	110			
Potassium	5.12	0.300	5.00	0	102	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Silver	0.197	0.00200	0.200	0	98.6	90	110			
Sodium	4.94	0.300	5.00	0	98.7	90	110			

Sample ID **LCVL4-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 7:53:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00522	0.00500	0.00500	0	104	70	130			
Barium	0.00502	0.0100	0.00500	0	100	70	130			
Cadmium	0.00109	0.00100	0.00100	0	109	70	130			
Calcium	0.103	0.300	0.100	0	103	70	130			
Chromium	0.00515	0.00500	0.00500	0	103	70	130			
Lead	0.000927	0.00100	0.00100	0	92.7	70	130			
Magnesium	0.0978	0.300	0.100	0	97.8	70	130			
Potassium	0.132	0.300	0.100	0	132	70	130			S
Selenium	0.00530	0.00500	0.00500	0	106	70	130			
Silver	0.00196	0.00200	0.00200	0	98.0	70	130			
Sodium	0.110	0.300	0.100	0	110	70	130			

Sample ID **CCV5-150505**	Batch ID: **R79453**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_150505B**	Analysis Date: **5/5/2015 8:20:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.199	0.00500	0.200	0	99.5	90	110			
Barium	0.208	0.0100	0.200	0	104	90	110			
Cadmium	0.200	0.00100	0.200	0	99.8	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Lead	0.198	0.00100	0.200	0	99.2	90	110			
Potassium	5.00	0.300	5.00	0	100	90	110			
Selenium	0.201	0.00500	0.200	0	101	90	110			
Silver	0.191	0.00200	0.200	0	95.3	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID	**LCVL5-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**LCVL**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 8:24:00 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	0.00511	0.0100	0.00500	0	102	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Chromium	0.00512	0.00500	0.00500	0	102	70	130			
Lead	0.000956	0.00100	0.00100	0	95.6	70	130			
Potassium	0.0915	0.300	0.100	0	91.5	70	130			
Selenium	0.00535	0.00500	0.00500	0	107	70	130			
Silver	0.00193	0.00200	0.00200	0	96.4	70	130			

Sample ID	**CCV6-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 8:47:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.201	0.00500	0.200	0	100	90	110			
Barium	0.205	0.0100	0.200	0	103	90	110			
Cadmium	0.196	0.00100	0.200	0	98.2	90	110			
Chromium	0.194	0.00500	0.200	0	96.9	90	110			
Lead	0.197	0.00100	0.200	0	98.7	90	110			
Potassium	5.17	0.300	5.00	0	103	90	110			
Selenium	0.201	0.00500	0.200	0	100	90	110			
Silver	0.188	0.00200	0.200	0	93.8	90	110			

Sample ID	**LCVL6-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**LCVL**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 8:51:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00553	0.00500	0.00500	0	111	70	130			
Barium	0.00511	0.0100	0.00500	0	102	70	130			
Cadmium	0.00103	0.00100	0.00100	0	103	70	130			
Chromium	0.00498	0.00500	0.00500	0	99.7	70	130			
Lead	0.000900	0.00100	0.00100	0	90.0	70	130			
Potassium	0.121	0.300	0.100	0	121	70	130			
Selenium	0.00526	0.00500	0.00500	0	105	70	130			
Silver	0.00192	0.00200	0.00200	0	95.8	70	130			

Sample ID	**CCV7-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 9:18:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.198	0.00500	0.200	0	98.9	90	110			
Barium	0.207	0.0100	0.200	0	103	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_150505B

Sample ID	**CCV7-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 9:18:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.198	0.00100	0.200	0	98.8	90	110			
Chromium	0.198	0.00500	0.200	0	99.1	90	110			
Lead	0.193	0.00100	0.200	0	96.5	90	110			
Potassium	5.00	0.300	5.00	0	100	90	110			
Selenium	0.195	0.00500	0.200	0	97.4	90	110			
Silver	0.191	0.00200	0.200	0	95.4	90	110			

Sample ID	**LCVL7-150505**	Batch ID:	**R79453**	TestNo:	**SW6020A**	Units:	**mg/L**
SampType:	**LCVL**	Run ID:	**ICP-MS4_150505B**	Analysis Date:	**5/5/2015 9:22:00 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00506	0.00500	0.00500	0	101	70	130			
Barium	0.00516	0.0100	0.00500	0	103	70	130			
Cadmium	0.00100	0.00100	0.00100	0	100	70	130			
Chromium	0.00502	0.00500	0.00500	0	100	70	130			
Lead	0.000936	0.00100	0.00100	0	93.6	70	130			
Potassium	0.111	0.300	0.100	0	111	70	130			
Selenium	0.00550	0.00500	0.00500	0	110	70	130			
Silver	0.00192	0.00200	0.00200	0	96.0	70	130			

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_150502A

The QC data in batch 69421 applies to the following samples: 1504245-01D, 1504245-02D, 1504245-03D, 1504245-04D, 1504245-05D, 1504245-06D, 1504245-07D, 1504245-08D, 1504245-09D, 1504245-10D, 1504245-11D, 1504245-12D, 1504245-13D, 1504245-14D, 1504245-15D, 1504245-16D, 1504245-17D, 1504245-18D, 1504245-19D, 1504245-20D

Sample ID **LCS-69421** Batch ID: **69421** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC2_150502A** Analysis Date: **5/2/2015 9:17:03 AM** Prep Date: **5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.77	1.00	10.00	0	97.7	90	110			
Sulfate	29.8	3.00	30.00	0	99.3	90	110			

Sample ID **LCSD-69421** Batch ID: **69421** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_150502A** Analysis Date: **5/2/2015 9:31:38 AM** Prep Date: **5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.75	1.00	10.00	0	97.5	90	110	0.257	20	
Sulfate	29.7	3.00	30.00	0	99.1	90	110	0.201	20	

Sample ID **MB-69421** Batch ID: **69421** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_150502A** Analysis Date: **5/2/2015 9:46:12 AM** Prep Date: **5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<1.00	1.00								
Sulfate	<3.00	3.00								

Sample ID **1504245-19DMS** Batch ID: **69421** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_150502A** Analysis Date: **5/2/2015 3:47:35 PM** Prep Date: **5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2090	100	2000	71.17	101	90	110			
Sulfate	3890	300	2000	1841	103	90	110			

Sample ID **1504245-19DMSD** Batch ID: **69421** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_150502A** Analysis Date: **5/2/2015 4:02:10 PM** Prep Date: **5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2110	100	2000	71.17	102	90	110	0.698	20	
Sulfate	3910	300	2000	1841	103	90	110	0.375	20	

Sample ID **1504245-20DMS** Batch ID: **69421** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_150502A** Analysis Date: **5/2/2015 4:16:45 PM** Prep Date: **5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2270	100	2000	261.2	101	90	110			
Sulfate	3240	300	2000	1201	102	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_150502A

Sample ID **1504245-20DMSD**	Batch ID: **69421**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_150502A**	Analysis Date: **5/2/2015 4:31:19 PM**	Prep Date: **5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2260	100	2000	261.2	100	90	110	0.483	20	
Sulfate	3220	300	2000	1201	101	90	110	0.829	20	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_150502A

Sample ID	**ICV-150502**	Batch ID:	**R79414**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**IC2_150502A**	Analysis Date:	**5/2/2015 8:57:24 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	23.8	1.00	25.00	0	95.2	90	110			
Sulfate	73.9	3.00	75.00	0	98.6	90	110			

Sample ID	**CCV1-150502**	Batch ID:	**R79414**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC2_150502A**	Analysis Date:	**5/2/2015 12:42:45 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.83	1.00	10.00	0	98.3	90	110			
Sulfate	29.8	3.00	30.00	0	99.4	90	110			

Sample ID	**CCV2-150502**	Batch ID:	**R79414**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC2_150502A**	Analysis Date:	**5/2/2015 3:28:41 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.81	1.00	10.00	0	98.1	90	110			
Sulfate	29.8	3.00	30.00	0	99.2	90	110			

Sample ID	**CCV3-150502**	Batch ID:	**R79414**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC2_150502A**	Analysis Date:	**5/2/2015 4:45:54 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.84	1.00	10.00	0	98.4	90	110			
Sulfate	29.7	3.00	30.00	0	99.0	90	110			

Sample ID	**CCV4-150502**	Batch ID:	**R79414**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC2_150502A**	Analysis Date:	**5/2/2015 5:17:03 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.2	3.00	30.00	0	97.4	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_150502B

The QC data in batch 69422 applies to the following samples: 1504245-21D, 1504245-22D, 1504245-23D, 1504245-24D, 1504245-25D

Sample ID	**LCS-69422**	Batch ID:	**69422**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**IC2_150502B**	Analysis Date:	**5/2/2015 5:33:33 PM**	Prep Date:	**5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.70	1.00	10.00	0	97.0	90	110			
Sulfate	29.4	3.00	30.00	0	97.9	90	110			

Sample ID	**LCSD-69422**	Batch ID:	**69422**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**IC2_150502B**	Analysis Date:	**5/2/2015 5:48:07 PM**	Prep Date:	**5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.73	1.00	10.00	0	97.3	90	110	0.258	20	
Sulfate	29.3	3.00	30.00	0	97.7	90	110	0.153	20	

Sample ID	**MB-69422**	Batch ID:	**69422**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**IC2_150502B**	Analysis Date:	**5/2/2015 6:02:42 PM**	Prep Date:	**5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<1.00	1.00								
Sulfate	<3.00	3.00								

Sample ID	**1504278-02AMS**	Batch ID:	**69422**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC2_150502B**	Analysis Date:	**5/2/2015 8:43:01 PM**	Prep Date:	**5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3460	100	2000	1533	96.3	90	110			
Sulfate	2640	300	2000	585.3	103	90	110			

Sample ID	**1504278-02AMSD**	Batch ID:	**69422**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC2_150502B**	Analysis Date:	**5/2/2015 8:57:36 PM**	Prep Date:	**5/2/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3440	100	2000	1533	95.3	90	110	0.560	20	
Sulfate	2630	300	2000	585.3	102	90	110	0.593	20	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_150502B

Sample ID **ICV-150502**	Batch ID: **R79415**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_150502B**	Analysis Date: **5/2/2015 8:57:24 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	23.8	1.00	25.00	0	95.2	90	110			
Sulfate	73.9	3.00	75.00	0	98.6	90	110			

Sample ID **CCV4-150502**	Batch ID: **R79415**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_150502B**	Analysis Date: **5/2/2015 5:17:03 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.68	1.00	10.00	0	96.8	90	110			
Sulfate	29.2	3.00	30.00	0	97.4	90	110			

Sample ID **CCV5-150502**	Batch ID: **R79415**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_150502B**	Analysis Date: **5/2/2015 9:12:10 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.85	1.00	10.00	0	98.5	90	110			
Sulfate	29.9	3.00	30.00	0	99.5	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_150424A

The QC data in batch 69292 applies to the following samples: 1504245-01D, 1504245-02D, 1504245-03D, 1504245-04D, 1504245-05D, 1504245-06D, 1504245-07D, 1504245-08D, 1504245-09D, 1504245-10D, 1504245-11D, 1504245-12D, 1504245-13D, 1504245-14D, 1504245-15D, 1504245-16D

Sample ID **MB-69292** Batch ID: **69292** TestNo: **M2320 B** Units: **mg/L @ pH 4.5**
SampType: **MBLK** Run ID: **TITRATOR_150424A** Analysis Date: **4/24/2015 9:28:00 AM** Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0								
Alkalinity, Total (As CaCO3)	<20.0	20.0								

Sample ID **LCS-69292** Batch ID: **69292** TestNo: **M2320 B** Units: **mg/L @ pH 4.49**
SampType: **LCS** Run ID: **TITRATOR_150424A** Analysis Date: **4/24/2015 9:33:00 AM** Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	53.6	20.0	50.00	0	107	74	129			

Sample ID **1504244-10C DUP** Batch ID: **69292** TestNo: **M2320 B** Units: **mg/L @ pH 4.54**
SampType: **DUP** Run ID: **TITRATOR_150424A** Analysis Date: **4/24/2015 10:58:00 AM** Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	722	20.0	0	721.1				0.097	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	722	20.0	0	721.1				0.097	20	

Sample ID **1504245-16D DUP** Batch ID: **69292** TestNo: **M2320 B** Units: **mg/L @ pH 4.52**
SampType: **DUP** Run ID: **TITRATOR_150424A** Analysis Date: **4/24/2015 2:44:00 PM** Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	186	20.0	0	186.3				0.071	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	186	20.0	0	186.3				0.071	20	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_150424A

Sample ID **ICV-150424**	Batch ID: **R79295**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.52**
SampType: **ICV**	Run ID: **TITRATOR_150424A**	Analysis Date: **4/24/2015 9:26:00 AM**	Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	8.72	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.9	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	99.6	20.0	100.0	0	99.6	98	102			

Sample ID **CCV1-150424**	Batch ID: **R79295**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.53**
SampType: **CCV**	Run ID: **TITRATOR_150424A**	Analysis Date: **4/24/2015 12:25:00 PM**	Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	25.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	75.4	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	90	110			

Sample ID **CCV2-150424**	Batch ID: **R79295**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.51**
SampType: **CCV**	Run ID: **TITRATOR_150424A**	Analysis Date: **4/24/2015 2:26:00 PM**	Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	39.5	20.0	0							
Alkalinity, Carbonate (As CaCO3)	59.8	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	99.4	20.0	100.0	0	99.4	90	110			

Sample ID **CCV3-150424**	Batch ID: **R79295**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.51**
SampType: **CCV**	Run ID: **TITRATOR_150424A**	Analysis Date: **4/24/2015 2:51:00 PM**	Prep Date: **4/24/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	11.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	89.9	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_150428B

The QC data in batch 69333 applies to the following samples: 1504245-17D, 1504245-18D, 1504245-19D, 1504245-20D, 1504245-21D, 1504245-22D, 1504245-23D, 1504245-24D, 1504245-25D

Sample ID **MB-69333** Batch ID: **69333** TestNo: **M2320 B** Units: **mg/L @ pH 4.52**
SampType: **MBLK** Run ID: **TITRATOR_150428B** Analysis Date: **4/28/2015 10:53:00 AM** Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0								
Alkalinity, Total (As CaCO3)	<20.0	20.0								

Sample ID **LCS-69333** Batch ID: **69333** TestNo: **M2320 B** Units: **mg/L @ pH 4.52**
SampType: **LCS** Run ID: **TITRATOR_150428B** Analysis Date: **4/28/2015 10:58:00 AM** Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	52.7	20.0	50.00	0	105	74	129			

Sample ID **1504247-01C DUP** Batch ID: **69333** TestNo: **M2320 B** Units: **mg/L @ pH 4.51**
SampType: **DUP** Run ID: **TITRATOR_150428B** Analysis Date: **4/28/2015 1:54:00 PM** Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	113	20.0	0	112.2				0.622	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	113	20.0	0	112.2				0.622	20	

Sample ID **1504247-11C DUP** Batch ID: **69333** TestNo: **M2320 B** Units: **mg/L @ pH 4.53**
SampType: **DUP** Run ID: **TITRATOR_150428B** Analysis Date: **4/28/2015 3:15:00 PM** Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	248	20.0	0	246.8				0.283	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	248	20.0	0	246.8				0.283	20	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_150428B

Sample ID **ICV-150428**	Batch ID: **R79346**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.53**
SampType: **ICV**	Run ID: **TITRATOR_150428B**	Analysis Date: **4/28/2015 10:50:00 AM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	11.4	20.0	0							
Alkalinity, Carbonate (As CaCO3)	87.5	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	99.0	20.0	100.0	0	99.0	98	102			

Sample ID **CCV1-150428**	Batch ID: **R79346**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.52**
SampType: **CCV**	Run ID: **TITRATOR_150428B**	Analysis Date: **4/28/2015 1:48:00 PM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	25.4	20.0	0							
Alkalinity, Carbonate (As CaCO3)	74.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	99.9	20.0	100.0	0	99.9	90	110			

Sample ID **CCV2-150428**	Batch ID: **R79346**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.52**
SampType: **CCV**	Run ID: **TITRATOR_150428B**	Analysis Date: **4/28/2015 2:55:00 PM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	31.8	20.0	0							
Alkalinity, Carbonate (As CaCO3)	68.3	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	90	110			

Sample ID **CCV3-150428**	Batch ID: **R79346**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.52**
SampType: **CCV**	Run ID: **TITRATOR_150428B**	Analysis Date: **4/28/2015 3:22:00 PM**	Prep Date: **4/28/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	34.2	20.0	0							
Alkalinity, Carbonate (As CaCO3)	64.8	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	99.0	20.0	100.0	0	99.0	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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: WC_150427A

The QC data in batch 69316 applies to the following samples: 1504245-01D, 1504245-02D, 1504245-03D, 1504245-04D, 1504245-05D, 1504245-06D, 1504245-07D

Sample ID	**MB-69316**	Batch ID:	**69316**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**WC_150427A**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID	**LCS-69316**	Batch ID:	**69316**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**WC_150427A**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	749	10.0	745.6	0	100	90	113			

Sample ID	**1504241-01B-DUP**	Batch ID:	**69316**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_150427A**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	271	10.0	0	270.0				0.370	5	

Sample ID	**1504244-01C-DUP**	Batch ID:	**69316**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_150427A**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	285	10.0	0	276.0				3.21	5	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: WC_150427B

The QC data in batch 69317 applies to the following samples: 1504245-08D, 1504245-09D, 1504245-10D, 1504245-11D, 1504245-12D, 1504245-13D, 1504245-14D, 1504245-15D, 1504245-16D

Sample ID	**MB-69317**	Batch ID:	**69317**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**WC_150427B**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID	**LCS-69317**	Batch ID:	**69317**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**WC_150427B**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	738	10.0	745.6	0	99.0	90	113			

Sample ID	**1504245-08D-DUP**	Batch ID:	**69317**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_150427B**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	7730	50.0	0	7415				4.22	5	

Sample ID	**1504245-09D-DUP**	Batch ID:	**69317**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_150427B**	Analysis Date:	**4/28/2015 8:50:00 AM**	Prep Date:	**4/27/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	3360	50.0	0	3485				3.65	5	

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: 1504245
Project: Artesia, NM Abo Empire Gas Plant

ANALYTICAL QC SUMMARY REPORT

RunID: WC_150429A

The QC data in batch 69330 applies to the following samples: 1504245-17D, 1504245-18D, 1504245-19D, 1504245-20D, 1504245-21D, 1504245-22D, 1504245-23D, 1504245-24D, 1504245-25D

Sample ID	**MB-69330**	Batch ID:	**69330**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**WC_150429A**	Analysis Date:	**4/30/2015 9:00:00 AM**	Prep Date:	**4/29/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID	**LCS-69330**	Batch ID:	**69330**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**WC_150429A**	Analysis Date:	**4/30/2015 9:00:00 AM**	Prep Date:	**4/29/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	757	10.0	745.6	0	102	90	113			

Sample ID	**1504245-17D-DUP**	Batch ID:	**69330**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_150429A**	Analysis Date:	**4/30/2015 9:00:00 AM**	Prep Date:	**4/29/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	3700	50.0	0	3720				0.674	5	

Sample ID	**1504245-18D-DUP**	Batch ID:	**69330**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_150429A**	Analysis Date:	**4/30/2015 9:00:00 AM**	Prep Date:	**4/29/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	3140	50.0	0	3275				4.37	5	

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

December 29, 2015

Jeremy Cannady
Larson & Associates
507 N. Marienfeld #205
Midland, TX 79701
TEL: (432) 687-0901
FAX (432) 687-0456

Order No.: 1512136

RE: Empire Abo

Dear Jeremy Cannady:

DHL Analytical, Inc. received 32 sample(s) on 12/10/2015 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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-15-15

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 58741

CHAIN-OF-CUSTODY

CLIENT: Larson and Associates
ADDRESS: 507 N Marienfeld Ste. 205 Midland TX, 79701
PHONE: (432) 687-0901 FAX/E-MAIL:
DATA REPORTED TO: Mark Larson
ADDITIONAL REPORT COPIES TO: Jeremy Cannady

DATE: 12/9/2015 PAGE ___ OF ___
PO #: DHL WORK ORDER #: 572136
PROJECT LOCATION OR NAME: Empire Abo
CLENT PROJECT #: 6-0141 COLLECTOR: Sarah Shotts

Authorize 5% surcharge for TRRP Report? ☐ Yes ☑ No

S=SOIL W=WATER A=AIR L=LIQUID P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☑ MTBE ☐ (METHOD 8021) ☐; TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐; GRO (METHOD 8015) ☐ DRO (METHOD 8105) ☐; VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐; SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐; 8081 PEST ☐ 608 PEST/PCB ☐ 8270 PEST ☐; 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐; 8321 HERB ☐ 8330 EXPL ☐ PERCHLORATE ☐; METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐; RCRA ☑ TX11 ☐ _____ ☐; PH ☐ HEX CHROM ☐ ALKALINITY ☑; CHLORIDE ☐ ANIONS _____ ☐; TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐; TCLP-METALS ☐ RCI ☐ TOX ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐; TDS ☑ TSS ☐ % MOISTURE ☐ FLASHPOINT ☐; CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☑	TPH 1005 ☐	GRO (METHOD 8015) ☐	VOC 8260 ☐	SVOC 8270 ☐	8081 PEST ☐	8270 O-P PEST ☐	8321 HERB ☐	METALS 6020 ☐	RCRA ☑	PH ☐	CHLORIDE ☐	TCLP-SVOC ☐	TCLP-METALS ☐	RCI ☐	TDS ☑	FIELD NOTES
MW-14	01	12/8/15	9:00	W	Poly/VOA	5	X			X		X									X	X	X				X	
EB-02	02		9:45																									
EB-05	03		10:30																									
P-01	04		10:45																									
MW-18	05		11:00																									
MW-2	06		12:15																									
MW-02-15	07		12:45																									
MW-08	08		1:30																									
MW-02-16	09		2:45																									
MW-20	10		3:30																									
TOTAL																												

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	12/9/2015 5:00PM	[signature]
[signature]	12/10/15 9:15	[signature]

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☑
OTHER ☐ _____

LABORATORY USE ONLY: 3.2, 3.1, 18.0, 13
RECEIVING TEMP: 4.3, 1.9 THERM #: _____
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☑ NOT USED
☑ CARRIER BILL #: [illegible]
☐ APC DELIVERY
☐ HAND DELIVERED

DHL ANALYTICAL

2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: *www.dhlanalytical.com*
E-Mail: *login@dhlanalytical.com*

nelap

№ 69054

CHAIN-OF-CUSTODY

CLIENT: Larson & Associates
ADDRESS: 507 North Marienfeld
PHONE: ____ FAX/E-MAIL: ____
DATA REPORTED TO: Jeremy Canady
ADDITIONAL REPORT COPIES TO: Mark Larson

DATE: 12-09-15 PAGE 1 OF 1
PO #: ____ DHL WORK ORDER #: 1512134
PROJECT LOCATION OR NAME: Empire Abo
CLENT PROJECT #: 6-0141 COLLECTOR: Travis Williams

Authorize 5% surcharge for TRRP Report? ☐ Yes ☒ No

S=SOIL (W=WATER circled) A=AIR ~~LIQUID~~ SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES:
1. BTEX ☒ MTBE ☐ [METHOD 8021]
2. TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐
3. GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐
4. VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐
5. SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐
6. 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐
7. 8270 O-P PEST ☐ 8082 PCB ☐ 8270 PCB ☐
8. 8321 HERB ☐ T PHOS, AMMONIA ☐
9. METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐
10. RCRA ☒ TX11 ☐ ____ ☐
11. PH ☐ HEX CHROM ☐ ALKALINITY ☒ COD ☐
12. CHLORIDE ☐ ANIONS ____ ☒
13. TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐
14. TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐
15. RCI ☐ FLASHPOINT ☐ DGAS ☐
16. TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 / NaOH	ICE	UNPRESERVED	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				FIELD NOTES
MW-15	011	12/08/15	10:38	W	Poly/VOA	5	X			X		X									X	X	X				X				
MW-16	012	12/08/15	9:22	W	〃	5	X			X		X									X	X	X				X				
MW-17	13	〃	11:48	〃	〃	〃	〃			〃		〃									〃	〃	〃				〃				
MW-23	14	〃	1:42	〃	〃	〃	〃			〃		〃									〃	〃	〃				〃				
MW-24	15	〃	2:15	〃	〃	〃	〃			〃		〃									〃	〃	〃				〃				
FB-06	16	〃	12:31	〃	〃	〃	〃			〃		〃									〃	〃	〃				〃				
P-02	17	〃	1:15	〃	〃	〃	〃			〃		〃									〃	〃	〃				〃				
P-03	18	〃	2:42	〃	〃	〃	〃			〃		〃									〃	〃	〃				〃				

