
2018 ANNUAL GROUNDWATER MONITORING REPORT

**San Miguel Electric Cooperative, Inc.
Christine, Atascosa County, Texas**



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Prepared for: San Miguel Electric Cooperative, Inc.



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1.0 INTRODUCTION

On behalf of the San Miguel Electric Cooperative, Inc. (SMECI), GSI Environmental Inc. (GSI) prepared this Coal Combustion Residuals (CCR) Annual Groundwater Monitoring Report (Annual Report) for the Equalization Pond, Ash Ponds, and Ash Pile at the San Miguel Electric Plant (the San Miguel Plant or Plant) located near Christine, Atascosa County, Texas. This Annual Report was prepared in accordance with the requirements specified in the CCR Rule under 40 Code of Federal Regulations (CFR) §257.90(e).

This Annual Report documents i) the results of three 2018 groundwater monitoring events (March, June and September), and ii) summarizes the findings from the following documents:

- Zephyr Environmental Corporation (2018). Detection Groundwater Monitoring Statistical Comparisons, 18 January 2018.
- AECOM (2018). CCR Annual Groundwater Monitoring Report §257.90 for the Equalization Pond, Ash Pond, and Ash Pile at the San Miguel Plant, Revision 1: January 31, 2018; Revision 2: 24 October 2018.
- Pastor, Behling, & Wheeler, LLC (2018). Coal Combustion Residual Rule, Alternative Source Demonstration Report, 14 May 2018.
- Power Engineers (2019). Groundwater Statistics Report for RY2018, San Miguel Electric Cooperative, Inc. 16 January 2019.

1.1 Site Overview

The San Miguel Plant is located in south-central Atascosa County in Christine, Texas, and is surrounded by the San Miguel Lignite Mine, reclaimed mine areas, and open grasslands that are primarily used as pastureland for livestock (Figure 1). The Plant has three units used for the ongoing management of CCR that are subject to requirements in CFR §257: two surface impoundments (Ash Ponds and Equalization Pond) and one landfill (Ash Pile) as described below and shown in Figure 1.

Equalization Pond: The Equalization Pond is located on the eastern boundary of the Plant property (Figure 1) and is a diked impoundment that shares the western dike with a freshwater storage pond. It is roughly rectangular in shape, with approximate dimensions of 750 feet by 1,500 feet, and an area of approximately 25 acres. The Equalization Pond receives flue gas desulfurization scrubber wastewater (a spent limestone slurry) and treated sewage wastewater from the San Miguel Plant.

Ash Ponds: Ash Water Transport Ponds A and B (Ash Ponds) are located along the southern boundary of the site and east of the Yard Drainage Retention Pond. The Ash Ponds are bermed impoundments with the northern dike at or near natural grade. The two Ash Ponds are separated by a central 'splitter-dike' which separates Ash Pond A on the north side from Ash Pond B on the south side; there is a connecting weir between the two ponds (Figure 1). The Ash Ponds are rectangular, with approximate dimensions of 2,500 feet by 250 feet each, and a total area of approximately 28 acres. The Ash Ponds receive bottom ash transport water, boiler blowdown, cooling tower blowdown, boiler feedwater treatment wastewater, and stormwater runoff from a limited portion of the site. In addition, the Ash Ponds receive wastewater from the Equalization Pond as needed to manage the water level in the Equalization Pond, and periodic makeup water from the Yard Drainage Retention Pond.

Ash Pile: The Ash Pile is located northwest of the Plant and east of the Lignite Storage Pile. The Ash Pile is a temporary storage area with an area of approximately one acre that is classified as an existing non-containerized CCR pile. The Ash Pile is used to stage a stabilized mixture of fly ash and flue gas desulfurization scrubber waste treatment sludge. These materials are collected from the Ash Pile, typically on a daily basis, and transported to mine areas undergoing reclamation.

1.2 Geology/Hydrogeology

The San Miguel Plant overlies a shallow unconfined aquifer approximately 5 to 30 ft below ground surface and 5 to 25 ft thick, which is composed of silty and clayey sand beds that are relatively continuous laterally across the site. The aquifer locally dips to the southeast at approximately 45 feet per mile (AECOM, 2018). Local and regional geology are described further in the 2017 Annual Groundwater Monitoring Report (AECOM, 2018).