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	9:39am 12-09-15	Fedex
Fedex	12/10/15 9:15	[signature]

☐ *DHL DISPOSAL @ $5.00 each* ☐ *Return*

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ ____

LABORATORY USE ONLY:
RECEIVING TEMP: 4.3, 1.9, 3.2, 3.1, 18.0 THERM #: 78
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LONE STAR ☒ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

DHL ANALYTICAL
2300 Double Creek Dr. ■ Round Rock, TX 78664
Phone (512) 388-8222 ■ FAX (512) 388-8229
Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

CHAIN-OF-CUSTODY

№ 69052

CLIENT: Larson & Associates
ADDRESS: 507 North Marienfeld
PHONE: _____ FAX/E-MAIL: _____
DATA REPORTED TO: Jeremy Canady
ADDITIONAL REPORT COPIES TO: Mark Larson

DATE: 12-09-15 PAGE 1 OF 1
PO #: _____ DHL WORK ORDER #: 572136
PROJECT LOCATION OR NAME: Empire Abo
CLENT PROJECT #: 6-0141 COLLECTOR: Travis Williams

Authorize 5% surcharge for TRRP Report? ☐ Yes ☑ No

S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT P=PAINT SL=SLUDGE O=OTHER SO=SOLID

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD PAH ☐ SVOC 625 ☐ | 8270 PEST ☐ 625 PEST/PCB ☐ 608 PCB ☐ 8082 PCB ☐ 8270 PCB ☐ | 8270 O-P PEST ☐ 8321 HERB ☐ T PHOS, AMMONIA ☐ | METALS 6020 ☐ METALS 200.8 ☐ DISS. METALS ☐ | RCRA ☒ TX11 ☐ | PH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐ | CHLORIDE ☐ ANIONS ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ FLASHPOINT ☐ DGAS ☐ | TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESERVED	FIELD NOTES
MW 02-03	19	12-09-15	9:30	W	Poly/VOA	5	X			X		
MW 03	20		10:00									
MW 02-04	21		10:40									
MW 02-11	22		11:05									
MW 22	23		11:40									
MW 02-18	24		12:15									
MW 03-03	25		12:50									

RELINQUISHED BY: (Signature) DATE/TIME 1:50 pm 12-9-15 RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) Fedex DATE/TIME 12/10/15 915 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

5

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☒
OTHER ☐ _____

LABORATORY USE ONLY: 3.2, 3.1, 3.0
RECEIVING TEMP: 4.3, 1.9, THERM #: 98
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☑ NOT USED
CARRIER: ☐ LONE STAR ☑ FEDEX ☐ UPS ☐ OTHER
☐ COURIER DELIVERY
☐ HAND DELIVERED

DHL ANALYTICAL
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Web: www.dhlanalytical.com
E-Mail: login@dhlanalytical.com

№ 62357

CHAIN-OF-CUSTODY

CLIENT: Larson and Associates
ADDRESS: 507 N Marienfeld Ste. 205 Midland, TX 79701
PHONE: (432) 687-0901 FAX/E-MAIL:
DATA REPORTED TO: Jeremy Cannady
ADDITIONAL REPORT COPIES TO: Mark Larson

DATE: 12/9/2015 PAGE 1 OF 1
PO #: DHL WORK ORDER #: 157234
PROJECT LOCATION OR NAME: Empire Abo
CLENT PROJECT #: 6-0141 COLLECTOR: Sarah Swasey

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: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☑ MTBE ☐ [METHOD 8021] | TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐ | GRO [METHOD 8015] ☐ DRO [METHOD 8105] ☐ | VOC 8260 ☐ VOC 624 ☐ VOC 8260/5035 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLD/PAH ☐ SVOC 625 ☐ | 8081 PEST ☐ 608 PEST/PCB ☐ 8082 PCB ☐ 8270 PEST ☐ | 8270 O-P PEST ☐ 8321 HERB ☐ 8330 EXPL ☐ 8270 PCB ☐ | METALS 6020 ☐ METALS 2008 ☐ DISS. METALS ☐ PERCHLORATE ☐ | RCRA ☑ TX11 ☐ PH ☐ HEX CHROM ☐ ALKALINITY ☐ | CHLORIDE ☐ ANIONS ☐ | TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐ | TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☑ TSS ☐ % MOISTURE ☐ CYANIDE ☐

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
MW-07	26	12/9/15	9:15	W	Poly/VOA	5	☒			☒		☑	
MW-12	27		9:45										
MW-02-12	28		10:30										
MW-05	29		11:30										
MW-02-06	30		12:00										
MW-02-02	31		12:30										
MW-02-05	32		1:15										

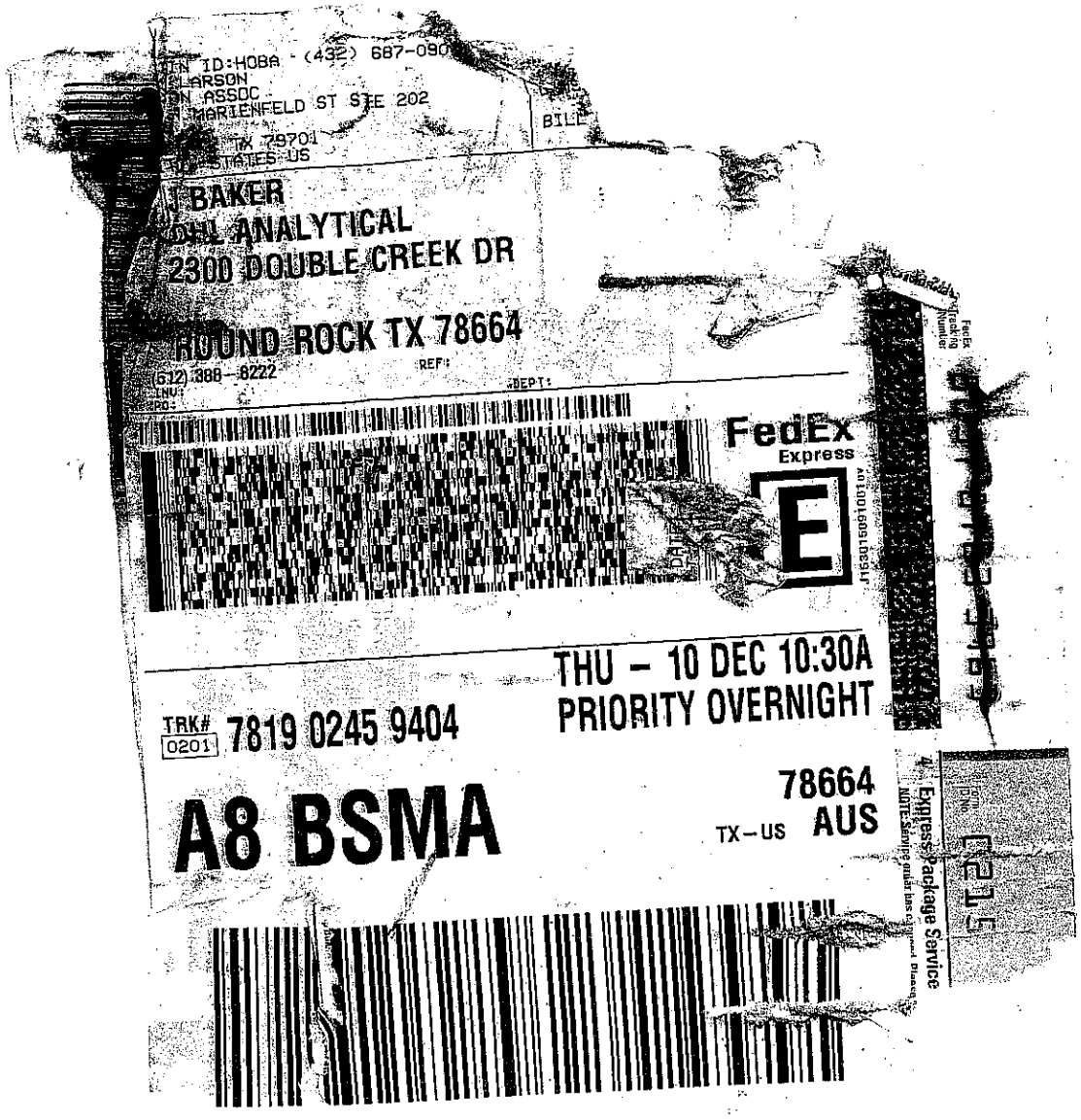
TOTAL

RELINQUISHED BY: (Signature) DATE/TIME 12/9/15 5:20pm RECEIVED BY: (Signature) Fedex
RELINQUISHED BY: (Signature) Fedex DATE/TIME 12/10/15 9:15 RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature) DATE/TIME RECEIVED BY: (Signature)

☐ DHL DISPOSAL @ $5.00 each ☐ Return

TURN AROUND TIME
RUSH ☐ CALL FIRST
1 DAY ☐ CALL FIRST
2 DAY ☐
NORMAL ☑
OTHER ☐ _____

LABORATORY USE ONLY:
RECEIVING TEMP: 4.3, 1.2, 3.2, 1.1, 1.3.0 THERM #: 79
CUSTODY SEALS: ☐ BROKEN ☐ INTACT ☑ NOT USED
☑ CARRIER BILL #: Fedex
☐ APC DELIVERY
☐ HAND DELIVERED


ID:HOBA - (432) 687-090
LARSON
ASSOC
MARIENFELD ST STE 202
TX 79701
STATES US
BILL
BAKER
DHL ANALYTICAL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 388-8222
REF:
DEPT:
FedEx
Express
THU - 10 DEC 10:30A
PRIORITY OVERNIGHT
TRK#
0201
7819 0245 9404
A8 BSMA
78664
TX-US
AUS
FedEx Express Package Service

ORIGIN ID:HOBA (432) 687-0901
MARK LARSON
LARSON ASSOC
507 N MARIENFELD ST STE 202

MIDLAND, TX 79701
UNITED STATES US

SHIP DATE: 09DEC15
ACTWGT: 63.80 LB
CAD: 006994246/SSFE1621
DIMS: 25x14x14 IN

BILL THIRD PARTY

TO J BAKER
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 386-8222
INV:
PO:
REF:
DEPT:

FedEx
Express

TRK# 0201 7819 0246 7711

THU - 10 DEC 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

ORIGIN ID:HOBA (432) 687-0901
MARK LARSON
LARSON ASSOC
507 N MARIENFELD ST STE 202

MIDLAND, TX 79701
UNITED STATES US

SHIP DATE: 09DEC15
ACTWGT: 55.70 LB
CAD: 006994246/SSFE1621
DIMS: 25x14x14 IN

BILL THIRD PARTY

TO J BAKER
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF:
INV:
PO: DEPT:

FedEx
Express

E

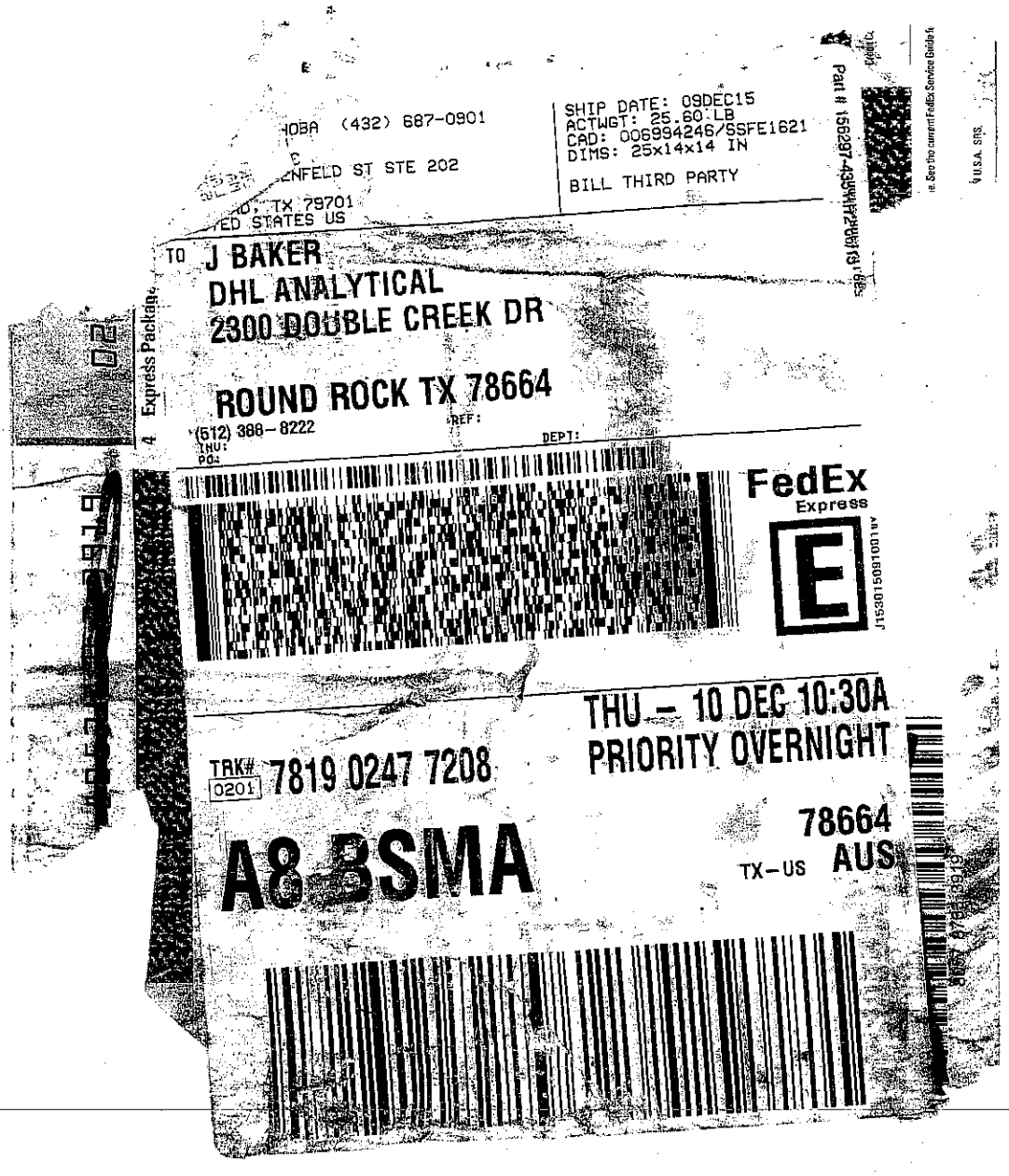
J153015091001uv

THU - 10 DEC 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7819 0248 3501

A8 BSMA

78664
TX-US AUS


(432) 687-0901
SHIP DATE: 09DEC15
ACTWGT: 25.60 LB
CAD: 006994246/SSFE1621
DIMS: 25x14x14 IN
BILL THIRD PARTY
TO J BAKER
DHL ANALYTICAL
2300 DOUBLE CREEK DR
ROUND ROCK TX 78664
(512) 386-8222
REF:
DEPT:
FedEx
Express
THU - 10 DEC 10:30A
PRIORITY OVERNIGHT
TRK# 0201 7819 0247 7208
78664
TX-US AUS
A8 BSMA

ORIGIN ID:HOBA (432) 687-0901
MARK LARSON
LARSON ASSOC
507 N MARIENFELD ST STE 202

MIDLAND, TX 79701
UNITED STATES US

SHIP DATE: 09DEC15
ACTWGT: 10.80 LB
CAD: 0068984246/SSFE1621
DIMS: 13x10x8 IN

BILL THIRD PARTY

TO J BAKER
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7819 0244 8164

THU - 10 DEC 10:30A
PRIORITY OVERNIGHT

A8 BSMA

78664
TX-US AUS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name Larson & Associates

Date Received: 12/10/2015

Work Order Number 1512136

Received by JB

Checklist completed by: _____ 12/10/2015
Signature | Date

Reviewed by: _____ 12/10/2015
Initials | Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 ☐	4.3 °C, 1-9_3.2_3.1.180
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 _____

DHL Analytical, Inc. **Date:** *29-Dec-15*

CLIENT: Larson & Associates
Project: Empire Abo
Lab Order: 1512136

CASE NARRATIVE

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

Method SW6020A - Dissolved Metals Analysis
Method SW7470A - Mercury Analysis (Filtered)
Method SW8021B - Volatile Organics by GC Analysis
Method E300 - Anions Analysis
Method M2540C - Total Dissolved Solids Analysis
Method M2320 B - Alkalinity Analysis

LOG IN

The samples were received and log-in performed on 12/10/2015. A total of 32 sample was received and analyzed. The sample arrived in good condition and was properly packaged. The samples were collected in Mountain Standard Time.

VOLATILE ORGANICS BY GC ANALYSIS

For Volatile Organics by GC Analysis, the recovery of Xylenes, Total for the Matrix Spike (1512136-12 MS) was marginally above the method control limits. This is flagged accordingly in the QC Summary Report. This compound was within method control limits in the associated LCS/MSD. No further corrective action was taken.

METALS ANALYSIS

For Dissolved Metals Analysis, for Batches 72691 and 72736, the recoveries of up to eight analytes for the Matrix Spike and Matrix Spike Duplicate (1512136-01, 1512136-11 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated LCS(s). No further corrective action was taken.

For Dissolved Metals Analysis, for Batch 72736, the recoveries of two analytes for the Post Digestion Spike (1512136-11 PDS) were above the method control limits. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated Serial Dilution. No further corrective action was taken.

For Dissolved Metals Analysis, performed on 12/16/2015, the recovery of one analyte for the Low Level Calibration Verification(s) (LCVL7-151216, LCVL2-151216) was above the method control limits. The concentration of these analytes are similar to the CCV spike levels. These analytes meet method control limits in the associated bracketing QC. No further corrective action was taken.

CLIENT:	Larson & Associates
Project:	Empire Abo
Lab Order:	1512136

CASE NARRATIVE

For Dissolved Metals Analysis, the response factor of Internal Standard Bismuth 209 was below the method control limit for Samples MW-15, MW-02-02 and the Post Digestion Spike (1512136-11 PDS), due to concentration of target analytes. No further corrective action was taken.

DHL Analytical, Inc.

Date: *29-Dec-15*

CLIENT: Larson & Associates
Project: Empire Abo
Lab Order: 1512136

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1512136-01	MW-14		12/08/15 09:00 AM	12/10/2015
1512136-02	EB-02		12/08/15 09:45 AM	12/10/2015
1512136-03	EB-05		12/08/15 10:30 AM	12/10/2015
1512136-04	P-01		12/08/15 10:45 AM	12/10/2015
1512136-05	MW-18		12/08/15 11:00 AM	12/10/2015
1512136-06	MW-2		12/08/15 12:15 PM	12/10/2015
1512136-07	MW-02-15		12/08/15 12:45 PM	12/10/2015
1512136-08	MW-08		12/08/15 01:30 PM	12/10/2015
1512136-09	MW-02-16		12/08/15 02:45 PM	12/10/2015
1512136-10	MW-20		12/08/15 03:30 PM	12/10/2015
1512136-11	MW-15		12/08/15 10:38 AM	12/10/2015
1512136-12	MW-16		12/08/15 09:22 AM	12/10/2015
1512136-13	MW-17		12/08/15 11:48 AM	12/10/2015
1512136-14	MW-23		12/08/15 01:42 PM	12/10/2015
1512136-15	MW-24		12/08/15 02:15 PM	12/10/2015
1512136-16	EB-06		12/08/15 12:39 PM	12/10/2015
1512136-17	P-02		12/08/15 01:15 PM	12/10/2015
1512136-18	P-03		12/08/15 02:42 PM	12/10/2015
1512136-19	MW-02-03		12/09/15 09:22 AM	12/10/2015
1512136-20	MW-03		12/09/15 10:00 AM	12/10/2015
1512136-21	MW-02-04		12/09/15 10:48 AM	12/10/2015
1512136-22	MW-02-11		12/09/15 01:05 PM	12/10/2015
1512136-23	MW-22		12/09/15 11:40 AM	12/10/2015
1512136-24	MW-02-18		12/09/15 12:15 PM	12/10/2015
1512136-25	MW-03-03		12/09/15 12:50 PM	12/10/2015
1512136-26	MW-07		12/09/15 09:15 AM	12/10/2015
1512136-27	MW-12		12/09/15 09:45 AM	12/10/2015
1512136-28	MW-02-12		12/09/15 10:30 AM	12/10/2015
1512136-29	MW-05		12/09/15 11:30 AM	12/10/2015
1512136-30	MW-02-06		12/09/15 12:00 PM	12/10/2015
1512136-31	MW-02-02		12/09/15 12:30 PM	12/10/2015
1512136-32	MW-02-05		12/09/15 01:15 PM	12/10/2015

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-01A	MW-14	12/08/15 09:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-01B	MW-14	12/08/15 09:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-14	12/08/15 09:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-14	12/08/15 09:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-01D	MW-14	12/08/15 09:00 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-14	12/08/15 09:00 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-14	12/08/15 09:00 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-02A	EB-02	12/08/15 09:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-02B	EB-02	12/08/15 09:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	EB-02	12/08/15 09:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	EB-02	12/08/15 09:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-02D	EB-02	12/08/15 09:45 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	EB-02	12/08/15 09:45 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	EB-02	12/08/15 09:45 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-03A	EB-05	12/08/15 10:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-03B	EB-05	12/08/15 10:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	EB-05	12/08/15 10:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	EB-05	12/08/15 10:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-03D	EB-05	12/08/15 10:30 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	EB-05	12/08/15 10:30 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	EB-05	12/08/15 10:30 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-04A	P-01	12/08/15 10:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-04B	P-01	12/08/15 10:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	P-01	12/08/15 10:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	P-01	12/08/15 10:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-04D	P-01	12/08/15 10:45 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	P-01	12/08/15 10:45 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	P-01	12/08/15 10:45 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-05A	MW-18	12/08/15 11:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-05B	MW-18	12/08/15 11:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-18	12/08/15 11:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-18	12/08/15 11:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-05D	MW-18	12/08/15 11:00 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-18	12/08/15 11:00 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-18	12/08/15 11:00 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-06A	MW-2	12/08/15 12:15 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-06B	MW-2	12/08/15 12:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-2	12/08/15 12:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-2	12/08/15 12:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-06D	MW-2	12/08/15 12:15 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-2	12/08/15 12:15 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-2	12/08/15 12:15 PM	Aqueous	E300	Anion Preparation	12/19/15 06:06 PM	72840
	MW-2	12/08/15 12:15 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-07A	MW-02-15	12/08/15 12:45 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-07B	MW-02-15	12/08/15 12:45 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-15	12/08/15 12:45 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-15	12/08/15 12:45 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-07D	MW-02-15	12/08/15 12:45 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-02-15	12/08/15 12:45 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-02-15	12/08/15 12:45 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-08A	MW-08	12/08/15 01:30 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-08B	MW-08	12/08/15 01:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-08	12/08/15 01:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-08	12/08/15 01:30 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-08D	MW-08	12/08/15 01:30 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-08	12/08/15 01:30 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-08D	MW-08	12/08/15 01:30 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-09A	MW-02-16	12/08/15 02:45 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-09B	MW-02-16	12/08/15 02:45 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-16	12/08/15 02:45 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-16	12/08/15 02:45 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-09D	MW-02-16	12/08/15 02:45 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-02-16	12/08/15 02:45 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-02-16	12/08/15 02:45 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-10A	MW-20	12/08/15 03:30 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-10B	MW-20	12/08/15 03:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-20	12/08/15 03:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-20	12/08/15 03:30 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-10D	MW-20	12/08/15 03:30 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-20	12/08/15 03:30 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-20	12/08/15 03:30 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-11A	MW-15	12/08/15 10:38 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/15/15 03:35 PM	72731
1512136-11B	MW-15	12/08/15 10:38 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-15	12/08/15 10:38 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-15	12/08/15 10:38 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-15	12/08/15 10:38 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-11D	MW-15	12/08/15 10:38 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-15	12/08/15 10:38 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-15	12/08/15 10:38 AM	Aqueous	E300	Anion Preparation	12/21/15 08:21 AM	72848
	MW-15	12/08/15 10:38 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-12A	MW-16	12/08/15 09:22 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-12B	MW-16	12/08/15 09:22 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-16	12/08/15 09:22 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-16	12/08/15 09:22 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-12D	MW-16	12/08/15 09:22 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-16	12/08/15 09:22 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-16	12/08/15 09:22 AM	Aqueous	E300	Anion Preparation	12/21/15 08:21 AM	72848
	MW-16	12/08/15 09:22 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-13A	MW-17	12/08/15 11:48 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-13B	MW-17	12/08/15 11:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-17	12/08/15 11:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-17	12/08/15 11:48 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-13D	MW-17	12/08/15 11:48 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-17	12/08/15 11:48 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-17	12/08/15 11:48 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-14A	MW-23	12/08/15 01:42 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-14B	MW-23	12/08/15 01:42 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-23	12/08/15 01:42 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-23	12/08/15 01:42 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-14D	MW-23	12/08/15 01:42 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-23	12/08/15 01:42 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-23	12/08/15 01:42 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-15A	MW-24	12/08/15 02:15 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
	MW-24	12/08/15 02:15 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-15B	MW-24	12/08/15 02:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-24	12/08/15 02:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-24	12/08/15 02:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-15D	MW-24	12/08/15 02:15 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-24	12/08/15 02:15 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-24	12/08/15 02:15 PM	Aqueous	E300	Anion Preparation	12/21/15 08:21 AM	72848
	MW-24	12/08/15 02:15 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-16A	EB-06	12/08/15 12:39 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-16B	EB-06	12/08/15 12:39 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	EB-06	12/08/15 12:39 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	EB-06	12/08/15 12:39 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-16D	EB-06	12/08/15 12:39 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	EB-06	12/08/15 12:39 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	EB-06	12/08/15 12:39 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-17A	P-02	12/08/15 01:15 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-17B	P-02	12/08/15 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	P-02	12/08/15 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	P-02	12/08/15 01:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-17D	P-02	12/08/15 01:15 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	P-02	12/08/15 01:15 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	P-02	12/08/15 01:15 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-18A	P-03	12/08/15 02:42 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-18B	P-03	12/08/15 02:42 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	P-03	12/08/15 02:42 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	P-03	12/08/15 02:42 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-18D	P-03	12/08/15 02:42 PM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	P-03	12/08/15 02:42 PM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	P-03	12/08/15 02:42 PM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-19A	MW-02-03	12/09/15 09:22 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-19B	MW-02-03	12/09/15 09:22 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-03	12/09/15 09:22 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-03	12/09/15 09:22 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-19D	MW-02-03	12/09/15 09:22 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-02-03	12/09/15 09:22 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-02-03	12/09/15 09:22 AM	Aqueous	M2540C	TDS Preparation	12/11/15 02:54 PM	72690
1512136-20A	MW-03	12/09/15 10:00 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-20B	MW-03	12/09/15 10:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-03	12/09/15 10:00 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-03	12/09/15 10:00 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/14/15 01:11 PM	72715
1512136-20D	MW-03	12/09/15 10:00 AM	Aqueous	M2320 B	Alkalinity Preparation	12/11/15 08:47 AM	72674
	MW-03	12/09/15 10:00 AM	Aqueous	E300	Anion Preparation	12/19/15 10:01 AM	72830
	MW-03	12/09/15 10:00 AM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-21A	MW-02-04	12/09/15 10:48 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-21B	MW-02-04	12/09/15 10:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-04	12/09/15 10:48 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-04	12/09/15 10:48 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-21D	MW-02-04	12/09/15 10:48 AM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-02-04	12/09/15 10:48 AM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-04	12/09/15 10:48 AM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-22A	MW-02-11	12/09/15 01:05 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-22B	MW-02-11	12/09/15 01:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-11	12/09/15 01:05 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-11	12/09/15 01:05 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-22D	MW-02-11	12/09/15 01:05 PM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-02-11	12/09/15 01:05 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-11	12/09/15 01:05 PM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-23A	MW-22	12/09/15 11:40 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-23B	MW-22	12/09/15 11:40 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-22	12/09/15 11:40 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-22	12/09/15 11:40 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-23D	MW-22	12/09/15 11:40 AM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-22	12/09/15 11:40 AM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-22	12/09/15 11:40 AM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-24A	MW-02-18	12/09/15 12:15 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-24B	MW-02-18	12/09/15 12:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-18	12/09/15 12:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-02-18	12/09/15 12:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-24D	MW-02-18	12/09/15 12:15 PM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-02-18	12/09/15 12:15 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-18	12/09/15 12:15 PM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-25A	MW-03-03	12/09/15 12:50 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-25B	MW-03-03	12/09/15 12:50 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-03-03	12/09/15 12:50 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/12/15 09:22 AM	72691
	MW-03-03	12/09/15 12:50 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-25D	MW-03-03	12/09/15 12:50 PM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-03-03	12/09/15 12:50 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-03-03	12/09/15 12:50 PM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-26A	MW-07	12/09/15 09:15 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-26B	MW-07	12/09/15 09:15 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-07	12/09/15 09:15 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-07	12/09/15 09:15 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-07	12/09/15 09:15 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-26D	MW-07	12/09/15 09:15 AM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-07	12/09/15 09:15 AM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-07	12/09/15 09:15 AM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-27A	MW-12	12/09/15 09:45 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-27B	MW-12	12/09/15 09:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-12	12/09/15 09:45 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-12	12/09/15 09:45 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-27D	MW-12	12/09/15 09:45 AM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-12	12/09/15 09:45 AM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-12	12/09/15 09:45 AM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-28A	MW-02-12	12/09/15 10:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-28B	MW-02-12	12/09/15 10:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-12	12/09/15 10:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-12	12/09/15 10:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-28D	MW-02-12	12/09/15 10:30 AM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-02-12	12/09/15 10:30 AM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-12	12/09/15 10:30 AM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-29A	MW-05	12/09/15 11:30 AM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-29B	MW-05	12/09/15 11:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-05	12/09/15 11:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-05	12/09/15 11:30 AM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-29D	MW-05	12/09/15 11:30 AM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-05	12/09/15 11:30 AM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-05	12/09/15 11:30 AM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-30A	MW-02-06	12/09/15 12:00 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-30B	MW-02-06	12/09/15 12:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-06	12/09/15 12:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-06	12/09/15 12:00 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-30D	MW-02-06	12/09/15 12:00 PM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-02-06	12/09/15 12:00 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-06	12/09/15 12:00 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-06	12/09/15 12:00 PM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-31A	MW-02-02	12/09/15 12:30 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 02:54 PM	72743
1512136-31B	MW-02-02	12/09/15 12:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-02	12/09/15 12:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-02	12/09/15 12:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-02	12/09/15 12:30 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-31D	MW-02-02	12/09/15 12:30 PM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1512136-31D	MW-02-02	12/09/15 12:30 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-02	12/09/15 12:30 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-02	12/09/15 12:30 PM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716
1512136-32A	MW-02-05	12/09/15 01:15 PM	Aqueous	SW5030C	Purge and Trap Water GC	12/16/15 03:17 PM	72744
1512136-32B	MW-02-05	12/09/15 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-05	12/09/15 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-05	12/09/15 01:15 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	12/15/15 02:24 PM	72736
	MW-02-05	12/09/15 01:15 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	12/15/15 01:18 PM	72734
1512136-32D	MW-02-05	12/09/15 01:15 PM	Aqueous	M2320 B	Alkalinity Preparation	12/14/15 10:37 AM	72711
	MW-02-05	12/09/15 01:15 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-05	12/09/15 01:15 PM	Aqueous	E300	Anion Preparation	12/19/15 10:03 AM	72831
	MW-02-05	12/09/15 01:15 PM	Aqueous	M2540C	TDS Preparation	12/14/15 01:55 PM	72716

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512136-01A	MW-14	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/16/15 12:41 PM	GC8_151215A
1512136-01B	MW-14	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	100	12/15/15 11:37 AM	ICP-MS4_151215A
	MW-14	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:36 PM	ICP-MS4_151215A
	MW-14	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 01:39 PM	CETAC2_HG_151215D
1512136-01D	MW-14	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 09:35 AM	TITRATOR_151211B
	MW-14	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 01:27 PM	IC3_151219A
	MW-14	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-02A	EB-02	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/15/15 11:54 PM	GC8_151215A
1512136-02B	EB-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:41 AM	ICP-MS4_151215A
	EB-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:40 PM	ICP-MS4_151215A
	EB-02	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 01:42 PM	CETAC2_HG_151215D
1512136-02D	EB-02	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 09:42 AM	TITRATOR_151211B
	EB-02	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 02:11 PM	IC3_151219A
	EB-02	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-03A	EB-05	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/16/15 01:01 AM	GC8_151215A
1512136-03B	EB-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:42 PM	ICP-MS4_151215A
	EB-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:43 AM	ICP-MS4_151215A
	EB-05	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 01:53 PM	CETAC2_HG_151215D
1512136-03D	EB-05	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 09:50 AM	TITRATOR_151211B
	EB-05	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 03:13 PM	IC3_151219A
	EB-05	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-04A	P-01	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/16/15 01:24 AM	GC8_151215A
1512136-04B	P-01	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:45 AM	ICP-MS4_151215A
	P-01	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:44 PM	ICP-MS4_151215A
	P-01	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 01:55 PM	CETAC2_HG_151215D
1512136-04D	P-01	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 10:55 AM	TITRATOR_151211B

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512136-04D	P-01	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 04:15 PM	IC3_151219A
	P-01	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-05A	MW-18	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/16/15 01:46 AM	GC8_151215A
1512136-05B	MW-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:46 PM	ICP-MS4_151215A
	MW-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:46 AM	ICP-MS4_151215A
	MW-18	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 01:57 PM	CETAC2_HG_151215D
1512136-05D	MW-18	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 09:59 AM	TITRATOR_151211B
	MW-18	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 04:35 PM	IC3_151219A
	MW-18	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-06A	MW-2	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/16/15 02:09 AM	GC8_151215A
1512136-06B	MW-2	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:48 AM	ICP-MS4_151215A
	MW-2	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:48 PM	ICP-MS4_151215A
	MW-2	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:00 PM	CETAC2_HG_151215D
1512136-06D	MW-2	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 10:07 AM	TITRATOR_151211B
	MW-2	Aqueous	E300	Anions by IC method - Water	72840	100	12/20/15 12:21 PM	IC2_151219B
	MW-2	Aqueous	E300	Anions by IC method - Water	72830	10	12/19/15 05:17 PM	IC3_151219A
	MW-2	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-07A	MW-02-15	Aqueous	SW8021B	Volatile Organics by GC	72731	5	12/16/15 03:17 AM	GC8_151215A
1512136-07B	MW-02-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:50 AM	ICP-MS4_151215A
	MW-02-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:50 PM	ICP-MS4_151215A
	MW-02-15	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:02 PM	CETAC2_HG_151215D
1512136-07D	MW-02-15	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 10:18 AM	TITRATOR_151211B
	MW-02-15	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 05:37 PM	IC3_151219A
	MW-02-15	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-08A	MW-08	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/16/15 03:39 AM	GC8_151215A
1512136-08B	MW-08	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:52 AM	ICP-MS4_151215A

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Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512136-08B	MW-08	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:52 PM	ICP-MS4_151215A
	MW-08	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:04 PM	CETAC2_HG_151215D
1512136-08D	MW-08	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 10:29 AM	TITRATOR_151211B
	MW-08	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 05:58 PM	IC3_151219A
	MW-08	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-09A	MW-02-16	Aqueous	SW8021B	Volatile Organics by GC	72731	100	12/16/15 04:02 AM	GC8_151215A
1512136-09B	MW-02-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:54 AM	ICP-MS4_151215A
	MW-02-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:54 PM	ICP-MS4_151215A
	MW-02-16	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:07 PM	CETAC2_HG_151215D
1512136-09D	MW-02-16	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 10:43 AM	TITRATOR_151211B
	MW-02-16	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 07:41 PM	IC3_151219A
	MW-02-16	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-10A	MW-20	Aqueous	SW8021B	Volatile Organics by GC	72731	25	12/16/15 04:24 AM	GC8_151215A
1512136-10B	MW-20	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 11:56 AM	ICP-MS4_151215A
	MW-20	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 02:56 PM	ICP-MS4_151215A
	MW-20	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:09 PM	CETAC2_HG_151215D
1512136-10D	MW-20	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 10:54 AM	TITRATOR_151211B
	MW-20	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 08:02 PM	IC3_151219A
	MW-20	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-11A	MW-15	Aqueous	SW8021B	Volatile Organics by GC	72731	1	12/16/15 04:47 AM	GC8_151215A
1512136-11B	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	100	12/16/15 04:34 PM	ICP-MS4_151216B
	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	5000	12/16/15 05:16 PM	ICP-MS4_151216B
	MW-15	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:43 PM	ICP-MS4_151216B
	MW-15	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:16 PM	CETAC2_HG_151215D
1512136-11D	MW-15	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 11:27 AM	TITRATOR_151211B
	MW-15	Aqueous	E300	Anions by IC method - Water	72830	10	12/19/15 08:22 PM	IC3_151219A

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Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512136-11D	MW-15	Aqueous	E300	Anions by IC method - Water	72848	1000	12/21/15 06:45 PM	IC3_151221A
	MW-15	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-12A	MW-16	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 04:25 PM	GC8_151216A
1512136-12B	MW-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:38 PM	ICP-MS4_151216B
	MW-16	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:47 PM	ICP-MS4_151216B
	MW-16	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:18 PM	CETAC2_HG_151215D
1512136-12D	MW-16	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 11:31 AM	TITRATOR_151211B
	MW-16	Aqueous	E300	Anions by IC method - Water	72830	10	12/19/15 08:43 PM	IC3_151219A
	MW-16	Aqueous	E300	Anions by IC method - Water	72848	100	12/21/15 07:05 PM	IC3_151221A
	MW-16	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-13A	MW-17	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 05:33 PM	GC8_151216A
1512136-13B	MW-17	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:40 PM	ICP-MS4_151216B
	MW-17	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:48 PM	ICP-MS4_151216B
	MW-17	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:20 PM	CETAC2_HG_151215D
1512136-13D	MW-17	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 11:39 AM	TITRATOR_151211B
	MW-17	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 09:04 PM	IC3_151219A
	MW-17	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-14A	MW-23	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 05:55 PM	GC8_151216A
1512136-14B	MW-23	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:42 PM	ICP-MS4_151216B
	MW-23	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:50 PM	ICP-MS4_151216B
	MW-23	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:23 PM	CETAC2_HG_151215D
1512136-14D	MW-23	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 11:51 AM	TITRATOR_151211B
	MW-23	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 09:24 PM	IC3_151219A
	MW-23	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-15A	MW-24	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 06:18 PM	GC8_151216A
	MW-24	Aqueous	SW8021B	Volatile Organics by GC	72743	20	12/17/15 11:12 AM	GC8_151216A

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1512136-15B	MW-24	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:52 PM	ICP-MS4_151216B
	MW-24	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:44 PM	ICP-MS4_151216B
	MW-24	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:25 PM	CETAC2_HG_151215D
1512136-15D	MW-24	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 12:04 PM	TITRATOR_151211B
	MW-24	Aqueous	E300	Anions by IC method - Water	72830	10	12/19/15 09:45 PM	IC3_151219A
	MW-24	Aqueous	E300	Anions by IC method - Water	72848	100	12/21/15 08:07 PM	IC3_151221A
	MW-24	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-16A	EB-06	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 06:40 PM	GC8_151216A
1512136-16B	EB-06	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:13 PM	ICP-MS4_151215A
	EB-06	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:08 PM	ICP-MS4_151215A
	EB-06	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:27 PM	CETAC2_HG_151215D
1512136-16D	EB-06	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 12:08 PM	TITRATOR_151211B
	EB-06	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 10:05 PM	IC3_151219A
	EB-06	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-17A	P-02	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 07:03 PM	GC8_151216A
1512136-17B	P-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:15 PM	ICP-MS4_151215A
	P-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:10 PM	ICP-MS4_151215A
	P-02	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:29 PM	CETAC2_HG_151215D
1512136-17D	P-02	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 12:17 PM	TITRATOR_151211B
	P-02	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 10:26 PM	IC3_151219A
	P-02	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-18A	P-03	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 07:26 PM	GC8_151216A
1512136-18B	P-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:17 PM	ICP-MS4_151215A
	P-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:11 PM	ICP-MS4_151215A
	P-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:32 PM	CETAC2_HG_151215D
1512136-18D	P-03	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 12:26 PM	TITRATOR_151211B

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1512136-18D	P-03	Aqueous	E300	Anions by IC method - Water	72830	100	12/19/15 10:47 PM	IC3_151219A
	P-03	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-19A	MW-02-03	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 07:48 PM	GC8_151216A
1512136-19B	MW-02-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:13 PM	ICP-MS4_151215A
	MW-02-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:19 PM	ICP-MS4_151215A
	MW-02-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:34 PM	CETAC2_HG_151215D
1512136-19D	MW-02-03	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 12:32 PM	TITRATOR_151211B
	MW-02-03	Aqueous	E300	Anions by IC method - Water	72830	100	12/20/15 12:30 AM	IC3_151219A
	MW-02-03	Aqueous	M2540C	Total Dissolved Solids	72690	1	12/12/15 08:30 AM	WC_151211A
1512136-20A	MW-03	Aqueous	SW8021B	Volatile Organics by GC	72743	20	12/16/15 08:11 PM	GC8_151216A
1512136-20B	MW-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:21 PM	ICP-MS4_151215A
	MW-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:15 PM	ICP-MS4_151215A
	MW-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72715	1	12/15/15 02:36 PM	CETAC2_HG_151215D
1512136-20D	MW-03	Aqueous	M2320 B	Alkalinity	72674	1	12/11/15 12:52 PM	TITRATOR_151211B
	MW-03	Aqueous	E300	Anions by IC method - Water	72830	100	12/20/15 12:51 AM	IC3_151219A
	MW-03	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-21A	MW-02-04	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 08:33 PM	GC8_151216A
1512136-21B	MW-02-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:17 PM	ICP-MS4_151215A
	MW-02-04	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:23 PM	ICP-MS4_151215A
	MW-02-04	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:17 AM	CETAC2_HG_151217C
1512136-21D	MW-02-04	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 11:59 AM	TITRATOR_151214A
	MW-02-04	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 11:24 AM	IC2_151219A
	MW-02-04	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-22A	MW-02-11	Aqueous	SW8021B	Volatile Organics by GC	72743	200	12/16/15 09:41 PM	GC8_151216A
1512136-22B	MW-02-11	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:25 PM	ICP-MS4_151215A
	MW-02-11	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:19 PM	ICP-MS4_151215A

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1512136-22B	MW-02-11	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:28 AM	CETAC2_HG_151217C
1512136-22D	MW-02-11	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 12:23 PM	TITRATOR_151214A
	MW-02-11	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 12:08 PM	IC2_151219A
	MW-02-11	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-23A	MW-22	Aqueous	SW8021B	Volatile Organics by GC	72743	200	12/16/15 10:03 PM	GC8_151216A
1512136-23B	MW-22	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:27 PM	ICP-MS4_151215A
	MW-22	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:21 PM	ICP-MS4_151215A
	MW-22	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:31 AM	CETAC2_HG_151217C
1512136-23D	MW-22	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 12:39 PM	TITRATOR_151214A
	MW-22	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 01:00 PM	IC2_151219A
	MW-22	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-24A	MW-02-18	Aqueous	SW8021B	Volatile Organics by GC	72743	100	12/16/15 10:26 PM	GC8_151216A
1512136-24B	MW-02-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:29 PM	ICP-MS4_151215A
	MW-02-18	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:23 PM	ICP-MS4_151215A
	MW-02-18	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:33 AM	CETAC2_HG_151217C
1512136-24D	MW-02-18	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 12:57 PM	TITRATOR_151214A
	MW-02-18	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 01:15 PM	IC2_151219A
	MW-02-18	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-25A	MW-03-03	Aqueous	SW8021B	Volatile Organics by GC	72743	50	12/16/15 10:48 PM	GC8_151216A
1512136-25B	MW-03-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	1	12/15/15 03:25 PM	ICP-MS4_151215A
	MW-03-03	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72691	50	12/15/15 12:31 PM	ICP-MS4_151215A
	MW-03-03	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:35 AM	CETAC2_HG_151217C
1512136-25D	MW-03-03	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 01:15 PM	TITRATOR_151214A
	MW-03-03	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 01:30 PM	IC2_151219A
	MW-03-03	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-26A	MW-07	Aqueous	SW8021B	Volatile Organics by GC	72743	100	12/16/15 11:11 PM	GC8_151216A

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1512136-26B	MW-07	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:46 PM	ICP-MS4_151216B
	MW-07	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:54 PM	ICP-MS4_151216B
	MW-07	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/22/15 06:24 PM	ICP-MS4_151222D
	MW-07	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:37 AM	CETAC2_HG_151217C
1512136-26D	MW-07	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 01:30 PM	TITRATOR_151214A
	MW-07	Aqueous	E300	Anions by IC method - Water	72831	10	12/19/15 01:44 PM	IC2_151219A
	MW-07	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-27A	MW-12	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 11:33 PM	GC8_151216A
1512136-27B	MW-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:48 PM	ICP-MS4_151216B
	MW-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:56 PM	ICP-MS4_151216B
	MW-12	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:40 AM	CETAC2_HG_151217C
1512136-27D	MW-12	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 01:43 PM	TITRATOR_151214A
	MW-12	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 02:14 PM	IC2_151219A
	MW-12	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-28A	MW-02-12	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/16/15 11:56 PM	GC8_151216A
1512136-28B	MW-02-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:50 PM	ICP-MS4_151216B
	MW-02-12	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 07:58 PM	ICP-MS4_151216B
	MW-02-12	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:42 AM	CETAC2_HG_151217C
1512136-28D	MW-02-12	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 01:57 PM	TITRATOR_151214A
	MW-02-12	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 02:43 PM	IC2_151219A
	MW-02-12	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-29A	MW-05	Aqueous	SW8021B	Volatile Organics by GC	72743	1	12/17/15 12:19 AM	GC8_151216A
1512136-29B	MW-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 08:00 PM	ICP-MS4_151216B
	MW-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	50	12/16/15 04:52 PM	ICP-MS4_151216B
	MW-05	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:44 AM	CETAC2_HG_151217C
1512136-29D	MW-05	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 02:10 PM	TITRATOR_151214A

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512136-29D	MW-05	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 04:01 PM	IC2_151219A
	MW-05	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-30A	MW-02-06	Aqueous	SW8021B	Volatile Organics by GC	72743	50	12/17/15 11:34 AM	GC8_151216A
1512136-30B	MW-02-06	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	100	12/16/15 04:54 PM	ICP-MS4_151216B
	MW-02-06	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	1	12/16/15 08:02 PM	ICP-MS4_151216B
	MW-02-06	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:46 AM	CETAC2_HG_151217C
1512136-30D	MW-02-06	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 02:40 PM	TITRATOR_151214A
	MW-02-06	Aqueous	E300	Anions by IC method - Water	72831	1	12/19/15 04:16 PM	IC2_151219A
	MW-02-06	Aqueous	E300	Anions by IC method - Water	72831	100	12/19/15 04:30 PM	IC2_151219A
	MW-02-06	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-31A	MW-02-02	Aqueous	SW8021B	Volatile Organics by GC	72743	10	12/17/15 01:49 AM	GC8_151216A
1512136-31B	MW-02-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	100	12/16/15 05:25 PM	ICP-MS4_151216B
	MW-02-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	10	12/16/15 06:26 PM	ICP-MS4_151216B
	MW-02-02	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	5000	12/16/15 05:21 PM	ICP-MS4_151216B
	MW-02-02	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:53 AM	CETAC2_HG_151217C
1512136-31D	MW-02-02	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 03:19 PM	TITRATOR_151214A
	MW-02-02	Aqueous	E300	Anions by IC method - Water	72831	1000	12/19/15 04:45 PM	IC2_151219A
	MW-02-02	Aqueous	E300	Anions by IC method - Water	72831	10000	12/19/15 04:59 PM	IC2_151219A
	MW-02-02	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D
1512136-32A	MW-02-05	Aqueous	SW8021B	Volatile Organics by GC	72744	10	12/17/15 02:11 AM	GC8_151216A
1512136-32B	MW-02-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	5000	12/16/15 05:23 PM	ICP-MS4_151216B
	MW-02-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	100	12/16/15 05:27 PM	ICP-MS4_151216B
	MW-02-05	Aqueous	SW6020A	Dissolved Metals-ICPMS (0.45µ)	72736	20	12/16/15 06:28 PM	ICP-MS4_151216B
	MW-02-05	Aqueous	SW7470A	Mercury Filtered (0.45µ)	72734	1	12/17/15 11:56 AM	CETAC2_HG_151217C
1512136-32D	MW-02-05	Aqueous	M2320 B	Alkalinity	72711	1	12/14/15 03:43 PM	TITRATOR_151214A
	MW-02-05	Aqueous	E300	Anions by IC method - Water	72831	1000	12/19/15 05:14 PM	IC2_151219A

Lab Order: 1512136
Client: Larson & Associates
Project: Empire Abo

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1512136-32D	MW-02-05	Aqueous	E300	Anions by IC method - Water	72831	10000	12/19/15 05:29 PM	IC2_151219A
	MW-02-05	Aqueous	M2540C	Total Dissolved Solids	72716	1	12/15/15 08:00 AM	WC_151214D

DHL Analytical, Inc.

Date: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-14
Project:	Empire Abo	**Lab ID:**	1512136-01
Project No:	6-0141	**Collection Date:**	12/08/15 09:00 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.111	0.000800	0.00200		mg/L	1	12/16/15 12:41 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 12:41 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 12:41 PM
Xylenes, Total	0.0153	0.00300	0.00900		mg/L	1	12/16/15 12:41 PM
Surr: a,a,a-Trifluorotoluene	95.7	0	87-113		%REC	1	12/16/15 12:41 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 01:39 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:36 PM
Barium	0.0193	0.00300	0.0100		mg/L	1	12/15/15 02:36 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:36 PM
Calcium	545	10.0	30.0		mg/L	100	12/15/15 11:37 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:36 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:36 PM
Magnesium	116	10.0	30.0		mg/L	100	12/15/15 11:37 AM
Potassium	4.63	0.100	0.300		mg/L	1	12/15/15 02:36 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:36 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:36 PM
Sodium	141	10.0	30.0		mg/L	100	12/15/15 11:37 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	125	30.0	100		mg/L	100	12/19/15 01:27 PM
Sulfate	1720	100	300		mg/L	100	12/19/15 01:27 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	600	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 09:35 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 09:35 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 09:35 AM
Alkalinity, Total (As CaCO3)	600	20.0	20.0		mg/L @ pH 4.52	1	12/11/15 09:35 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2960	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-02
Project:	Empire Abo	**Lab ID:**	1512136-02
Project No:	6-0141	**Collection Date:**	12/08/15 09:45 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/15/15 11:54 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/15/15 11:54 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/15/15 11:54 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/15/15 11:54 PM
Surr: a,a,a-Trifluorotoluene	93.7	0	87-113		%REC	1	12/15/15 11:54 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 01:42 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:40 PM
Barium	0.00947	0.00300	0.0100	J	mg/L	1	12/15/15 02:40 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:40 PM
Calcium	498	5.00	15.0		mg/L	50	12/15/15 11:41 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:40 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:40 PM
Magnesium	293	5.00	15.0		mg/L	50	12/15/15 11:41 AM
Potassium	9.57	0.100	0.300		mg/L	1	12/15/15 02:40 PM
Selenium	0.00364	0.00200	0.00500	J	mg/L	1	12/15/15 02:40 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:40 PM
Sodium	157	5.00	15.0		mg/L	50	12/15/15 11:41 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	83.5	30.0	100	J	mg/L	100	12/19/15 02:11 PM
Sulfate	2850	100	300		mg/L	100	12/19/15 02:11 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	302	10.0	20.0		mg/L @ pH 4.34	1	12/11/15 09:42 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.34	1	12/11/15 09:42 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.34	1	12/11/15 09:42 AM
Alkalinity, Total (As CaCO3)	302	20.0	20.0		mg/L @ pH 4.34	1	12/11/15 09:42 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3990	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-05
Project:	Empire Abo	**Lab ID:**	1512136-03
Project No:	6-0141	**Collection Date:**	12/08/15 10:30 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 01:01 AM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 01:01 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 01:01 AM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 01:01 AM
Surr: a,a,a-Trifluorotoluene	93.6	0	87-113		%REC	1	12/16/15 01:01 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 01:53 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00307	0.00200	0.00500	J	mg/L	1	12/15/15 02:42 PM
Barium	0.0209	0.00300	0.0100		mg/L	1	12/15/15 02:42 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:42 PM
Calcium	606	5.00	15.0		mg/L	50	12/15/15 11:43 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:42 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:42 PM
Magnesium	59.5	5.00	15.0		mg/L	50	12/15/15 11:43 AM
Potassium	5.44	0.100	0.300		mg/L	1	12/15/15 02:42 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:42 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:42 PM
Sodium	75.9	5.00	15.0		mg/L	50	12/15/15 11:43 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	124	30.0	100		mg/L	100	12/19/15 03:13 PM
Sulfate	1640	100	300		mg/L	100	12/19/15 03:13 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	363	10.0	20.0		mg/L @ pH 4.33	1	12/11/15 09:50 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.33	1	12/11/15 09:50 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.33	1	12/11/15 09:50 AM
Alkalinity, Total (As CaCO3)	363	20.0	20.0		mg/L @ pH 4.33	1	12/11/15 09:50 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2730	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	P-01
Project:	Empire Abo	**Lab ID:**	1512136-04
Project No:	6-0141	**Collection Date:**	12/08/15 10:45 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 01:24 AM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 01:24 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 01:24 AM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 01:24 AM
Surr: a,a,a-Trifluorotoluene	93.7	0	87-113		%REC	1	12/16/15 01:24 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 01:55 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.118	0.00200	0.00500		mg/L	1	12/15/15 02:44 PM
Barium	0.0273	0.00300	0.0100		mg/L	1	12/15/15 02:44 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:44 PM
Calcium	454	5.00	15.0		mg/L	50	12/15/15 11:45 AM
Chromium	0.0327	0.00200	0.00500		mg/L	1	12/15/15 02:44 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:44 PM
Magnesium	592	5.00	15.0		mg/L	50	12/15/15 11:45 AM
Potassium	8.13	0.100	0.300		mg/L	1	12/15/15 02:44 PM
Selenium	0.0141	0.00200	0.00500		mg/L	1	12/15/15 02:44 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:44 PM
Sodium	64.8	5.00	15.0		mg/L	50	12/15/15 11:45 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	97.9	30.0	100	J	mg/L	100	12/19/15 04:15 PM
Sulfate	4480	100	300		mg/L	100	12/19/15 04:15 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 3.9	1	12/11/15 10:55 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 3.9	1	12/11/15 10:55 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 3.9	1	12/11/15 10:55 AM
Alkalinity, Total (As CaCO3)	<20.0	20.0	20.0		mg/L @ pH 3.9	1	12/11/15 10:55 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	6600	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-18
Project:	Empire Abo	**Lab ID:**	1512136-05
Project No:	6-0141	**Collection Date:**	12/08/15 11:00 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 01:46 AM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 01:46 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 01:46 AM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 01:46 AM
Surr: a,a,a-Trifluorotoluene	93.2	0	87-113		%REC	1	12/16/15 01:46 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 01:57 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:46 PM
Barium	0.0139	0.00300	0.0100		mg/L	1	12/15/15 02:46 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:46 PM
Calcium	638	5.00	15.0		mg/L	50	12/15/15 11:46 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:46 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:46 PM
Magnesium	137	5.00	15.0		mg/L	50	12/15/15 11:46 AM
Potassium	4.34	0.100	0.300		mg/L	1	12/15/15 02:46 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:46 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:46 PM
Sodium	57.2	5.00	15.0		mg/L	50	12/15/15 11:46 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	385	30.0	100		mg/L	100	12/19/15 04:35 PM
Sulfate	1720	100	300		mg/L	100	12/19/15 04:35 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	202	10.0	20.0		mg/L @ pH 4.15	1	12/11/15 09:59 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.15	1	12/11/15 09:59 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.15	1	12/11/15 09:59 AM
Alkalinity, Total (As CaCO3)	202	20.0	20.0		mg/L @ pH 4.15	1	12/11/15 09:59 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3100	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-2
Project:	Empire Abo	**Lab ID:**	1512136-06
Project No:	6-0141	**Collection Date:**	12/08/15 12:15 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 02:09 AM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 02:09 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 02:09 AM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 02:09 AM
Surr: a,a,a-Trifluorotoluene	93.9	0	87-113		%REC	1	12/16/15 02:09 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:00 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00512	0.00200	0.00500		mg/L	1	12/15/15 02:48 PM
Barium	0.0419	0.00300	0.0100		mg/L	1	12/15/15 02:48 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:48 PM
Calcium	540	5.00	15.0		mg/L	50	12/15/15 11:48 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:48 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:48 PM
Magnesium	114	5.00	15.0		mg/L	50	12/15/15 11:48 AM
Potassium	20.8	0.100	0.300		mg/L	1	12/15/15 02:48 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:48 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:48 PM
Sodium	120	5.00	15.0		mg/L	50	12/15/15 11:48 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	125	3.00	10.0		mg/L	10	12/19/15 05:17 PM
Sulfate	1650	100	300		mg/L	100	12/20/15 12:21 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	276	10.0	20.0		mg/L @ pH 4.48	1	12/11/15 10:07 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.48	1	12/11/15 10:07 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.48	1	12/11/15 10:07 AM
Alkalinity, Total (As CaCO3)	276	20.0	20.0		mg/L @ pH 4.48	1	12/11/15 10:07 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3020	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-15
Project:	Empire Abo	**Lab ID:**	1512136-07
Project No:	6-0141	**Collection Date:**	12/08/15 12:45 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.448	0.00400	0.0100		mg/L	5	12/16/15 03:17 AM
Ethylbenzene	<0.0300	0.0100	0.0300		mg/L	5	12/16/15 03:17 AM
Toluene	<0.0300	0.0100	0.0300		mg/L	5	12/16/15 03:17 AM
Xylenes, Total	<0.0450	0.0150	0.0450		mg/L	5	12/16/15 03:17 AM
Surr: a,a,a-Trifluorotoluene	93.6	0	87-113		%REC	5	12/16/15 03:17 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:02 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.0100	0.00200	0.00500		mg/L	1	12/15/15 02:50 PM
Barium	0.0207	0.00300	0.0100		mg/L	1	12/15/15 02:50 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:50 PM
Calcium	709	5.00	15.0		mg/L	50	12/15/15 11:50 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:50 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:50 PM
Magnesium	114	5.00	15.0		mg/L	50	12/15/15 11:50 AM
Potassium	10.7	0.100	0.300		mg/L	1	12/15/15 02:50 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:50 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:50 PM
Sodium	427	5.00	15.0		mg/L	50	12/15/15 11:50 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	785	30.0	100		mg/L	100	12/19/15 05:37 PM
Sulfate	1660	100	300		mg/L	100	12/19/15 05:37 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	644	10.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:18 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:18 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:18 AM
Alkalinity, Total (As CaCO3)	644	20.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:18 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	4250	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-08
Project:	Empire Abo	**Lab ID:**	1512136-08
Project No:	6-0141	**Collection Date:**	12/08/15 01:30 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 03:39 AM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 03:39 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 03:39 AM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 03:39 AM
Surr: a,a,a-Trifluorotoluene	93.2	0	87-113		%REC	1	12/16/15 03:39 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:04 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00588	0.00200	0.00500		mg/L	1	12/15/15 02:52 PM
Barium	0.0193	0.00300	0.0100		mg/L	1	12/15/15 02:52 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:52 PM
Calcium	450	5.00	15.0		mg/L	50	12/15/15 11:52 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:52 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:52 PM
Magnesium	123	5.00	15.0		mg/L	50	12/15/15 11:52 AM
Potassium	7.84	0.100	0.300		mg/L	1	12/15/15 02:52 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:52 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:52 PM
Sodium	278	5.00	15.0		mg/L	50	12/15/15 11:52 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	274	30.0	100		mg/L	100	12/19/15 05:58 PM
Sulfate	1550	100	300		mg/L	100	12/19/15 05:58 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	461	10.0	20.0		mg/L @ pH 4.39	1	12/11/15 10:29 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.39	1	12/11/15 10:29 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.39	1	12/11/15 10:29 AM
Alkalinity, Total (As CaCO3)	461	20.0	20.0		mg/L @ pH 4.39	1	12/11/15 10:29 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3060	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-16
Project:	Empire Abo	**Lab ID:**	1512136-09
Project No:	6-0141	**Collection Date:**	12/08/15 02:45 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	8.22	0.0800	0.200		mg/L	100	12/16/15 04:02 AM
Ethylbenzene	0.534	0.200	0.600	J	mg/L	100	12/16/15 04:02 AM
Toluene	0.678	0.200	0.600		mg/L	100	12/16/15 04:02 AM
Xylenes, Total	<0.900	0.300	0.900		mg/L	100	12/16/15 04:02 AM
Surr: a,a,a-Trifluorotoluene	92.4	0	87-113		%REC	100	12/16/15 04:02 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:07 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.0122	0.00200	0.00500		mg/L	1	12/15/15 02:54 PM
Barium	0.0261	0.00300	0.0100		mg/L	1	12/15/15 02:54 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:54 PM
Calcium	643	5.00	15.0		mg/L	50	12/15/15 11:54 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:54 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:54 PM
Magnesium	95.2	5.00	15.0		mg/L	50	12/15/15 11:54 AM
Potassium	14.7	0.100	0.300		mg/L	1	12/15/15 02:54 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:54 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:54 PM
Sodium	259	5.00	15.0		mg/L	50	12/15/15 11:54 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	234	30.0	100		mg/L	100	12/19/15 07:41 PM
Sulfate	1660	100	300		mg/L	100	12/19/15 07:41 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	817	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 10:43 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 10:43 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 10:43 AM
Alkalinity, Total (As CaCO3)	817	20.0	20.0		mg/L @ pH 4.54	1	12/11/15 10:43 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3350	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-20
Project:	Empire Abo	**Lab ID:**	1512136-10
Project No:	6-0141	**Collection Date:**	12/08/15 03:30 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.556	0.0200	0.0500		mg/L	25	12/16/15 04:24 AM
Ethylbenzene	<0.150	0.0500	0.150		mg/L	25	12/16/15 04:24 AM
Toluene	<0.150	0.0500	0.150		mg/L	25	12/16/15 04:24 AM
Xylenes, Total	<0.225	0.0750	0.225		mg/L	25	12/16/15 04:24 AM
Surr: a,a,a-Trifluorotoluene	93.7	0	87-113		%REC	25	12/16/15 04:24 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:09 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:56 PM
Barium	0.0145	0.00300	0.0100		mg/L	1	12/15/15 02:56 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:56 PM
Calcium	556	5.00	15.0		mg/L	50	12/15/15 11:56 AM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:56 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 02:56 PM
Magnesium	137	5.00	15.0		mg/L	50	12/15/15 11:56 AM
Potassium	5.23	0.100	0.300		mg/L	1	12/15/15 02:56 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 02:56 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 02:56 PM
Sodium	270	5.00	15.0		mg/L	50	12/15/15 11:56 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	136	30.0	100		mg/L	100	12/19/15 08:02 PM
Sulfate	2020	100	300		mg/L	100	12/19/15 08:02 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	553	10.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:54 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:54 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:54 AM
Alkalinity, Total (As CaCO3)	553	20.0	20.0		mg/L @ pH 4.53	1	12/11/15 10:54 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3280	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-15
Project:	Empire Abo	**Lab ID:**	1512136-11
Project No:	6-0141	**Collection Date:**	12/08/15 10:38 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 04:47 AM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 04:47 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 04:47 AM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 04:47 AM
Surr: a,a,a-Trifluorotoluene	91.4	0	87-113		%REC	1	12/16/15 04:47 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:16 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00734	0.00200	0.00500		mg/L	1	12/16/15 07:43 PM
Barium	0.0135	0.00300	0.0100		mg/L	1	12/16/15 07:43 PM
Cadmium	0.000456	0.000300	0.00100	J	mg/L	1	12/16/15 07:43 PM
Calcium	428	10.0	30.0		mg/L	100	12/16/15 04:34 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:43 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:43 PM
Magnesium	5870	500	1500		mg/L	5000	12/16/15 05:16 PM
Potassium	201	10.0	30.0		mg/L	100	12/16/15 04:34 PM
Selenium	0.00449	0.00200	0.00500	J	mg/L	1	12/16/15 07:43 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:43 PM
Sodium	7560	500	1500		mg/L	5000	12/16/15 05:16 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	2480	300	1000		mg/L	1000	12/21/15 06:45 PM
Sulfate	39800	1000	3000		mg/L	1000	12/21/15 06:45 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	747	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:27 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:27 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:27 AM
Alkalinity, Total (As CaCO3)	747	20.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:27 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	59400	1000	1000		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-16
Project:	Empire Abo	**Lab ID:**	1512136-12
Project No:	6-0141	**Collection Date:**	12/08/15 09:22 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 04:25 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 04:25 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 04:25 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 04:25 PM
Surr: a,a,a-Trifluorotoluene	92.9	0	87-113		%REC	1	12/16/15 04:25 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:18 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00285	0.00200	0.00500	J	mg/L	1	12/16/15 07:47 PM
Barium	0.00930	0.00300	0.0100	J	mg/L	1	12/16/15 07:47 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:47 PM
Calcium	485	5.00	15.0		mg/L	50	12/16/15 04:38 PM
Chromium	0.0173	0.00200	0.00500		mg/L	1	12/16/15 07:47 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:47 PM
Magnesium	248	5.00	15.0		mg/L	50	12/16/15 04:38 PM
Potassium	8.68	0.100	0.300		mg/L	1	12/16/15 07:47 PM
Selenium	0.00564	0.00200	0.00500		mg/L	1	12/16/15 07:47 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:47 PM
Sodium	240	5.00	15.0		mg/L	50	12/16/15 04:38 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	387	3.00	10.0		mg/L	10	12/19/15 08:43 PM
Sulfate	2430	100	300		mg/L	100	12/21/15 07:05 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	82.6	10.0	20.0		mg/L @ pH 4.23	1	12/11/15 11:31 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.23	1	12/11/15 11:31 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.23	1	12/11/15 11:31 AM
Alkalinity, Total (As CaCO3)	82.6	20.0	20.0		mg/L @ pH 4.23	1	12/11/15 11:31 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3760	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-17
Project:	Empire Abo	**Lab ID:**	1512136-13
Project No:	6-0141	**Collection Date:**	12/08/15 11:48 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 05:33 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 05:33 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 05:33 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 05:33 PM
Surr: a,a,a-Trifluorotoluene	93.7	0	87-113		%REC	1	12/16/15 05:33 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:20 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00543	0.00200	0.00500		mg/L	1	12/16/15 07:48 PM
Barium	0.0153	0.00300	0.0100		mg/L	1	12/16/15 07:48 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:48 PM
Calcium	497	5.00	15.0		mg/L	50	12/16/15 04:40 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:48 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:48 PM
Magnesium	189	5.00	15.0		mg/L	50	12/16/15 04:40 PM
Potassium	7.42	0.100	0.300		mg/L	1	12/16/15 07:48 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:48 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:48 PM
Sodium	128	5.00	15.0		mg/L	50	12/16/15 04:40 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	133	30.0	100		mg/L	100	12/19/15 09:04 PM
Sulfate	1980	100	300		mg/L	100	12/19/15 09:04 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	314	10.0	20.0		mg/L @ pH 4.4	1	12/11/15 11:39 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.4	1	12/11/15 11:39 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.4	1	12/11/15 11:39 AM
Alkalinity, Total (As CaCO3)	314	20.0	20.0		mg/L @ pH 4.4	1	12/11/15 11:39 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3220	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-23
Project:	Empire Abo	**Lab ID:**	1512136-14
Project No:	6-0141	**Collection Date:**	12/08/15 01:42 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.00900	0.000800	0.00200		mg/L	1	12/16/15 05:55 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 05:55 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 05:55 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 05:55 PM
Surr: a,a,a-Trifluorotoluene	93.8	0	87-113		%REC	1	12/16/15 05:55 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:23 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:50 PM
Barium	0.0179	0.00300	0.0100		mg/L	1	12/16/15 07:50 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:50 PM
Calcium	586	5.00	15.0		mg/L	50	12/16/15 04:42 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:50 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:50 PM
Magnesium	138	5.00	15.0		mg/L	50	12/16/15 04:42 PM
Potassium	6.78	0.100	0.300		mg/L	1	12/16/15 07:50 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:50 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:50 PM
Sodium	178	5.00	15.0		mg/L	50	12/16/15 04:42 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	198	30.0	100		mg/L	100	12/19/15 09:24 PM
Sulfate	1840	100	300		mg/L	100	12/19/15 09:24 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	499	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:51 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:51 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:51 AM
Alkalinity, Total (As CaCO3)	499	20.0	20.0		mg/L @ pH 4.54	1	12/11/15 11:51 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2410	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-24
Project:	Empire Abo	**Lab ID:**	1512136-15
Project No:	6-0141	**Collection Date:**	12/08/15 02:15 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	2.14	0.0160	0.0400		mg/L	20	12/17/15 11:12 AM
Ethylbenzene	0.743	0.0400	0.120		mg/L	20	12/17/15 11:12 AM
Toluene	<0.120	0.0400	0.120		mg/L	20	12/17/15 11:12 AM
Xylenes, Total	0.354	0.0600	0.180		mg/L	20	12/17/15 11:12 AM
Surr: a,a,a-Trifluorotoluene	93.9	0	87-113		%REC	20	12/17/15 11:12 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:25 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:52 PM
Barium	0.0221	0.00300	0.0100		mg/L	1	12/16/15 07:52 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:52 PM
Calcium	578	5.00	15.0		mg/L	50	12/16/15 04:44 PM
Chromium	0.00305	0.00200	0.00500	J	mg/L	1	12/16/15 07:52 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:52 PM
Magnesium	293	5.00	15.0		mg/L	50	12/16/15 04:44 PM
Potassium	3.61	0.100	0.300		mg/L	1	12/16/15 07:52 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:52 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:52 PM
Sodium	73.7	5.00	15.0		mg/L	50	12/16/15 04:44 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	84.9	3.00	10.0		mg/L	10	12/19/15 09:45 PM
Sulfate	2100	100	300		mg/L	100	12/21/15 08:07 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	817	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 12:04 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 12:04 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/11/15 12:04 PM
Alkalinity, Total (As CaCO3)	817	20.0	20.0		mg/L @ pH 4.54	1	12/11/15 12:04 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2960	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	EB-06
Project:	Empire Abo	**Lab ID:**	1512136-16
Project No:	6-0141	**Collection Date:**	12/08/15 12:39 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 06:40 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 06:40 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 06:40 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 06:40 PM
Surr: a,a,a-Trifluorotoluene	93.7	0	87-113		%REC	1	12/16/15 06:40 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:27 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00208	0.00200	0.00500	J	mg/L	1	12/15/15 03:08 PM
Barium	0.0124	0.00300	0.0100		mg/L	1	12/15/15 03:08 PM
Cadmium	0.000436	0.000300	0.00100	J	mg/L	1	12/15/15 03:08 PM
Calcium	530	5.00	15.0		mg/L	50	12/15/15 12:13 PM
Chromium	0.0676	0.00200	0.00500		mg/L	1	12/15/15 03:08 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:08 PM
Magnesium	132	5.00	15.0		mg/L	50	12/15/15 12:13 PM
Potassium	4.97	0.100	0.300		mg/L	1	12/15/15 03:08 PM
Selenium	0.00380	0.00200	0.00500	J	mg/L	1	12/15/15 03:08 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:08 PM
Sodium	46.6	5.00	15.0		mg/L	50	12/15/15 12:13 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	147	30.0	100		mg/L	100	12/19/15 10:05 PM
Sulfate	1790	100	300		mg/L	100	12/19/15 10:05 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	104	10.0	20.0		mg/L @ pH 4.35	1	12/11/15 12:08 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.35	1	12/11/15 12:08 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.35	1	12/11/15 12:08 PM
Alkalinity, Total (As CaCO3)	104	20.0	20.0		mg/L @ pH 4.35	1	12/11/15 12:08 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2640	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	P-02
Project:	Empire Abo	**Lab ID:**	1512136-17
Project No:	6-0141	**Collection Date:**	12/08/15 01:15 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 07:03 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 07:03 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 07:03 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 07:03 PM
Surr: a,a,a-Trifluorotoluene	93.8	0	87-113		%REC	1	12/16/15 07:03 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:29 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:10 PM
Barium	0.0168	0.00300	0.0100		mg/L	1	12/15/15 03:10 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:10 PM
Calcium	567	5.00	15.0		mg/L	50	12/15/15 12:15 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:10 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:10 PM
Magnesium	189	5.00	15.0		mg/L	50	12/15/15 12:15 PM
Potassium	4.47	0.100	0.300		mg/L	1	12/15/15 03:10 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:10 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:10 PM
Sodium	43.6	5.00	15.0		mg/L	50	12/15/15 12:15 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	74.2	30.0	100	J	mg/L	100	12/19/15 10:26 PM
Sulfate	1930	100	300		mg/L	100	12/19/15 10:26 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	395	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:17 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:17 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:17 PM
Alkalinity, Total (As CaCO3)	395	20.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:17 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3030	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	P-03
Project:	Empire Abo	**Lab ID:**	1512136-18
Project No:	6-0141	**Collection Date:**	12/08/15 02:42 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.00240	0.000800	0.00200		mg/L	1	12/16/15 07:26 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 07:26 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 07:26 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 07:26 PM
Surr: a,a,a-Trifluorotoluene	91.7	0	87-113		%REC	1	12/16/15 07:26 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:32 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:11 PM
Barium	0.0223	0.00300	0.0100		mg/L	1	12/15/15 03:11 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:11 PM
Calcium	536	5.00	15.0		mg/L	50	12/15/15 12:17 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:11 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:11 PM
Magnesium	120	5.00	15.0		mg/L	50	12/15/15 12:17 PM
Potassium	3.02	0.100	0.300		mg/L	1	12/15/15 03:11 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:11 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:11 PM
Sodium	63.4	5.00	15.0		mg/L	50	12/15/15 12:17 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	88.6	30.0	100	J	mg/L	100	12/19/15 10:47 PM
Sulfate	1810	100	300		mg/L	100	12/19/15 10:47 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	246	10.0	20.0		mg/L @ pH 4.23	1	12/11/15 12:26 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.23	1	12/11/15 12:26 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.23	1	12/11/15 12:26 PM
Alkalinity, Total (As CaCO3)	246	20.0	20.0		mg/L @ pH 4.23	1	12/11/15 12:26 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2660	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-03
Project:	Empire Abo	**Lab ID:**	1512136-19
Project No:	6-0141	**Collection Date:**	12/09/15 09:22 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 07:48 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 07:48 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 07:48 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 07:48 PM
Surr: a,a,a-Trifluorotoluene	93.9	0	87-113		%REC	1	12/16/15 07:48 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:34 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00276	0.00200	0.00500	J	mg/L	1	12/15/15 03:13 PM
Barium	0.00987	0.00300	0.0100	J	mg/L	1	12/15/15 03:13 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:13 PM
Calcium	534	5.00	15.0		mg/L	50	12/15/15 12:19 PM
Chromium	0.0651	0.00200	0.00500		mg/L	1	12/15/15 03:13 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:13 PM
Magnesium	127	5.00	15.0		mg/L	50	12/15/15 12:19 PM
Potassium	5.00	0.100	0.300		mg/L	1	12/15/15 03:13 PM
Selenium	0.00516	0.00200	0.00500		mg/L	1	12/15/15 03:13 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:13 PM
Sodium	47.5	5.00	15.0		mg/L	50	12/15/15 12:19 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	36.3	30.0	100	J	mg/L	100	12/20/15 12:30 AM
Sulfate	2020	100	300		mg/L	100	12/20/15 12:30 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	104	10.0	20.0		mg/L @ pH 4.27	1	12/11/15 12:32 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.27	1	12/11/15 12:32 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.27	1	12/11/15 12:32 PM
Alkalinity, Total (As CaCO3)	104	20.0	20.0		mg/L @ pH 4.27	1	12/11/15 12:32 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	1830	50.0	50.0		mg/L	1	12/12/15 08:30 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-03
Project:	Empire Abo	**Lab ID:**	1512136-20
Project No:	6-0141	**Collection Date:**	12/09/15 10:00 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	2.12	0.0160	0.0400		mg/L	20	12/16/15 08:11 PM
Ethylbenzene	0.190	0.0400	0.120		mg/L	20	12/16/15 08:11 PM
Toluene	<0.120	0.0400	0.120		mg/L	20	12/16/15 08:11 PM
Xylenes, Total	0.238	0.0600	0.180		mg/L	20	12/16/15 08:11 PM
Surr: a,a,a-Trifluorotoluene	92.9	0	87-113		%REC	20	12/16/15 08:11 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/15/15 02:36 PM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00272	0.00200	0.00500	J	mg/L	1	12/15/15 03:15 PM
Barium	0.0287	0.00300	0.0100		mg/L	1	12/15/15 03:15 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:15 PM
Calcium	475	5.00	15.0		mg/L	50	12/15/15 12:21 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:15 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:15 PM
Magnesium	92.7	5.00	15.0		mg/L	50	12/15/15 12:21 PM
Potassium	12.3	0.100	0.300		mg/L	1	12/15/15 03:15 PM
Selenium	0.121	0.00200	0.00500		mg/L	1	12/15/15 03:15 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:15 PM
Sodium	112	5.00	15.0		mg/L	50	12/15/15 12:21 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	104	30.0	100		mg/L	100	12/20/15 12:51 AM
Sulfate	1220	100	300		mg/L	100	12/20/15 12:51 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	627	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:52 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:52 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:52 PM
Alkalinity, Total (As CaCO3)	627	20.0	20.0		mg/L @ pH 4.52	1	12/11/15 12:52 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2640	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-04
Project:	Empire Abo	**Lab ID:**	1512136-21
Project No:	6-0141	**Collection Date:**	12/09/15 10:48 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.00200	0.000800	0.00200		mg/L	1	12/16/15 08:33 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 08:33 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 08:33 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 08:33 PM
Surr: a,a,a-Trifluorotoluene	93.3	0	87-113		%REC	1	12/16/15 08:33 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:17 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00788	0.00200	0.00500		mg/L	1	12/15/15 03:17 PM
Barium	0.0197	0.00300	0.0100		mg/L	1	12/15/15 03:17 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:17 PM
Calcium	540	5.00	15.0		mg/L	50	12/15/15 12:23 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:17 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:17 PM
Magnesium	134	5.00	15.0		mg/L	50	12/15/15 12:23 PM
Potassium	11.1	0.100	0.300		mg/L	1	12/15/15 03:17 PM
Selenium	0.00496	0.00200	0.00500	J	mg/L	1	12/15/15 03:17 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:17 PM
Sodium	63.8	5.00	15.0		mg/L	50	12/15/15 12:23 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	62.1	30.0	100	J	mg/L	100	12/19/15 11:24 AM
Sulfate	1480	100	300		mg/L	100	12/19/15 11:24 AM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	253	10.0	20.0		mg/L @ pH 4.5	1	12/14/15 11:59 AM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.5	1	12/14/15 11:59 AM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.5	1	12/14/15 11:59 AM
Alkalinity, Total (As CaCO3)	253	20.0	20.0		mg/L @ pH 4.5	1	12/14/15 11:59 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2580	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-11
Project:	Empire Abo	**Lab ID:**	1512136-22
Project No:	6-0141	**Collection Date:**	12/09/15 01:05 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	29.6	0.160	0.400		mg/L	200	12/16/15 09:41 PM
Ethylbenzene	0.539	0.400	1.20	J	mg/L	200	12/16/15 09:41 PM
Toluene	<1.20	0.400	1.20		mg/L	200	12/16/15 09:41 PM
Xylenes, Total	0.813	0.600	1.80	J	mg/L	200	12/16/15 09:41 PM
Surr: a,a,a-Trifluorotoluene	93.6	0	87-113		%REC	200	12/16/15 09:41 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:28 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00212	0.00200	0.00500	J	mg/L	1	12/15/15 03:19 PM
Barium	0.0161	0.00300	0.0100		mg/L	1	12/15/15 03:19 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:19 PM
Calcium	630	5.00	15.0		mg/L	50	12/15/15 12:25 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:19 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:19 PM
Magnesium	228	5.00	15.0		mg/L	50	12/15/15 12:25 PM
Potassium	3.83	0.100	0.300		mg/L	1	12/15/15 03:19 PM
Selenium	0.00227	0.00200	0.00500	J	mg/L	1	12/15/15 03:19 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:19 PM
Sodium	101	5.00	15.0		mg/L	50	12/15/15 12:25 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	75.2	30.0	100	J	mg/L	100	12/19/15 12:08 PM
Sulfate	1710	100	300		mg/L	100	12/19/15 12:08 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	834	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:23 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:23 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:23 PM
Alkalinity, Total (As CaCO3)	834	20.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:23 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3720	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-22
Project:	Empire Abo	**Lab ID:**	1512136-23
Project No:	6-0141	**Collection Date:**	12/09/15 11:40 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	3.54	0.160	0.400		mg/L	200	12/16/15 10:03 PM
Ethylbenzene	<1.20	0.400	1.20		mg/L	200	12/16/15 10:03 PM
Toluene	<1.20	0.400	1.20		mg/L	200	12/16/15 10:03 PM
Xylenes, Total	<1.80	0.600	1.80		mg/L	200	12/16/15 10:03 PM
Surr: a,a,a-Trifluorotoluene	93.2	0	87-113		%REC	200	12/16/15 10:03 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:31 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:21 PM
Barium	0.0207	0.00300	0.0100		mg/L	1	12/15/15 03:21 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:21 PM
Calcium	605	5.00	15.0		mg/L	50	12/15/15 12:27 PM
Chromium	0.0284	0.00200	0.00500		mg/L	1	12/15/15 03:21 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:21 PM
Magnesium	185	5.00	15.0		mg/L	50	12/15/15 12:27 PM
Potassium	4.11	0.100	0.300		mg/L	1	12/15/15 03:21 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:21 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:21 PM
Sodium	56.4	5.00	15.0		mg/L	50	12/15/15 12:27 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	68.4	30.0	100	J	mg/L	100	12/19/15 01:00 PM
Sulfate	1650	100	300		mg/L	100	12/19/15 01:00 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	611	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 12:39 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 12:39 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 12:39 PM
Alkalinity, Total (As CaCO3)	611	20.0	20.0		mg/L @ pH 4.53	1	12/14/15 12:39 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3310	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-18
Project:	Empire Abo	**Lab ID:**	1512136-24
Project No:	6-0141	**Collection Date:**	12/09/15 12:15 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	10.5	0.0800	0.200		mg/L	100	12/16/15 10:26 PM
Ethylbenzene	0.291	0.200	0.600	J	mg/L	100	12/16/15 10:26 PM
Toluene	<0.600	0.200	0.600		mg/L	100	12/16/15 10:26 PM
Xylenes, Total	<0.900	0.300	0.900		mg/L	100	12/16/15 10:26 PM
Surr: a,a,a-Trifluorotoluene	92.9	0	87-113		%REC	100	12/16/15 10:26 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:33 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:23 PM
Barium	0.0177	0.00300	0.0100		mg/L	1	12/15/15 03:23 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:23 PM
Calcium	570	5.00	15.0		mg/L	50	12/15/15 12:29 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:23 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:23 PM
Magnesium	201	5.00	15.0		mg/L	50	12/15/15 12:29 PM
Potassium	3.17	0.100	0.300		mg/L	1	12/15/15 03:23 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:23 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:23 PM
Sodium	63.6	5.00	15.0		mg/L	50	12/15/15 12:29 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	50.1	30.0	100	J	mg/L	100	12/19/15 01:15 PM
Sulfate	1610	100	300		mg/L	100	12/19/15 01:15 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	677	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:57 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:57 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:57 PM
Alkalinity, Total (As CaCO3)	677	20.0	20.0		mg/L @ pH 4.54	1	12/14/15 12:57 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3560	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-03-03
Project:	Empire Abo	**Lab ID:**	1512136-25
Project No:	6-0141	**Collection Date:**	12/09/15 12:50 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	2.52	0.0400	0.100		mg/L	50	12/16/15 10:48 PM
Ethylbenzene	<0.300	0.100	0.300		mg/L	50	12/16/15 10:48 PM
Toluene	<0.300	0.100	0.300		mg/L	50	12/16/15 10:48 PM
Xylenes, Total	<0.450	0.150	0.450		mg/L	50	12/16/15 10:48 PM
Surr: a,a,a-Trifluorotoluene	93.2	0	87-113		%REC	50	12/16/15 10:48 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:35 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00577	0.00200	0.00500		mg/L	1	12/15/15 03:25 PM
Barium	0.0238	0.00300	0.0100		mg/L	1	12/15/15 03:25 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:25 PM
Calcium	499	5.00	15.0		mg/L	50	12/15/15 12:31 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:25 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/15/15 03:25 PM
Magnesium	107	5.00	15.0		mg/L	50	12/15/15 12:31 PM
Potassium	10.4	0.100	0.300		mg/L	1	12/15/15 03:25 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/15/15 03:25 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/15/15 03:25 PM
Sodium	221	5.00	15.0		mg/L	50	12/15/15 12:31 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	279	30.0	100		mg/L	100	12/19/15 01:30 PM
Sulfate	1150	100	300		mg/L	100	12/19/15 01:30 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	715	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 01:15 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 01:15 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 01:15 PM
Alkalinity, Total (As CaCO3)	715	20.0	20.0		mg/L @ pH 4.54	1	12/14/15 01:15 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3090	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-07
Project:	Empire Abo	**Lab ID:**	1512136-26
Project No:	6-0141	**Collection Date:**	12/09/15 09:15 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	7.26	0.0800	0.200		mg/L	100	12/16/15 11:11 PM
Ethylbenzene	0.873	0.200	0.600		mg/L	100	12/16/15 11:11 PM
Toluene	1.28	0.200	0.600		mg/L	100	12/16/15 11:11 PM
Xylenes, Total	0.655	0.300	0.900	J	mg/L	100	12/16/15 11:11 PM
Surr: a,a,a-Trifluorotoluene	93.8	0	87-113		%REC	100	12/16/15 11:11 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:37 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00453	0.00200	0.00500	J	mg/L	1	12/16/15 07:54 PM
Barium	0.0609	0.00300	0.0100		mg/L	1	12/16/15 07:54 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:54 PM
Calcium	528	5.00	15.0		mg/L	50	12/16/15 04:46 PM
Chromium	0.0574	0.00200	0.00500		mg/L	1	12/16/15 07:54 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:54 PM
Magnesium	14.5	0.100	0.300		mg/L	1	12/22/15 06:24 PM
Potassium	4.87	0.100	0.300		mg/L	1	12/16/15 07:54 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:54 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:54 PM
Sodium	10.4	0.100	0.300		mg/L	1	12/22/15 06:24 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	7.28	3.00	10.0	J	mg/L	10	12/19/15 01:44 PM
Sulfate	1210	10.0	30.0		mg/L	10	12/19/15 01:44 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	578	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:30 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:30 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:30 PM
Alkalinity, Total (As CaCO3)	578	20.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:30 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	2350	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-12
Project:	Empire Abo	**Lab ID:**	1512136-27
Project No:	6-0141	**Collection Date:**	12/09/15 09:45 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.0122	0.000800	0.00200		mg/L	1	12/16/15 11:33 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 11:33 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 11:33 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 11:33 PM
Surr: a,a,a-Trifluorotoluene	94.9	0	87-113		%REC	1	12/16/15 11:33 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:40 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:56 PM
Barium	0.0179	0.00300	0.0100		mg/L	1	12/16/15 07:56 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:56 PM
Calcium	537	5.00	15.0		mg/L	50	12/16/15 04:48 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:56 PM
Lead	0.000308	0.000300	0.00100	J	mg/L	1	12/16/15 07:56 PM
Magnesium	245	5.00	15.0		mg/L	50	12/16/15 04:48 PM
Potassium	5.26	0.100	0.300		mg/L	1	12/16/15 07:56 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:56 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:56 PM
Sodium	87.9	5.00	15.0		mg/L	50	12/16/15 04:48 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	79.8	30.0	100	J	mg/L	100	12/19/15 02:14 PM
Sulfate	1970	100	300		mg/L	100	12/19/15 02:14 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	461	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:43 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:43 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:43 PM
Alkalinity, Total (As CaCO3)	461	20.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:43 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3590	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-12
Project:	Empire Abo	**Lab ID:**	1512136-28
Project No:	6-0141	**Collection Date:**	12/09/15 10:30 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.00279	0.000800	0.00200		mg/L	1	12/16/15 11:56 PM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 11:56 PM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/16/15 11:56 PM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/16/15 11:56 PM
Surr: a,a,a-Trifluorotoluene	94.7	0	87-113		%REC	1	12/16/15 11:56 PM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:42 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.00290	0.00200	0.00500	J	mg/L	1	12/16/15 07:58 PM
Barium	0.0147	0.00300	0.0100		mg/L	1	12/16/15 07:58 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:58 PM
Calcium	546	5.00	15.0		mg/L	50	12/16/15 04:50 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:58 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 07:58 PM
Magnesium	130	5.00	15.0		mg/L	50	12/16/15 04:50 PM
Potassium	8.94	0.100	0.300		mg/L	1	12/16/15 07:58 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 07:58 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 07:58 PM
Sodium	238	5.00	15.0		mg/L	50	12/16/15 04:50 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	137	30.0	100		mg/L	100	12/19/15 02:43 PM
Sulfate	1710	100	300		mg/L	100	12/19/15 02:43 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	518	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:57 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:57 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:57 PM
Alkalinity, Total (As CaCO3)	518	20.0	20.0		mg/L @ pH 4.53	1	12/14/15 01:57 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3450	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-05
Project:	Empire Abo	**Lab ID:**	1512136-29
Project No:	6-0141	**Collection Date:**	12/09/15 11:30 AM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.00110	0.000800	0.00200	J	mg/L	1	12/17/15 12:19 AM
Ethylbenzene	<0.00600	0.00200	0.00600		mg/L	1	12/17/15 12:19 AM
Toluene	<0.00600	0.00200	0.00600		mg/L	1	12/17/15 12:19 AM
Xylenes, Total	<0.00900	0.00300	0.00900		mg/L	1	12/17/15 12:19 AM
Surr: a,a,a-Trifluorotoluene	94.7	0	87-113		%REC	1	12/17/15 12:19 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:44 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 08:00 PM
Barium	0.0138	0.00300	0.0100		mg/L	1	12/16/15 08:00 PM
Cadmium	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 08:00 PM
Calcium	517	5.00	15.0		mg/L	50	12/16/15 04:52 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 08:00 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 08:00 PM
Magnesium	128	5.00	15.0		mg/L	50	12/16/15 04:52 PM
Potassium	8.09	0.100	0.300		mg/L	1	12/16/15 08:00 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 08:00 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 08:00 PM
Sodium	226	5.00	15.0		mg/L	50	12/16/15 04:52 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	137	30.0	100		mg/L	100	12/19/15 04:01 PM
Sulfate	1640	100	300		mg/L	100	12/19/15 04:01 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	461	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 02:10 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 02:10 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.53	1	12/14/15 02:10 PM
Alkalinity, Total (As CaCO3)	461	20.0	20.0		mg/L @ pH 4.53	1	12/14/15 02:10 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3290	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-06
Project:	Empire Abo	**Lab ID:**	1512136-30
Project No:	6-0141	**Collection Date:**	12/09/15 12:00 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	0.721	0.0400	0.100		mg/L	50	12/17/15 11:34 AM
Ethylbenzene	1.76	0.100	0.300		mg/L	50	12/17/15 11:34 AM
Toluene	<0.300	0.100	0.300		mg/L	50	12/17/15 11:34 AM
Xylenes, Total	3.49	0.150	0.450		mg/L	50	12/17/15 11:34 AM
Surr: a,a,a-Trifluorotoluene	108	0	87-113		%REC	50	12/17/15 11:34 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:46 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.0122	0.00200	0.00500		mg/L	1	12/16/15 08:02 PM
Barium	0.0258	0.00300	0.0100		mg/L	1	12/16/15 08:02 PM
Cadmium	0.000412	0.000300	0.00100	J	mg/L	1	12/16/15 08:02 PM
Calcium	560	10.0	30.0		mg/L	100	12/16/15 04:54 PM
Chromium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 08:02 PM
Lead	<0.00100	0.000300	0.00100		mg/L	1	12/16/15 08:02 PM
Magnesium	161	10.0	30.0		mg/L	100	12/16/15 04:54 PM
Potassium	8.09	0.100	0.300		mg/L	1	12/16/15 08:02 PM
Selenium	<0.00500	0.00200	0.00500		mg/L	1	12/16/15 08:02 PM
Silver	<0.00200	0.00100	0.00200		mg/L	1	12/16/15 08:02 PM
Sodium	58.3	10.0	30.0		mg/L	100	12/16/15 04:54 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	36.3	0.300	1.00		mg/L	1	12/19/15 04:16 PM
Sulfate	1620	100	300		mg/L	100	12/19/15 04:30 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	495	10.0	20.0		mg/L @ pH 4.46	1	12/14/15 02:40 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.46	1	12/14/15 02:40 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.46	1	12/14/15 02:40 PM
Alkalinity, Total (As CaCO3)	495	20.0	20.0		mg/L @ pH 4.46	1	12/14/15 02:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	3170	50.0	50.0		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-02
Project:	Empire Abo	**Lab ID:**	1512136-31
Project No:	6-0141	**Collection Date:**	12/09/15 12:30 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.0200	0.00800	0.0200		mg/L	10	12/17/15 01:49 AM
Ethylbenzene	<0.0600	0.0200	0.0600		mg/L	10	12/17/15 01:49 AM
Toluene	<0.0600	0.0200	0.0600		mg/L	10	12/17/15 01:49 AM
Xylenes, Total	<0.0900	0.0300	0.0900		mg/L	10	12/17/15 01:49 AM
Surr: a,a,a-Trifluorotoluene	92.8	0	87-113		%REC	10	12/17/15 01:49 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:53 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.0680	0.0200	0.0500		mg/L	10	12/16/15 06:26 PM
Barium	<0.100	0.0300	0.100		mg/L	10	12/16/15 06:26 PM
Cadmium	0.00407	0.00300	0.0100	J	mg/L	10	12/16/15 06:26 PM
Calcium	209	1.00	3.00		mg/L	10	12/16/15 06:26 PM
Chromium	<0.0500	0.0200	0.0500		mg/L	10	12/16/15 06:26 PM
Lead	<0.0100	0.00300	0.0100		mg/L	10	12/16/15 06:26 PM
Magnesium	55500	500	1500		mg/L	5000	12/16/15 05:21 PM
Potassium	1630	10.0	30.0		mg/L	100	12/16/15 05:25 PM
Selenium	<0.0500	0.0200	0.0500		mg/L	10	12/16/15 06:26 PM
Silver	<0.0200	0.0100	0.0200		mg/L	10	12/16/15 06:26 PM
Sodium	60200	500	1500		mg/L	5000	12/16/15 05:21 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	9950	300	1000		mg/L	1000	12/19/15 04:45 PM
Sulfate	296000	10000	30000		mg/L	10000	12/19/15 04:59 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	6640	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:19 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:19 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:19 PM
Alkalinity, Total (As CaCO3)	6640	20.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:19 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	529000	5000	5000		mg/L	1	12/15/15 08:00 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: *29-Dec-15*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-02-05
Project:	Empire Abo	**Lab ID:**	1512136-32
Project No:	6-0141	**Collection Date:**	12/09/15 01:15 PM
Lab Order:	1512136	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS BY GC		**SW8021B**					Analyst: **LM**
Benzene	<0.0200	0.00800	0.0200		mg/L	10	12/17/15 02:11 AM
Ethylbenzene	<0.0600	0.0200	0.0600		mg/L	10	12/17/15 02:11 AM
Toluene	<0.0600	0.0200	0.0600		mg/L	10	12/17/15 02:11 AM
Xylenes, Total	<0.0900	0.0300	0.0900		mg/L	10	12/17/15 02:11 AM
Surr: a,a,a-Trifluorotoluene	92.9	0	87-113		%REC	10	12/17/15 02:11 AM
MERCURY FILTERED (0.45µ)		**SW7470A**					Analyst: **ABO**
Mercury	<0.000200	0.0000800	0.000200		mg/L	1	12/17/15 11:56 AM
DISSOLVED METALS-ICPMS (0.45µ)		**SW6020A**					Analyst: **RO**
Arsenic	0.0556	0.0400	0.100	J	mg/L	20	12/16/15 06:28 PM
Barium	<0.200	0.0600	0.200		mg/L	20	12/16/15 06:28 PM
Cadmium	<0.0200	0.00600	0.0200		mg/L	20	12/16/15 06:28 PM
Calcium	209	2.00	6.00		mg/L	20	12/16/15 06:28 PM
Chromium	<0.100	0.0400	0.100		mg/L	20	12/16/15 06:28 PM
Lead	<0.0200	0.00600	0.0200		mg/L	20	12/16/15 06:28 PM
Magnesium	54100	500	1500		mg/L	5000	12/16/15 05:23 PM
Potassium	1120	10.0	30.0		mg/L	100	12/16/15 05:27 PM
Selenium	<0.100	0.0400	0.100		mg/L	20	12/16/15 06:28 PM
Silver	<0.0400	0.0200	0.0400		mg/L	20	12/16/15 06:28 PM
Sodium	58200	500	1500		mg/L	5000	12/16/15 05:23 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **AV**
Chloride	5700	300	1000		mg/L	1000	12/19/15 05:14 PM
Sulfate	290000	10000	30000		mg/L	10000	12/19/15 05:29 PM
ALKALINITY		**M2320 B**					Analyst: **LM**
Alkalinity, Bicarbonate (As CaCO3)	7810	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:43 PM
Alkalinity, Carbonate (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:43 PM
Alkalinity, Hydroxide (As CaCO3)	<20.0	10.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:43 PM
Alkalinity, Total (As CaCO3)	7810	20.0	20.0		mg/L @ pH 4.54	1	12/14/15 03:43 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **BJT**
Total Dissolved Solids (Residue, Filterable)	545000	5000	5000		mg/L	1	12/15/15 08:00 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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151215A

The QC data in batch 72731 applies to the following samples: 1512136-01A, 1512136-02A, 1512136-03A, 1512136-04A, 1512136-05A, 1512136-06A, 1512136-07A, 1512136-08A, 1512136-09A, 1512136-10A, 1512136-11A

Sample ID **LCS-72731** Batch ID: **72731** TestNo: **SW8021B** Units: **mg/L**
SampType: **LCS** Run ID: **GC8_151215A** Analysis Date: **12/15/2015 3:35:55 PM** Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0468	0.00200	0.0464	0	101	81	125			
Toluene	0.0460	0.00600	0.0464	0	99.1	84	123			
Ethylbenzene	0.0465	0.00600	0.0464	0	100	83	119			
Xylenes, Total	0.140	0.00900	0.139	0	101	81	117			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.7	87	113			

Sample ID **MB-72731** Batch ID: **72731** TestNo: **SW8021B** Units: **mg/L**
SampType: **MBLK** Run ID: **GC8_151215A** Analysis Date: **12/15/2015 4:21:30 PM** Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Toluene	<0.00600	0.00600								
Ethylbenzene	<0.00600	0.00600								
Xylenes, Total	<0.00900	0.00900								
Surr: a,a,a-Trifluorotoluene	186		200.0		93.2	87	113			

Sample ID **1512136-02AMS** Batch ID: **72731** TestNo: **SW8021B** Units: **mg/L**
SampType: **MS** Run ID: **GC8_151215A** Analysis Date: **12/16/2015 12:16:36 A** Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0487	0.00200	0.0464	0	105	81	125			
Toluene	0.0475	0.00600	0.0464	0	102	84	123			
Ethylbenzene	0.0477	0.00600	0.0464	0	103	83	119			
Xylenes, Total	0.143	0.00900	0.139	0	103	81	117			
Surr: a,a,a-Trifluorotoluene	190		200.0		94.9	87	113			

Sample ID **1512136-02AMSD** Batch ID: **72731** TestNo: **SW8021B** Units: **mg/L**
SampType: **MSD** Run ID: **GC8_151215A** Analysis Date: **12/16/2015 12:39:07 A** Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0481	0.00200	0.0464	0	104	81	125	1.35	20	
Toluene	0.0471	0.00600	0.0464	0	102	84	123	0.835	20	
Ethylbenzene	0.0479	0.00600	0.0464	0	103	83	119	0.412	20	
Xylenes, Total	0.143	0.00900	0.139	0	102	81	117	0.501	20	
Surr: a,a,a-Trifluorotoluene	189		200.0		94.3	87	113	0	0	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151215A

Sample ID **ICV-151215**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_151215A**	Analysis Date: **12/15/2015 2:50:24 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0899	0.00200	0.0928	0	96.9	80	120			
Toluene	0.0894	0.00600	0.0928	0	96.3	80	120			
Ethylbenzene	0.0906	0.00600	0.0928	0	97.6	80	120			
Xylenes, Total	0.269	0.00900	0.278	0	96.7	80	120			
Surr: a,a,a-Trifluorotoluene	184		200.0		91.9	87	113			

Sample ID **CCV1-151215**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151215A**	Analysis Date: **12/15/2015 9:38:43 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0476	0.00200	0.0464	0	103	80	120			
Toluene	0.0466	0.00600	0.0464	0	100	80	120			
Ethylbenzene	0.0473	0.00600	0.0464	0	102	80	120			
Xylenes, Total	0.141	0.00900	0.139	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	183		200.0		91.3	87	113			

Sample ID **CCV2-151215**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151215A**	Analysis Date: **12/16/2015 2:54:28 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0471	0.00200	0.0464	0	102	80	120			
Toluene	0.0460	0.00600	0.0464	0	99.2	80	120			
Ethylbenzene	0.0466	0.00600	0.0464	0	100	80	120			
Xylenes, Total	0.139	0.00900	0.139	0	99.9	80	120			
Surr: a,a,a-Trifluorotoluene	186		200.0		92.9	87	113			

Sample ID **CCV3-151215**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151215A**	Analysis Date: **12/16/2015 7:25:22 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0476	0.00200	0.0464	0	103	80	120			
Toluene	0.0464	0.00600	0.0464	0	100	80	120			
Ethylbenzene	0.0469	0.00600	0.0464	0	101	80	120			
Xylenes, Total	0.140	0.00900	0.139	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	186		200.0		93.0	87	113			

Sample ID **CCV4-151215**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151215A**	Analysis Date: **12/16/2015 9:40:50 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0475	0.00200	0.0464	0	102	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151215A

Sample ID **CCV4-151215**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151215A**	Analysis Date: **12/16/2015 9:40:50 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	0.0464	0.00600	0.0464	0	100	80	120			
Ethylbenzene	0.0468	0.00600	0.0464	0	101	80	120			
Xylenes, Total	0.141	0.00900	0.139	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	188		200.0		94.0	87	113			

Sample ID **ICV-151216**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_151215A**	Analysis Date: **12/16/2015 10:26:00 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0907	0.00200	0.0928	0	97.7	80	120			
Toluene	0.0900	0.00600	0.0928	0	96.9	80	120			
Ethylbenzene	0.0905	0.00600	0.0928	0	97.5	80	120			
Xylenes, Total	0.271	0.00900	0.278	0	97.3	80	120			
Surr: a,a,a-Trifluorotoluene	188		200.0		93.9	87	113			

Sample ID **CCV5-151216**	Batch ID: **R83162**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151215A**	Analysis Date: **12/16/2015 1:27:03 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0473	0.00200	0.0464	0	102	80	120			
Toluene	0.0464	0.00600	0.0464	0	100	80	120			
Ethylbenzene	0.0469	0.00600	0.0464	0	101	80	120			
Xylenes, Total	0.140	0.00900	0.139	0	101	80	120			
Surr: a,a,a-Trifluorotoluene	188		200.0		94.0	87	113			

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151216A

The QC data in batch 72743 applies to the following samples: 1512136-12A, 1512136-13A, 1512136-14A, 1512136-15A, 1512136-16A, 1512136-17A, 1512136-18A, 1512136-19A, 1512136-20A, 1512136-21A, 1512136-22A, 1512136-23A, 1512136-24A, 1512136-25A, 1512136-26A, 1512136-27A, 1512136-28A, 1512136-29A, 1512136-30A, 1512136-31A

Sample ID **LCS-72743** Batch ID: **72743** TestNo: **SW8021B** Units: **mg/L**
SampType: **LCS** Run ID: **GC8_151216A** Analysis Date: **12/16/2015 2:54:27 PM** Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0479	0.00200	0.0464	0	103	81	125			
Toluene	0.0470	0.00600	0.0464	0	101	84	123			
Ethylbenzene	0.0474	0.00600	0.0464	0	102	83	119			
Xylenes, Total	0.142	0.00900	0.139	0	102	81	117			
Surr: a,a,a-Trifluorotoluene	188		200.0		94.0	87	113			

Sample ID **MB-72743** Batch ID: **72743** TestNo: **SW8021B** Units: **mg/L**
SampType: **MBLK** Run ID: **GC8_151216A** Analysis Date: **12/16/2015 3:39:59 PM** Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Toluene	<0.00600	0.00600								
Ethylbenzene	<0.00600	0.00600								
Xylenes, Total	<0.00900	0.00900								
Surr: a,a,a-Trifluorotoluene	187		200.0		93.6	87	113			

Sample ID **1512136-12AMS** Batch ID: **72743** TestNo: **SW8021B** Units: **mg/L**
SampType: **MS** Run ID: **GC8_151216A** Analysis Date: **12/16/2015 4:47:52 PM** Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0572	0.00200	0.0464	0	123	81	125			
Toluene	0.0552	0.00600	0.0464	0	119	84	123			
Ethylbenzene	0.0554	0.00600	0.0464	0	119	83	119			
Xylenes, Total	0.164	0.00900	0.139	0	118	81	117			S
Surr: a,a,a-Trifluorotoluene	185		200.0		92.6	87	113			

Sample ID **1512136-12AMSD** Batch ID: **72743** TestNo: **SW8021B** Units: **mg/L**
SampType: **MSD** Run ID: **GC8_151216A** Analysis Date: **12/16/2015 5:10:25 PM** Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0506	0.00200	0.0464	0	109	81	125	12.3	20	
Toluene	0.0493	0.00600	0.0464	0	106	84	123	11.2	20	
Ethylbenzene	0.0503	0.00600	0.0464	0	108	83	119	9.60	20	
Xylenes, Total	0.149	0.00900	0.139	0	107	81	117	9.34	20	
Surr: a,a,a-Trifluorotoluene	188		200.0		93.9	87	113	0	0	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151216A

The QC data in batch 72744 applies to the following samples: 1512136-32A

Sample ID **LCS-72744**	Batch ID: **72744**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **LCS**	Run ID: **GC8_151216A**	Analysis Date: **12/16/2015 3:17:12 PM**	Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0479	0.00200	0.0464	0	103	81	125			
Toluene	0.0470	0.00600	0.0464	0	101	84	123			
Ethylbenzene	0.0476	0.00600	0.0464	0	103	83	119			
Xylenes, Total	0.143	0.00900	0.139	0	103	81	117			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.6	87	113			

Sample ID **MB-72744**	Batch ID: **72744**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC8_151216A**	Analysis Date: **12/16/2015 4:02:41 PM**	Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Toluene	<0.00600	0.00600								
Ethylbenzene	<0.00600	0.00600								
Xylenes, Total	<0.00900	0.00900								
Surr: a,a,a-Trifluorotoluene	186		200.0		92.9	87	113			

Sample ID **1512170-06AMS**	Batch ID: **72744**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MS**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 4:49:13 AM**	Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0485	0.00200	0.0464	0	105	81	125			
Toluene	0.0473	0.00600	0.0464	0	102	84	123			
Ethylbenzene	0.0480	0.00600	0.0464	0	104	83	119			
Xylenes, Total	0.143	0.00900	0.139	0	103	81	117			
Surr: a,a,a-Trifluorotoluene	184		200.0		92.2	87	113			

Sample ID **1512170-06AMSD**	Batch ID: **72744**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MSD**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 5:11:40 AM**	Prep Date: **12/16/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0467	0.00200	0.0464	0	101	81	125	3.72	20	
Toluene	0.0457	0.00600	0.0464	0	98.6	84	123	3.35	20	
Ethylbenzene	0.0464	0.00600	0.0464	0	100	83	119	3.50	20	
Xylenes, Total	0.138	0.00900	0.139	0	99.3	81	117	3.25	20	
Surr: a,a,a-Trifluorotoluene	187		200.0		93.6	87	113	0	0	

Sample ID **MB-151217**	Batch ID: **72744**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 10:49:46 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151216A

Sample ID **MB-151217**	Batch ID: **72744**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 10:49:46 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	<0.00200	0.00200								
Toluene	<0.00600	0.00600								
Ethylbenzene	<0.00600	0.00600								
Xylenes, Total	<0.00900	0.00900								
Surr: a,a,a-Trifluorotoluene	185		200.0		92.5	87	113			

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151216A

Sample ID **ICV-151216**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_151216A**	Analysis Date: **12/16/2015 2:31:47 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0899	0.00200	0.0928	0	96.9	80	120			
Toluene	0.0892	0.00600	0.0928	0	96.1	80	120			
Ethylbenzene	0.0905	0.00600	0.0928	0	97.5	80	120			
Xylenes, Total	0.269	0.00900	0.278	0	96.9	80	120			
Surr: a,a,a-Trifluorotoluene	185		200.0		92.4	87	113			

Sample ID **CCV1-151216**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151216A**	Analysis Date: **12/16/2015 9:18:41 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0459	0.00200	0.0464	0	98.9	80	120			
Toluene	0.0446	0.00600	0.0464	0	96.2	80	120			
Ethylbenzene	0.0456	0.00600	0.0464	0	98.3	80	120			
Xylenes, Total	0.135	0.00900	0.139	0	97.3	80	120			
Surr: a,a,a-Trifluorotoluene	185		200.0		92.7	87	113			

Sample ID **CCV2-151216**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 1:26:35 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0464	0.00200	0.0464	0	100	80	120			
Toluene	0.0454	0.00600	0.0464	0	97.8	80	120			
Ethylbenzene	0.0457	0.00600	0.0464	0	98.5	80	120			
Xylenes, Total	0.137	0.00900	0.139	0	98.3	80	120			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.4	87	113			

Sample ID **CCV3-151216**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 6:41:35 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0494	0.00200	0.0464	0	106	80	120			
Toluene	0.0480	0.00600	0.0464	0	104	80	120			
Ethylbenzene	0.0486	0.00600	0.0464	0	105	80	120			
Xylenes, Total	0.145	0.00900	0.139	0	104	80	120			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.7	87	113			

Sample ID **CCV4-151216**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 9:41:51 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0468	0.00200	0.0464	0	101	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_151216A

Sample ID **CCV4-151216**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 9:41:51 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	0.0455	0.00600	0.0464	0	98.0	80	120			
Ethylbenzene	0.0461	0.00600	0.0464	0	99.4	80	120			
Xylenes, Total	0.137	0.00900	0.139	0	98.6	80	120			
Surr: a,a,a-Trifluorotoluene	189		200.0		94.7	87	113			

Sample ID **ICV-151217**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **ICV**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 10:27:10 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0895	0.00200	0.0928	0	96.5	80	120			
Toluene	0.0883	0.00600	0.0928	0	95.1	80	120			
Ethylbenzene	0.0897	0.00600	0.0928	0	96.7	80	120			
Xylenes, Total	0.267	0.00900	0.278	0	95.9	80	120			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.7	87	113			

Sample ID **CCV5-151217**	Batch ID: **R83192**	TestNo: **SW8021B**	Units: **mg/L**
SampType: **CCV**	Run ID: **GC8_151216A**	Analysis Date: **12/17/2015 1:28:11 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0464	0.00200	0.0464	0	99.9	80	120			
Toluene	0.0455	0.00600	0.0464	0	98.1	80	120			
Ethylbenzene	0.0459	0.00600	0.0464	0	99.0	80	120			
Xylenes, Total	0.137	0.00900	0.139	0	98.9	80	120			
Surr: a,a,a-Trifluorotoluene	187		200.0		93.5	87	113			

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151215D

The QC data in batch 72715 applies to the following samples: 1512136-01B, 1512136-02B, 1512136-03B, 1512136-04B, 1512136-05B, 1512136-06B, 1512136-07B, 1512136-08B, 1512136-09B, 1512136-10B, 1512136-11B, 1512136-12B, 1512136-13B, 1512136-14B, 1512136-15B, 1512136-16B, 1512136-17B, 1512136-18B, 1512136-19B, 1512136-20B

Sample ID **MB-72715** Batch ID: **72715** TestNo: **SW7470A** Units: **mg/L**
SampType: **MBLK** Run ID: **CETAC2_HG_151215D** Analysis Date: **12/15/2015 1:33:05 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000200	0.000200								

Sample ID **LCS-72715** Batch ID: **72715** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCS** Run ID: **CETAC2_HG_151215D** Analysis Date: **12/15/2015 1:35:20 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	85	115			

Sample ID **LCSD-72715** Batch ID: **72715** TestNo: **SW7470A** Units: **mg/L**
SampType: **LCSD** Run ID: **CETAC2_HG_151215D** Analysis Date: **12/15/2015 1:37:36 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	85	115	0	15	

Sample ID **1512136-02B SD** Batch ID: **72715** TestNo: **SW7470A** Units: **mg/L**
SampType: **SD** Run ID: **CETAC2_HG_151215D** Analysis Date: **12/15/2015 1:44:24 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00100	0.00100	0	0				0	10	

Sample ID **1512136-02B PDS** Batch ID: **72715** TestNo: **SW7470A** Units: **mg/L**
SampType: **PDS** Run ID: **CETAC2_HG_151215D** Analysis Date: **12/15/2015 1:46:40 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00237	0.000200	0.00250	0	94.8	85	115			

Sample ID **1512136-02B MS** Batch ID: **72715** TestNo: **SW7470A** Units: **mg/L**
SampType: **MS** Run ID: **CETAC2_HG_151215D** Analysis Date: **12/15/2015 1:48:55 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	80	120			

Sample ID **1512136-02B MSD** Batch ID: **72715** TestNo: **SW7470A** Units: **mg/L**
SampType: **MSD** Run ID: **CETAC2_HG_151215D** Analysis Date: **12/15/2015 1:51:11 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	80	120	2.54	15	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151215D

Sample ID	**ICV-151215**	Batch ID:	**R83134**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**CETAC2_HG_151215D**	Analysis Date:	**12/15/2015 9:37:21 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00395	0.000200	0.00400	0	98.8	90	110			

Sample ID	**CCV3-151215**	Batch ID:	**R83134**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_151215D**	Analysis Date:	**12/15/2015 1:25:20 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			

Sample ID	**CCV4-151215**	Batch ID:	**R83134**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_151215D**	Analysis Date:	**12/15/2015 2:11:37 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			

Sample ID	**CCV5-151215**	Batch ID:	**R83134**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_151215D**	Analysis Date:	**12/15/2015 2:38:56 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151217C

The QC data in batch 72734 applies to the following samples: 1512136-21B, 1512136-22B, 1512136-23B, 1512136-24B, 1512136-25B, 1512136-26B, 1512136-27B, 1512136-28B, 1512136-29B, 1512136-30B, 1512136-31B, 1512136-32B

Sample ID	**MB-72734**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:08:22 A**	Prep Date:	**12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000200	0.000200								

Sample ID	**FB-72734**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:10:38 A**	Prep Date:	**12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.000200	0.000200								

Sample ID	**LCS-72734**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:12:54 A**	Prep Date:	**12/15/2015**

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			

Sample ID	**LCSD-72734**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:15:10 A**	Prep Date:	**12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00198	0.000200	0.00200	0	99.0	85	115	0.504	15	

Sample ID	**1512136-21B SD**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**SD**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:19:41 A**	Prep Date:	**12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00100	0.00100	0	0				0	10	

Sample ID	**1512136-21B PDS**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**PDS**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:21:57 A**	Prep Date:	**12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00248	0.000200	0.00250	0	99.2	85	115			

Sample ID	**1512136-21B MS**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:24:13 A**	Prep Date:	**12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00195	0.000200	0.00200	0	97.5	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151217C

Sample ID	**1512136-21B MSD**	Batch ID:	**72734**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:26:28 A**	Prep Date:	**12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00194	0.000200	0.00200	0	97.0	80	120	0.514	15	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_151217C

Sample ID	**ICV-151217**	Batch ID:	**R83185**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 9:50:07 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00397	0.000200	0.00400	0	99.2	90	110			

Sample ID	**CCV2-151217**	Batch ID:	**R83185**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:03:48 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00206	0.000200	0.00200	0	103	90	110			

Sample ID	**CCV3-151217**	Batch ID:	**R83185**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:49:10 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00204	0.000200	0.00200	0	102	90	110			

Sample ID	**CCV4-151217**	Batch ID:	**R83185**	TestNo:	**SW7470A**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**CETAC2_HG_151217C**	Analysis Date:	**12/17/2015 11:58:19 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00201	0.000200	0.00200	0	101	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

The QC data in batch 72691 applies to the following samples: 1512136-01B, 1512136-02B, 1512136-03B, 1512136-04B, 1512136-05B, 1512136-06B, 1512136-07B, 1512136-08B, 1512136-09B, 1512136-10B, 1512136-16B, 1512136-17B, 1512136-18B, 1512136-19B, 1512136-20B, 1512136-21B, 1512136-22B, 1512136-23B, 1512136-24B, 1512136-25B

Sample ID **MB-72691** Batch ID: **72691** TestNo: **SW6020A** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_151215A** Analysis Date: **12/15/2015 11:27:00 A** Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500								
Barium	<0.0100	0.0100								
Cadmium	<0.00100	0.00100								
Calcium	<0.300	0.300								
Chromium	<0.00500	0.00500								
Lead	<0.00100	0.00100								
Magnesium	<0.300	0.300								
Potassium	<0.300	0.300								
Selenium	<0.00500	0.00500								
Silver	<0.00200	0.00200								
Sodium	<0.300	0.300								

Sample ID **FB-72691** Batch ID: **72691** TestNo: **SW6020A** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_151215A** Analysis Date: **12/15/2015 11:29:00 A** Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500	0							
Barium	<0.0100	0.0100	0							
Cadmium	<0.00100	0.00100	0							
Calcium	<0.300	0.300	0							
Chromium	<0.00500	0.00500	0							
Lead	<0.00100	0.00100	0							
Magnesium	<0.300	0.300	0							
Potassium	<0.300	0.300	0							
Selenium	<0.00500	0.00500	0							
Silver	<0.00200	0.00200	0							
Sodium	<0.300	0.300	0							

Sample ID **LCS-72691** Batch ID: **72691** TestNo: **SW6020A** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_151215A** Analysis Date: **12/15/2015 11:31:00 A** Prep Date: **12/12/2015**

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	0.206	0.0100	0.200	0	103	80	120			
Cadmium	0.205	0.00100	0.200	0	103	80	120			
Calcium	4.73	0.300	5.00	0	94.6	80	120			
Chromium	0.206	0.00500	0.200	0	103	80	120			
Lead	0.206	0.00100	0.200	0	103	80	120			
Magnesium	5.05	0.300	5.00	0	101	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

Sample ID **LCS-72691**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCS**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 11:31:00 A**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	5.09	0.300	5.00	0	102	80	120			
Selenium	0.206	0.00500	0.200	0	103	80	120			
Silver	0.198	0.00200	0.200	0	98.9	80	120			
Sodium	5.05	0.300	5.00	0	101	80	120			

Sample ID **LCSD-72691**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 11:33:00 A**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.203	0.00500	0.200	0	102	80	120	0.203	15	
Barium	0.207	0.0100	0.200	0	104	80	120	0.504	15	
Cadmium	0.207	0.00100	0.200	0	103	80	120	0.747	15	
Calcium	4.69	0.300	5.00	0	93.9	80	120	0.790	15	
Chromium	0.208	0.00500	0.200	0	104	80	120	0.727	15	
Lead	0.205	0.00100	0.200	0	102	80	120	0.465	15	
Magnesium	4.97	0.300	5.00	0	99.5	80	120	1.52	15	
Potassium	5.02	0.300	5.00	0	100	80	120	1.34	15	
Selenium	0.203	0.00500	0.200	0	101	80	120	1.33	15	
Silver	0.199	0.00200	0.200	0	99.4	80	120	0.488	15	
Sodium	5.01	0.300	5.00	0	100	80	120	0.752	15	

Sample ID **1512136-01B SD**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 11:39:00 A**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	546	150	0	545				0.093	10	
Magnesium	117	150	0	116				0.584	10	
Sodium	136	150	0	141				3.75	10	

Sample ID **1512136-01B PDS**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 11:58:00 A**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	994	30.0	500	545	89.7	80	120			
Magnesium	624	30.0	500	116	102	80	120			
Sodium	639	30.0	500	141	99.6	80	120			

Sample ID **1512136-01B MS**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:00:00 P**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

Sample ID **1512136-01B MS**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:00:00 P**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.228	0.500	0.200	0	114	80	120			
Barium	<1.00	1.00	0.200	0	0	80	120			S
Cadmium	0.220	0.100	0.200	0	110	80	120			
Calcium	565	30.0	5.00	545	390	80	120			S
Chromium	0.222	0.500	0.200	0	111	80	120			
Lead	0.213	0.100	0.200	0	106	80	120			
Magnesium	124	30.0	5.00	116	163	80	120			S
Potassium	<30.0	30.0	5.00	0	0	80	120			S
Selenium	<0.500	0.500	0.200	0	0	80	120			S
Silver	0.204	0.200	0.200	0	102	80	120			
Sodium	148	30.0	5.00	141	136	80	120			S

Sample ID **1512136-01B MSD**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:02:00 P**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.217	0.500	0.200	0	109	80	120	4.89	15	
Barium	<1.00	1.00	0.200	0	0	80	120	0	15	S
Cadmium	0.205	0.100	0.200	0	102	80	120	7.12	15	
Calcium	553	30.0	5.00	545	155	80	120	2.10	15	S
Chromium	0.210	0.500	0.200	0	105	80	120	5.41	15	
Lead	0.200	0.100	0.200	0	100	80	120	6.15	15	
Magnesium	121	30.0	5.00	116	111	80	120	2.13	15	
Potassium	<30.0	30.0	5.00	0	0	80	120	0	15	S
Selenium	<0.500	0.500	0.200	0	0	80	120	0	15	S
Silver	0.194	0.200	0.200	0	97.0	80	120	5.17	15	
Sodium	147	30.0	5.00	141	106	80	120	1.01	15	

Sample ID **1512136-01B SD**	Batch ID: **72691**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 2:38:00 PM**	Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0250	0.0250	0	0				0	10	
Barium	0.0190	0.0500	0	0.0193				1.52	10	
Cadmium	<0.00500	0.00500	0	0				0	10	
Chromium	<0.0250	0.0250	0	0				0	10	
Lead	<0.00500	0.00500	0	0				0	10	
Potassium	4.64	1.50	0	4.64				0.176	10	
Selenium	<0.0250	0.0250	0	0				0	10	
Silver	<0.0100	0.0100	0	0				0	10	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

Sample ID **1512136-01B PDS** Batch ID: **72691** TestNo: **SW6020A** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_151215A** Analysis Date: **12/15/2015 2:58:00 PM** Prep Date: **12/12/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.216	0.00500	0.200	0	108	80	120			
Barium	0.230	0.0100	0.200	0.0193	105	80	120			
Cadmium	0.203	0.00100	0.200	0	101	80	120			
Chromium	0.213	0.00500	0.200	0	107	80	120			
Lead	0.210	0.00100	0.200	0	105	80	120			
Potassium	9.41	0.300	5.00	4.63	95.6	80	120			
Selenium	0.216	0.00500	0.200	0	108	80	120			
Silver	0.186	0.00200	0.200	0	93.0	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

Sample ID **ICV-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 11:14:00 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.103	0.00500	0.100	0	103	90	110			
Barium	0.102	0.0100	0.100	0	102	90	110			
Cadmium	0.103	0.00100	0.100	0	103	90	110			
Calcium	2.34	0.300	2.50	0	93.5	90	110			
Chromium	0.107	0.00500	0.100	0	107	90	110			
Lead	0.104	0.00100	0.100	0	104	90	110			
Magnesium	2.61	0.300	2.50	0	104	90	110			
Potassium	2.58	0.300	2.50	0	103	90	110			
Selenium	0.104	0.00500	0.100	0	104	90	110			
Silver	0.0997	0.00200	0.100	0	99.7	90	110			
Sodium	2.58	0.300	2.50	0	103	90	110			

Sample ID **LCVL-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 11:19:00 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00511	0.00500	0.00500	0	102	70	130			
Barium	0.00512	0.0100	0.00500	0	102	70	130			
Cadmium	0.00100	0.00100	0.00100	0	100	70	130			
Calcium	0.0996	0.300	0.100	0	99.6	70	130			
Chromium	0.00528	0.00500	0.00500	0	106	70	130			
Lead	0.00108	0.00100	0.00100	0	108	70	130			
Magnesium	0.108	0.300	0.100	0	108	70	130			
Potassium	0.101	0.300	0.100	0	101	70	130			
Selenium	0.00515	0.00500	0.00500	0	103	70	130			
Silver	0.00200	0.00200	0.00200	0	99.8	70	130			
Sodium	0.0990	0.300	0.100	0	99.0	70	130			

Sample ID **CCV1-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:04:00 P**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.207	0.00500	0.200	0	103	90	110			
Barium	0.210	0.0100	0.200	0	105	90	110			
Cadmium	0.209	0.00100	0.200	0	105	90	110			
Calcium	4.87	0.300	5.00	0	97.4	90	110			
Chromium	0.209	0.00500	0.200	0	105	90	110			
Lead	0.203	0.00100	0.200	0	102	90	110			
Magnesium	5.18	0.300	5.00	0	104	90	110			
Potassium	5.26	0.300	5.00	0	105	90	110			
Selenium	0.207	0.00500	0.200	0	103	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

Sample ID **CCV1-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:04:00 P**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.201	0.00200	0.200	0	101	90	110			
Sodium	5.22	0.300	5.00	0	104	90	110			

Sample ID **LCVL1-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:08:00 P**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00519	0.00500	0.00500	0	104	70	130			
Barium	0.00508	0.0100	0.00500	0	102	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Calcium	0.104	0.300	0.100	0	104	70	130			
Chromium	0.00526	0.00500	0.00500	0	105	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Magnesium	0.106	0.300	0.100	0	106	70	130			
Potassium	0.101	0.300	0.100	0	101	70	130			
Selenium	0.00505	0.00500	0.00500	0	101	70	130			
Silver	0.00201	0.00200	0.00200	0	101	70	130			
Sodium	0.0982	0.300	0.100	0	98.2	70	130			

Sample ID **CCV2-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:33:00 P**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.85	0.300	5.00	0	97.0	90	110			
Magnesium	5.21	0.300	5.00	0	104	90	110			
Sodium	5.22	0.300	5.00	0	104	90	110			

Sample ID **LCVL2-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 12:37:00 P**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.105	0.300	0.100	0	105	70	130			
Magnesium	0.107	0.300	0.100	0	107	70	130			
Sodium	0.0946	0.300	0.100	0	94.6	70	130			

Sample ID **CCV5-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 2:19:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.209	0.00500	0.200	0	104	90	110			
Barium	0.204	0.0100	0.200	0	102	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

Sample ID **CCV5-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 2:19:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.201	0.00100	0.200	0	101	90	110			
Chromium	0.209	0.00500	0.200	0	104	90	110			
Lead	0.206	0.00100	0.200	0	103	90	110			
Potassium	5.23	0.300	5.00	0	105	90	110			
Selenium	0.211	0.00500	0.200	0	106	90	110			
Silver	0.194	0.00200	0.200	0	97.1	90	110			

Sample ID **LCVL5-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 2:32:00 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	0.00505	0.0100	0.00500	0	101	70	130			
Cadmium	0.000979	0.00100	0.00100	0	97.9	70	130			
Chromium	0.00515	0.00500	0.00500	0	103	70	130			
Lead	0.000917	0.00100	0.00100	0	91.7	70	130			
Potassium	0.107	0.300	0.100	0	107	70	130			
Selenium	0.00550	0.00500	0.00500	0	110	70	130			
Silver	0.00194	0.00200	0.00200	0	97.2	70	130			

Sample ID **CCV6-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 2:59:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.213	0.00500	0.200	0	106	90	110			
Barium	0.209	0.0100	0.200	0	105	90	110			
Cadmium	0.207	0.00100	0.200	0	103	90	110			
Chromium	0.210	0.00500	0.200	0	105	90	110			
Lead	0.207	0.00100	0.200	0	103	90	110			
Potassium	5.24	0.300	5.00	0	105	90	110			
Selenium	0.211	0.00500	0.200	0	106	90	110			
Silver	0.198	0.00200	0.200	0	98.9	90	110			

Sample ID **LCVL6-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 3:03:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00519	0.00500	0.00500	0	104	70	130			
Barium	0.00502	0.0100	0.00500	0	100	70	130			
Cadmium	0.000993	0.00100	0.00100	0	99.3	70	130			
Chromium	0.00510	0.00500	0.00500	0	102	70	130			

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151215A

Sample ID **LCVL6-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 3:03:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.000948	0.00100	0.00100	0	94.8	70	130			
Potassium	0.112	0.300	0.100	0	112	70	130			
Selenium	0.00516	0.00500	0.00500	0	103	70	130			
Silver	0.00193	0.00200	0.00200	0	96.4	70	130			

Sample ID **CCV7-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 3:27:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.214	0.00500	0.200	0	107	90	110			
Barium	0.208	0.0100	0.200	0	104	90	110			
Cadmium	0.207	0.00100	0.200	0	104	90	110			
Chromium	0.208	0.00500	0.200	0	104	90	110			
Lead	0.203	0.00100	0.200	0	102	90	110			
Potassium	5.29	0.300	5.00	0	106	90	110			
Selenium	0.212	0.00500	0.200	0	106	90	110			
Silver	0.196	0.00200	0.200	0	98.1	90	110			

Sample ID **LCVL7-151215**	Batch ID: **R83140**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151215A**	Analysis Date: **12/15/2015 3:34:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00524	0.00500	0.00500	0	105	70	130			
Barium	0.00527	0.0100	0.00500	0	105	70	130			
Cadmium	0.00103	0.00100	0.00100	0	103	70	130			
Chromium	0.00510	0.00500	0.00500	0	102	70	130			
Lead	0.000926	0.00100	0.00100	0	92.6	70	130			
Potassium	0.122	0.300	0.100	0	122	70	130			
Selenium	0.00546	0.00500	0.00500	0	109	70	130			
Silver	0.00199	0.00200	0.00200	0	99.6	70	130			

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

The QC data in batch 72736 applies to the following samples: 1512136-11B, 1512136-12B, 1512136-13B, 1512136-14B, 1512136-15B, 1512136-26B, 1512136-27B, 1512136-28B, 1512136-29B, 1512136-30B, 1512136-31B, 1512136-32B

Sample ID **MB-72736** Batch ID: **72736** TestNo: **SW6020A** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_151216B** Analysis Date: **12/16/2015 4:24:00 PM** Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500								
Barium	<0.0100	0.0100								
Cadmium	<0.00100	0.00100								
Calcium	<0.300	0.300								
Chromium	<0.00500	0.00500								
Lead	<0.00100	0.00100								
Magnesium	<0.300	0.300								
Potassium	<0.300	0.300								
Selenium	<0.00500	0.00500								
Silver	<0.00200	0.00200								
Sodium	<0.300	0.300								

Sample ID **FB-72736** Batch ID: **72736** TestNo: **SW6020A** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_151216B** Analysis Date: **12/16/2015 4:26:00 PM** Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.00500	0.00500								
Barium	<0.0100	0.0100								
Cadmium	<0.00100	0.00100								
Calcium	<0.300	0.300								
Chromium	<0.00500	0.00500								
Lead	<0.00100	0.00100								
Magnesium	<0.300	0.300								
Potassium	<0.300	0.300								
Selenium	<0.00500	0.00500								
Silver	<0.00200	0.00200								
Sodium	<0.300	0.300								

Sample ID **LCS-72736** Batch ID: **72736** TestNo: **SW6020A** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_151216B** Analysis Date: **12/16/2015 4:28:00 PM** Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.202	0.00500	0.200	0	101	80	120			
Barium	0.201	0.0100	0.200	0	100	80	120			
Cadmium	0.204	0.00100	0.200	0	102	80	120			
Calcium	4.70	0.300	5.00	0	93.9	80	120			
Chromium	0.209	0.00500	0.200	0	105	80	120			
Lead	0.204	0.00100	0.200	0	102	80	120			
Magnesium	5.00	0.300	5.00	0	100	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **LCS-72736**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCS**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:28:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	4.99	0.300	5.00	0	99.8	80	120			
Selenium	0.203	0.00500	0.200	0	101	80	120			
Silver	0.203	0.00200	0.200	0	101	80	120			
Sodium	5.04	0.300	5.00	0	101	80	120			

Sample ID **LCSD-72736**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:30:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.207	0.00500	0.200	0	103	80	120	2.51	15	
Barium	0.202	0.0100	0.200	0	101	80	120	0.699	15	
Cadmium	0.205	0.00100	0.200	0	102	80	120	0.421	15	
Calcium	4.59	0.300	5.00	0	91.8	80	120	2.23	15	
Chromium	0.210	0.00500	0.200	0	105	80	120	0.277	15	
Lead	0.209	0.00100	0.200	0	104	80	120	2.11	15	
Magnesium	4.96	0.300	5.00	0	99.2	80	120	0.820	15	
Potassium	4.95	0.300	5.00	0	99.1	80	120	0.729	15	
Selenium	0.205	0.00500	0.200	0	103	80	120	1.12	15	
Silver	0.204	0.00200	0.200	0	102	80	120	0.531	15	
Sodium	5.01	0.300	5.00	0	100	80	120	0.465	15	

Sample ID **1512136-11B SD**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:36:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	423	150	0	428				1.13	10	
Potassium	200	150	0	201				0.588	10	

Sample ID **1512136-11B PDS**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:56:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	877	30.0	500	428	89.9	80	120			
Potassium	702	30.0	500	201	100	80	120			

Sample ID **1512136-11B MS**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:58:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.246	0.500	0.200	0	123	80	120			S
Barium	<1.00	1.00	0.200	0	0	80	120			S

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **1512136-11B MS**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:58:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.210	0.100	0.200	0	105	80	120			
Calcium	428	30.0	5.00	428	-7.47	80	120			S
Chromium	0.224	0.500	0.200	0	112	80	120			
Lead	0.220	0.100	0.200	0	110	80	120			
Magnesium	5630	30.0	5.00	5590	757	80	120			S
Potassium	205	30.0	5.00	201	66.6	80	120			S
Selenium	0.274	0.500	0.200	0	137	80	120			S
Silver	0.209	0.200	0.200	0	104	80	120			
Sodium	7140	30.0	5.00	7250	-2160	80	120			S

Sample ID **1512136-11B MSD**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:00:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.239	0.500	0.200	0	120	80	120	2.92	15	
Barium	<1.00	1.00	0.200	0	0	80	120	0	15	S
Cadmium	0.213	0.100	0.200	0	107	80	120	1.61	15	
Calcium	441	30.0	5.00	428	268	80	120	3.16	15	S
Chromium	0.225	0.500	0.200	0	113	80	120	0.669	15	
Lead	0.214	0.100	0.200	0	107	80	120	2.90	15	
Magnesium	5800	30.0	5.00	5590	4200	80	120	3.01	15	S
Potassium	214	30.0	5.00	201	257	80	120	4.54	15	S
Selenium	0.215	0.500	0.200	0	108	80	120	24.2	15	R
Silver	0.210	0.200	0.200	0	105	80	120	0.335	15	
Sodium	7490	30.0	5.00	7250	4810	80	120	4.76	15	S

Sample ID **1512136-11B SD**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:18:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	5980	7500	0	5870				1.95	10	
Sodium	7670	7500	0	7560				1.55	10	

Sample ID **1512136-11B PDS**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:20:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	31300	1500	25000	5870	102	80	120			
Sodium	32900	1500	25000	7560	101	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **1512136-11B SD**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 7:45:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	<0.0250	0.0250	0	0.00734				0	10	
Barium	<0.0500	0.0500	0	0.0135				0	10	
Cadmium	<0.00500	0.00500	0	0.000456				0	10	
Chromium	<0.0250	0.0250	0	0				0	10	
Lead	<0.00500	0.00500	0	0				0	10	
Selenium	<0.0250	0.0250	0	0.00449				0	10	
Silver	<0.0100	0.0100	0	0				0	10	

Sample ID **1512136-11B PDS**	Batch ID: **72736**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 8:04:00 PM**	Prep Date: **12/15/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.249	0.00500	0.200	0.00734	121	80	120			S
Barium	0.214	0.0100	0.200	0.0135	100	80	120			
Cadmium	0.201	0.00100	0.200	0.000456	100	80	120			
Chromium	0.194	0.00500	0.200	0	97.2	80	120			
Lead	0.209	0.00100	0.200	0	105	80	120			
Selenium	0.314	0.00500	0.200	0.00449	155	80	120			S
Silver	0.186	0.00200	0.200	0	92.8	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **ICV-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:13:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.105	0.00500	0.100	0	105	90	110			
Barium	0.102	0.0100	0.100	0	102	90	110			
Cadmium	0.103	0.00100	0.100	0	103	90	110			
Calcium	2.34	0.300	2.50	0	93.6	90	110			
Chromium	0.109	0.00500	0.100	0	109	90	110			
Lead	0.106	0.00100	0.100	0	106	90	110			
Magnesium	2.59	0.300	2.50	0	104	90	110			
Potassium	2.55	0.300	2.50	0	102	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Silver	0.103	0.00200	0.100	0	103	90	110			
Sodium	2.58	0.300	2.50	0	103	90	110			

Sample ID **LCVL-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 4:18:00 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	0.00505	0.0100	0.00500	0	101	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Calcium	0.0975	0.300	0.100	0	97.5	70	130			
Chromium	0.00527	0.00500	0.00500	0	105	70	130			
Lead	0.00112	0.00100	0.00100	0	112	70	130			
Magnesium	0.107	0.300	0.100	0	107	70	130			
Potassium	0.110	0.300	0.100	0	110	70	130			
Selenium	0.00526	0.00500	0.00500	0	105	70	130			
Silver	0.00204	0.00200	0.00200	0	102	70	130			
Sodium	0.108	0.300	0.100	0	108	70	130			

Sample ID **CCV1-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:06:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.207	0.00500	0.200	0	103	90	110			
Barium	0.199	0.0100	0.200	0	99.7	90	110			
Cadmium	0.200	0.00100	0.200	0	99.9	90	110			
Calcium	4.85	0.300	5.00	0	97.0	90	110			
Chromium	0.206	0.00500	0.200	0	103	90	110			
Lead	0.208	0.00100	0.200	0	104	90	110			
Magnesium	5.10	0.300	5.00	0	102	90	110			
Potassium	5.17	0.300	5.00	0	103	90	110			
Selenium	0.205	0.00500	0.200	0	103	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **CCV1-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:06:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.202	0.00200	0.200	0	101	90	110			
Sodium	5.15	0.300	5.00	0	103	90	110			

Sample ID **LCVL1-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:12:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00517	0.00500	0.00500	0	103	70	130			
Barium	0.00512	0.0100	0.00500	0	102	70	130			
Cadmium	0.00100	0.00100	0.00100	0	100	70	130			
Calcium	0.102	0.300	0.100	0	102	70	130			
Chromium	0.00529	0.00500	0.00500	0	106	70	130			
Lead	0.00104	0.00100	0.00100	0	104	70	130			
Magnesium	0.107	0.300	0.100	0	107	70	130			
Potassium	0.111	0.300	0.100	0	111	70	130			
Selenium	0.00534	0.00500	0.00500	0	107	70	130			
Silver	0.00206	0.00200	0.00200	0	103	70	130			
Sodium	0.111	0.300	0.100	0	111	70	130			

Sample ID **CCV2-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:33:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	5.16	0.300	5.00	0	103	90	110			
Potassium	5.18	0.300	5.00	0	104	90	110			
Sodium	5.25	0.300	5.00	0	105	90	110			

Sample ID **LCVL2-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 5:39:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.113	0.300	0.100	0	113	70	130			
Potassium	0.114	0.300	0.100	0	114	70	130			
Sodium	0.134	0.300	0.100	0	134	70	130			S

Sample ID **CCV3-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 6:19:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.211	0.00500	0.200	0	105	90	110			
Barium	0.202	0.0100	0.200	0	101	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **CCV3-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 6:19:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.204	0.00100	0.200	0	102	90	110			
Calcium	4.88	0.300	5.00	0	97.6	90	110			
Chromium	0.210	0.00500	0.200	0	105	90	110			
Lead	0.206	0.00100	0.200	0	103	90	110			
Selenium	0.213	0.00500	0.200	0	106	90	110			
Silver	0.205	0.00200	0.200	0	102	90	110			

Sample ID **LCVL3-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 6:23:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00530	0.00500	0.00500	0	106	70	130			
Barium	0.00513	0.0100	0.00500	0	103	70	130			
Cadmium	0.00107	0.00100	0.00100	0	107	70	130			
Calcium	0.118	0.300	0.100	0	118	70	130			
Chromium	0.00521	0.00500	0.00500	0	104	70	130			
Lead	0.00106	0.00100	0.00100	0	106	70	130			
Selenium	0.00604	0.00500	0.00500	0	121	70	130			
Silver	0.00211	0.00200	0.00200	0	105	70	130			

Sample ID **CCV4-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 6:30:00 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	0.201	0.0100	0.200	0	101	90	110			
Cadmium	0.207	0.00100	0.200	0	103	90	110			
Calcium	4.80	0.300	5.00	0	96.1	90	110			
Chromium	0.210	0.00500	0.200	0	105	90	110			
Lead	0.205	0.00100	0.200	0	102	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Silver	0.209	0.00200	0.200	0	105	90	110			

Sample ID **LCVL4-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 6:34:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00541	0.00500	0.00500	0	108	70	130			
Barium	0.00504	0.0100	0.00500	0	101	70	130			
Cadmium	0.00105	0.00100	0.00100	0	105	70	130			
Calcium	0.102	0.300	0.100	0	102	70	130			

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **LCVL4-151216** Batch ID: **R83180** TestNo: **SW6020A** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS4_151216B** Analysis Date: **12/16/2015 6:34:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.00533	0.00500	0.00500	0	107	70	130			
Lead	0.000995	0.00100	0.00100	0	99.5	70	130			
Selenium	0.00526	0.00500	0.00500	0	105	70	130			
Silver	0.00208	0.00200	0.00200	0	104	70	130			

Sample ID **CCV6-151216** Batch ID: **R83180** TestNo: **SW6020A** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS4_151216B** Analysis Date: **12/16/2015 7:35:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.216	0.00500	0.200	0	108	90	110			
Barium	0.203	0.0100	0.200	0	102	90	110			
Cadmium	0.205	0.00100	0.200	0	102	90	110			
Chromium	0.213	0.00500	0.200	0	106	90	110			
Lead	0.208	0.00100	0.200	0	104	90	110			
Magnesium	5.20	0.300	5.00	0	104	90	110			
Potassium	5.21	0.300	5.00	0	104	90	110			
Selenium	0.210	0.00500	0.200	0	105	90	110			
Silver	0.206	0.00200	0.200	0	103	90	110			

Sample ID **LCVL6-151216** Batch ID: **R83180** TestNo: **SW6020A** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS4_151216B** Analysis Date: **12/16/2015 7:39:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00536	0.00500	0.00500	0	107	70	130			
Barium	0.00500	0.0100	0.00500	0	100	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Chromium	0.00541	0.00500	0.00500	0	108	70	130			
Lead	0.00100	0.00100	0.00100	0	100	70	130			
Magnesium	0.118	0.300	0.100	0	118	70	130			
Potassium	0.121	0.300	0.100	0	121	70	130			
Selenium	0.00514	0.00500	0.00500	0	103	70	130			
Silver	0.00213	0.00200	0.00200	0	107	70	130			

Sample ID **CCV7-151216** Batch ID: **R83180** TestNo: **SW6020A** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS4_151216B** Analysis Date: **12/16/2015 8:06:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.213	0.00500	0.200	0	107	90	110			
Barium	0.205	0.0100	0.200	0	102	90	110			
Cadmium	0.207	0.00100	0.200	0	103	90	110			
Chromium	0.209	0.00500	0.200	0	104	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151216B

Sample ID **CCV7-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 8:06:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.208	0.00100	0.200	0	104	90	110			
Potassium	5.29	0.300	5.00	0	106	90	110			
Selenium	0.208	0.00500	0.200	0	104	90	110			
Silver	0.208	0.00200	0.200	0	104	90	110			

Sample ID **LCVL7-151216**	Batch ID: **R83180**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151216B**	Analysis Date: **12/16/2015 8:10:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00559	0.00500	0.00500	0	112	70	130			
Barium	0.00499	0.0100	0.00500	0	99.7	70	130			
Cadmium	0.000933	0.00100	0.00100	0	93.3	70	130			
Chromium	0.00529	0.00500	0.00500	0	106	70	130			
Lead	0.000969	0.00100	0.00100	0	96.9	70	130			
Potassium	0.149	0.300	0.100	0	149	70	130			S
Selenium	0.00500	0.00500	0.00500	0	100	70	130			
Silver	0.00201	0.00200	0.00200	0	101	70	130			

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_151222D

Sample ID **ICV2-151222**	Batch ID: **R83305**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_151222D**	Analysis Date: **12/22/2015 5:17:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	2.55	0.300	2.50	0	102	90	110			
Sodium	2.54	0.300	2.50	0	102	90	110			

Sample ID **ILCVL2-151222**	Batch ID: **R83305**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151222D**	Analysis Date: **12/22/2015 5:24:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.107	0.300	0.100	0	107	70	130			
Sodium	0.0927	0.300	0.100	0	92.7	70	130			

Sample ID **CCV8-151222**	Batch ID: **R83305**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151222D**	Analysis Date: **12/22/2015 6:07:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	5.09	0.300	5.00	0	102	90	110			
Sodium	5.18	0.300	5.00	0	104	90	110			

Sample ID **LCVL8-151222**	Batch ID: **R83305**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151222D**	Analysis Date: **12/22/2015 6:10:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	0.110	0.300	0.100	0	110	70	130			
Sodium	0.0899	0.300	0.100	0	89.9	70	130			

Sample ID **CCV9-151222**	Batch ID: **R83305**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_151222D**	Analysis Date: **12/22/2015 6:26:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	5.09	0.300	5.00	0	102	90	110			
Sodium	5.20	0.300	5.00	0	104	90	110			

Sample ID **LCVL9-151222**	Batch ID: **R83305**	TestNo: **SW6020A**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_151222D**	Analysis Date: **12/22/2015 6:30:00 PM**	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			
Sodium	0.0927	0.300	0.100	0	92.7	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151219A

The QC data in batch 72831 applies to the following samples: 1512136-21D, 1512136-22D, 1512136-23D, 1512136-24D, 1512136-25D, 1512136-26D, 1512136-27D, 1512136-28D, 1512136-29D, 1512136-30D, 1512136-31D, 1512136-32D

Sample ID **MB-72831** Batch ID: **72831** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_151219A** Analysis Date: **12/19/2015 10:35:36 A** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<1.00	1.00								
Sulfate	<3.00	3.00								

Sample ID **LCS-72831** Batch ID: **72831** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC2_151219A** Analysis Date: **12/19/2015 10:50:12 A** Prep Date: **12/19/2015**

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	28.9	3.00	30.00	0	96.2	90	110			

Sample ID **LCSD-72831** Batch ID: **72831** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_151219A** Analysis Date: **12/19/2015 11:04:49 A** Prep Date: **12/19/2015**

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	0.320	20	
Sulfate	28.9	3.00	30.00	0	96.4	90	110	0.205	20	

Sample ID **1512136-21DMS** Batch ID: **72831** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_151219A** Analysis Date: **12/19/2015 11:39:24 A** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2080	100	2000	62.12	101	90	110			
Sulfate	3360	300	2000	1477	94.3	90	110			

Sample ID **1512136-21DMSD** Batch ID: **72831** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_151219A** Analysis Date: **12/19/2015 11:54:01 A** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2060	100	2000	62.12	99.8	90	110	0.892	20	
Sulfate	3380	300	2000	1477	95.0	90	110	0.428	20	

Sample ID **1512136-22DMS** Batch ID: **72831** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_151219A** Analysis Date: **12/19/2015 12:23:14 P** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2060	100	2000	75.16	99.0	90	110			
Sulfate	3610	300	2000	1713	94.8	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151219A

Sample ID **1512136-22DMSD**	Batch ID: **72831**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC2_151219A**	Analysis Date: **12/19/2015 12:40:08 P**	Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2060	100	2000	75.16	99.5	90	110	0.435	20	
Sulfate	3610	300	2000	1713	94.6	90	110	0.129	20	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151219A

Sample ID **ICV-151219**	Batch ID: **R83274**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_151219A**	Analysis Date: **12/19/2015 10:05:04 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.4	90	110			
Sulfate	72.4	3.00	75.00	0	96.5	90	110			

Sample ID **CCV1-151219**	Batch ID: **R83274**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_151219A**	Analysis Date: **12/19/2015 3:12:27 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	29.1	3.00	30.00	0	97.1	90	110			

Sample ID **CCV2-151219**	Batch ID: **R83274**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_151219A**	Analysis Date: **12/19/2015 5:58:23 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	29.3	3.00	30.00	0	97.6	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151219B

The QC data in batch 72840 applies to the following samples: 1512136-06D

Sample ID	**LCS-72840**	Batch ID:	**72840**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**IC2_151219B**	Analysis Date:	**12/19/2015 6:38:06 PM**	Prep Date:	**12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.4	3.00	30.00	0	97.9	90	110			

Sample ID	**LCSD-72840**	Batch ID:	**72840**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**IC2_151219B**	Analysis Date:	**12/19/2015 6:52:42 PM**	Prep Date:	**12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.4	3.00	30.00	0	97.9	90	110	0.006	20	

Sample ID	**MB-72840**	Batch ID:	**72840**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**IC2_151219B**	Analysis Date:	**12/19/2015 7:07:19 PM**	Prep Date:	**12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	<3.00	3.00								

Sample ID	**1512257-02AMS**	Batch ID:	**72840**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC2_151219B**	Analysis Date:	**12/20/2015 11:52:39 A**	Prep Date:	**12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	3110	300	2000	1251	93.1	90	110			

Sample ID	**1512257-02AMSD**	Batch ID:	**72840**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC2_151219B**	Analysis Date:	**12/20/2015 12:07:15 P**	Prep Date:	**12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	3130	300	2000	1251	93.7	90	110	0.391	20	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_151219B

Sample ID	**ICV-151219**	Batch ID:	**R83279**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**IC2_151219B**	Analysis Date:	**12/19/2015 10:05:04 A**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	72.4	3.00	75.00	0	96.5	90	110			

Sample ID	**CCV2-151219**	Batch ID:	**R83279**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC2_151219B**	Analysis Date:	**12/19/2015 5:58:23 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.3	3.00	30.00	0	97.6	90	110			

Sample ID	**CCV3-151219**	Batch ID:	**R83279**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC2_151219B**	Analysis Date:	**12/20/2015 12:51:07 P**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29.0	3.00	30.00	0	96.5	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151219A

The QC data in batch 72830 applies to the following samples: 1512136-01D, 1512136-02D, 1512136-03D, 1512136-04D, 1512136-05D, 1512136-06D, 1512136-07D, 1512136-08D, 1512136-09D, 1512136-10D, 1512136-11D, 1512136-12D, 1512136-13D, 1512136-14D, 1512136-15D, 1512136-16D, 1512136-17D, 1512136-18D, 1512136-19D, 1512136-20D

Sample ID **MB-72830** Batch ID: **72830** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC3_151219A** Analysis Date: **12/19/2015 11:22:56 A** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<1.00	1.00								
Sulfate	<3.00	3.00								

Sample ID **LCSD-72830** Batch ID: **72830** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC3_151219A** Analysis Date: **12/19/2015 12:07:06 P** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.66	1.00	10.00	0	96.6	90	110	6.03	20	
Sulfate	32.1	3.00	30.00	0	107	90	110	1.19	20	

Sample ID **LCS-72830** Batch ID: **72830** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC3_151219A** Analysis Date: **12/19/2015 12:28:44 P** Prep Date: **12/19/2015**

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	32.5	3.00	30.00	0	108	90	110			

Sample ID **1512136-02DMS** Batch ID: **72830** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC3_151219A** Analysis Date: **12/19/2015 2:31:49 PM** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1970	100	2000	83.50	94.2	90	110			
Sulfate	4660	300	2000	2851	90.2	90	110			

Sample ID **1512136-02DMSD** Batch ID: **72830** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC3_151219A** Analysis Date: **12/19/2015 2:52:29 PM** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1990	100	2000	83.50	95.3	90	110	1.11	20	
Sulfate	4710	300	2000	2851	93.0	90	110	1.17	20	

Sample ID **1512136-03DMS** Batch ID: **72830** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC3_151219A** Analysis Date: **12/19/2015 3:33:49 PM** Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2130	100	2000	123.7	100	90	110			
Sulfate	3660	300	2000	1645	101	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151219A

Sample ID **1512136-03DMSD**	Batch ID: **72830**	TestNo: **E300**	Units: **mg/L**
SampType: **MSD**	Run ID: **IC3_151219A**	Analysis Date: **12/19/2015 3:54:29 PM**	Prep Date: **12/19/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1990	100	2000	123.7	93.6	90	110	6.34	20	
Sulfate	3650	300	2000	1645	100	90	110	0.175	20	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151219A

Sample ID **ICV-151219**	Batch ID: **R83242**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC3_151219A**	Analysis Date: **12/19/2015 10:35:04 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.2	1.00	25.00	0	96.8	90	110			
Sulfate	76.8	3.00	75.00	0	102	90	110			

Sample ID **CCV1-151219**	Batch ID: **R83242**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC3_151219A**	Analysis Date: **12/19/2015 6:39:34 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.61	1.00	10.00	0	96.1	90	110			
Sulfate	30.8	3.00	30.00	0	103	90	110			

Sample ID **CCV2-151219**	Batch ID: **R83242**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC3_151219A**	Analysis Date: **12/19/2015 11:28:29 P**	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	30.5	3.00	30.00	0	102	90	110			

Sample ID **CCV3-151219**	Batch ID: **R83242**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC3_151219A**	Analysis Date: **12/20/2015 1:32:16 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.59	1.00	10.00	0	95.9	90	110			
Sulfate	30.8	3.00	30.00	0	103	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151221A

The QC data in batch 72848 applies to the following samples: 1512136-11D, 1512136-12D, 1512136-15D

Sample ID	**MB-72848**	Batch ID:	**72848**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 10:09:53 A**	Prep Date:	**12/21/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<1.00	1.00								
Sulfate	<3.00	3.00								

Sample ID	**LCS-72848**	Batch ID:	**72848**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 10:33:23 A**	Prep Date:	**12/21/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.51	1.00	10.00	0	95.1	90	110			
Sulfate	32.3	3.00	30.00	0	108	90	110			

Sample ID	**LCSD-72848**	Batch ID:	**72848**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**LCSD**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 10:54:05 A**	Prep Date:	**12/21/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.51	1.00	10.00	0	95.1	90	110	0.030	20	
Sulfate	30.8	3.00	30.00	0	103	90	110	4.79	20	

Sample ID	**1512136-12DMS**	Batch ID:	**72848**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 7:26:16 PM**	Prep Date:	**12/21/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2290	100	2000	361.6	96.7	90	110			
Sulfate	4390	300	2000	2435	97.8	90	110			

Sample ID	**1512136-12DMSD**	Batch ID:	**72848**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MSD**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 7:46:56 PM**	Prep Date:	**12/21/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2380	100	2000	361.6	101	90	110	3.85	20	
Sulfate	4410	300	2000	2435	98.7	90	110	0.377	20	

Sample ID	**1512136-15DMS**	Batch ID:	**72848**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**MS**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 8:28:14 PM**	Prep Date:	**12/21/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2000	100	2000	83.42	95.7	90	110			
Sulfate	4110	300	2000	2101	100	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151221A

Sample ID **1512136-15DMSD** Batch ID: **72848** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC3_151221A** Analysis Date: **12/21/2015 8:48:53 PM** Prep Date: **12/21/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1990	100	2000	83.42	95.5	90	110	0.271	20	
Sulfate	4070	300	2000	2101	98.5	90	110	0.864	20	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: IC3_151221A

Sample ID	**ICV-151221**	Batch ID:	**R83285**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**ICV**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 9:20:02 AM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.3	1.00	25.00	0	97.3	90	110			
Sulfate	76.1	3.00	75.00	0	101	90	110			

Sample ID	**CCV CCV1-151221**	Batch ID:	**R83285**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 3:20:08 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.50	1.00	10.00	0	95.0	90	110			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Sample ID	**CCV2-151221**	Batch ID:	**R83285**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**CCV**	Run ID:	**IC3_151221A**	Analysis Date:	**12/21/2015 9:50:48 PM**	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.63	1.00	10.00	0	96.3	90	110			
Sulfate	30.5	3.00	30.00	0	102	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151211B

The QC data in batch 72674 applies to the following samples: 1512136-01D, 1512136-02D, 1512136-03D, 1512136-04D, 1512136-05D, 1512136-06D, 1512136-07D, 1512136-08D, 1512136-09D, 1512136-10D, 1512136-11D, 1512136-12D, 1512136-13D, 1512136-14D, 1512136-15D, 1512136-16D, 1512136-17D, 1512136-18D, 1512136-19D, 1512136-20D

Sample ID **MB-72674** Batch ID: **72674** TestNo: **M2320 B** Units: **mg/L @ pH 4.51**
SampType: **MBLK** Run ID: **TITRATOR_151211B** Analysis Date: **12/11/2015 9:19:00 AM** Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0								
Alkalinity, Total (As CaCO3)	<20.0	20.0								

Sample ID **LCS-72674** Batch ID: **72674** TestNo: **M2320 B** Units: **mg/L @ pH 4.51**
SampType: **LCS** Run ID: **TITRATOR_151211B** Analysis Date: **12/11/2015 9:23:00 AM** Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	53.7	20.0	50.00	0	107	74	129			

Sample ID **1512136-10D DUP** Batch ID: **72674** TestNo: **M2320 B** Units: **mg/L @ pH 4.53**
SampType: **DUP** Run ID: **TITRATOR_151211B** Analysis Date: **12/11/2015 11:19:00 A** Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	559	20.0	0	552.8				1.04	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	559	20.0	0	552.8				1.04	20	

Sample ID **1512136-20D DUP** Batch ID: **72674** TestNo: **M2320 B** Units: **mg/L @ pH 4.55**
SampType: **DUP** Run ID: **TITRATOR_151211B** Analysis Date: **12/11/2015 1:02:00 PM** Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	623	20.0	0	627.2				0.640	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	623	20.0	0	627.2				0.640	20	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151211B

Sample ID **ICV-151211**	Batch ID: **R83079**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.5**
SampType: **ICV**	Run ID: **TITRATOR_151211B**	Analysis Date: **12/11/2015 9:17:00 AM**	Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	11.4	20.0	0							
Alkalinity, Carbonate (As CaCO3)	88.5	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	99.8	20.0	100.0	0	99.8	98	102			

Sample ID **CCV1-151211**	Batch ID: **R83079**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.5**
SampType: **CCV**	Run ID: **TITRATOR_151211B**	Analysis Date: **12/11/2015 11:02:00 A**	Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	21.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	79.7	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	90	110			

Sample ID **CCV2-151211**	Batch ID: **R83079**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.51**
SampType: **CCV**	Run ID: **TITRATOR_151211B**	Analysis Date: **12/11/2015 12:39:00 P**	Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	31.7	20.0	0							
Alkalinity, Carbonate (As CaCO3)	68.8	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	90	110			

Sample ID **CCV3-151211**	Batch ID: **R83079**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.51**
SampType: **CCV**	Run ID: **TITRATOR_151211B**	Analysis Date: **12/11/2015 1:09:00 PM**	Prep Date: **12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	14.9	20.0	0							
Alkalinity, Carbonate (As CaCO3)	85.3	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151214A

The QC data in batch 72711 applies to the following samples: 1512136-21D, 1512136-22D, 1512136-23D, 1512136-24D, 1512136-25D, 1512136-26D, 1512136-27D, 1512136-28D, 1512136-29D, 1512136-30D, 1512136-31D, 1512136-32D

Sample ID **MB-72711** Batch ID: **72711** TestNo: **M2320 B** Units: **mg/L @ pH 4.49**
SampType: **MBLK** Run ID: **TITRATOR_151214A** Analysis Date: **12/14/2015 11:45:00 A** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0								
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0								
Alkalinity, Total (As CaCO3)	<20.0	20.0								

Sample ID **LCS-72711** Batch ID: **72711** TestNo: **M2320 B** Units: **mg/L @ pH 4.52**
SampType: **LCS** Run ID: **TITRATOR_151214A** Analysis Date: **12/14/2015 11:50:00 A** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	52.8	20.0	50.00	0	106	74	129			

Sample ID **1512136-29D DUP** Batch ID: **72711** TestNo: **M2320 B** Units: **mg/L @ pH 4.53**
SampType: **DUP** Run ID: **TITRATOR_151214A** Analysis Date: **12/14/2015 2:23:00 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	463	20.0	0	461.2				0.375	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	463	20.0	0	461.2				0.375	20	

Sample ID **1512136-30D DUP** Batch ID: **72711** TestNo: **M2320 B** Units: **mg/L @ pH 4.45**
SampType: **DUP** Run ID: **TITRATOR_151214A** Analysis Date: **12/14/2015 2:51:00 PM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	502	20.0	0	494.8				1.44	20	
Alkalinity, Carbonate (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0	0				0	20	
Alkalinity, Total (As CaCO3)	502	20.0	0	494.8				1.44	20	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_151214A

Sample ID **ICV-151214**	Batch ID: **R83111**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.5**
SampType: **ICV**	Run ID: **TITRATOR_151214A**	Analysis Date: **12/14/2015 11:43:00 A**	Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	15.4	20.0	0							
Alkalinity, Carbonate (As CaCO3)	83.8	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	99.2	20.0	100.0	0	99.2	98	102			

Sample ID **CCV1-151214**	Batch ID: **R83111**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.5**
SampType: **CCV**	Run ID: **TITRATOR_151214A**	Analysis Date: **12/14/2015 2:30:00 PM**	Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	31.5	20.0	0							
Alkalinity, Carbonate (As CaCO3)	68.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	90	110			

Sample ID **CCV2-151214**	Batch ID: **R83111**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.5**
SampType: **CCV**	Run ID: **TITRATOR_151214A**	Analysis Date: **12/14/2015 3:49:00 PM**	Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	17.3	20.0	0							
Alkalinity, Carbonate (As CaCO3)	83.2	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<20.0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: WC_151211A

The QC data in batch 72690 applies to the following samples: 1512136-01D, 1512136-02D, 1512136-03D, 1512136-04D, 1512136-05D, 1512136-06D, 1512136-07D, 1512136-08D, 1512136-09D, 1512136-10D, 1512136-11D, 1512136-12D, 1512136-13D, 1512136-14D, 1512136-15D, 1512136-16D, 1512136-17D, 1512136-18D, 1512136-19D

Sample ID	**MB-72690**	Batch ID:	**72690**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**MBLK**	Run ID:	**WC_151211A**	Analysis Date:	**12/12/2015 8:30:00 AM**	Prep Date:	**12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID	**LCS-72690**	Batch ID:	**72690**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**LCS**	Run ID:	**WC_151211A**	Analysis Date:	**12/12/2015 8:30:00 AM**	Prep Date:	**12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	734	10.0	745.6	0	98.4	90	113			

Sample ID	**1512104-10B-DUP**	Batch ID:	**72690**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_151211A**	Analysis Date:	**12/12/2015 8:30:00 AM**	Prep Date:	**12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	569	10.0	0	570.0				0.176	5	

Sample ID	**1512136-10D-DUP**	Batch ID:	**72690**	TestNo:	**M2540C**	Units:	**mg/L**
SampType:	**DUP**	Run ID:	**WC_151211A**	Analysis Date:	**12/12/2015 8:30:00 AM**	Prep Date:	**12/11/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	3290	50.0	0	3275				0.305	5	

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: 1512136
Project: Empire Abo

ANALYTICAL QC SUMMARY REPORT

RunID: WC_151214D

The QC data in batch 72716 applies to the following samples: 1512136-20D, 1512136-21D, 1512136-22D, 1512136-23D, 1512136-24D, 1512136-25D, 1512136-26D, 1512136-27D, 1512136-28D, 1512136-29D, 1512136-30D, 1512136-31D, 1512136-32D

Sample ID **MB-72716** Batch ID: **72716** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_151214D** Analysis Date: **12/15/2015 8:00:00 AM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID **LCS-72716** Batch ID: **72716** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_151214D** Analysis Date: **12/15/2015 8:00:00 AM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	751	10.0	745.6	0	101	90	113			

Sample ID **1512136-20D-DUP** Batch ID: **72716** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_151214D** Analysis Date: **12/15/2015 8:00:00 AM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	2630	50.0	0	2640				0.380	5	

Sample ID **1512145-01B-DUP** Batch ID: **72716** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_151214D** Analysis Date: **12/15/2015 8:00:00 AM** Prep Date: **12/14/2015**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1780	50.0	0	1780				0.281	5	

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