1.3 Status of Groundwater Monitoring

The groundwater monitoring program at the San Miguel Plant is currently in assessment monitoring for the Equalization Pond and Ash Ponds and in detection monitoring for the Ash Pile. Key tasks completed to-date for the groundwater monitoring program are summarized below.

1.3.1 Background Groundwater Monitoring

Background groundwater monitoring was conducted at the San Miguel Plant from May 2016 to August 2017. Per §257.94(b) of the CCR Rule, a minimum of eight independent samples were collected from each background and downgradient monitoring well at the CCR units and analyzed for constituents listed in Appendix III and IV of the CCR Rule:

- **Appendix III:** boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS).
- **Appendix IV:** antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 and 228 combined.

Eight sampling events were performed at the Equalization Pond and Ash Ponds (May 2016 – May 2017), and 10 sampling events were performed at the Ash Pile (May 2016 – August 2017). The two additional events at the Ash Pile were performed because it was determined that, after the first two events in May 2016 and August 2016, well SP-31 was not located upgradient of the Ash Pile (Figure 1). A new background monitoring well (SP-34) was installed upgradient of the Ash Pile in October 2016 and this well was sampled in eight events between October 2016 and August 2017. Well SP-31 is currently used as a groundwater observation well. Groundwater results for background monitoring are presented in Appendix A.

1.3.2 Detection & Assessment Monitoring

Initial detection monitoring for the three CCR units was conducted in August 2017. Pursuant to §257.94(a) of the CCR Rule, groundwater samples were collected from background and downgradient wells for each CCR unit and analyzed for Appendix III constituents. Groundwater samples were collected by AECOM and analyzed by DHL Analytical Inc. and ESC Lab Sciences. Groundwater results for the initial detection monitoring event are presented in Appendix A.

Pursuant to §257.93(g) of the CCR Rule, a statistical evaluation of the August 2017 detection monitoring results was conducted by Zephyr Environmental Inc. (Zephyr) (Zephyr, 2018)

according to the Groundwater Statistical Method for CCR Detection Monitoring certification document (Zephyr, 2017). For each CCR unit, upper prediction limits (UPLs) were established for Appendix III constituents based on the results of the background monitoring events at each upgradient well. Using an inter-well comparison approach, the statistical report identified SSIs above background UPLs for several Appendix III constituents at the downgradient wells for the three CCR units. Based on the results of Zephyr's 2018 statistical evaluation, SMECI initiated assessment monitoring in March 2018 at all monitoring wells for each CCR unit as required by §257.95 of the CCR Rule.

An alternative source demonstration was performed by Pastor, Behling, & Wheeler, LLC (PBW) pursuant to §257.94(e)(2) of the CCR Rule (PBW, 2018) (see Appendix B). The report compared the August 2017 and March 2018 groundwater results at downgradient wells of each CCR unit to historical results from six monitoring wells (known as the "Unit 22 wells") screened in the same uppermost aquifer and located at the adjacent San Miguel Lignite Mine. SMECI has a lengthy monitoring history for the Unit 22 wells. Most of these wells have been monitored on a quarterly basis for many years since 1985. PBW concluded that all SSIs for the Ash Pile and some of SSIs for the Equalization Pond and Ash Ponds were the result of natural variations in groundwater (PBW, 2018). The following specific conclusions were made:

- **Equalization Pond:** At all downgradient wells, concentrations of calcium, chloride, sulfate, and TDS were below the historical maximum values reported for the Unit 22 wells. As a result, SSIs reported for these constituents were attributed to natural variations in groundwater quality. However, boron concentrations at five downgradient wells were above the historical maximum concentrations at the Unit 22 wells.
- **Ash Ponds:** Boron concentrations at five downgradient wells were above the historical maximum concentrations at the Unit 22 wells.
- **Ash Pile:** At all downgradient wells, concentrations of calcium, chloride, and TDS were below the historical maximum values reported for the Unit 22 wells. As a result, PBW attributed SSIs for these constituents to natural variations in groundwater quality. SSIs for sulfate and pH were attributed to infiltration from the nearby lignite storage pile.

Based on the results of the alternative source demonstration, assessment monitoring continued at the Ash Ponds and Equalization Pond wells pursuant to §257.95 of the CCR Rule. For the Ash Pile, detection monitoring was resumed pursuant to §§257.94 and 257.95 of the CCR Rule. Subsequent groundwater monitoring events were conducted in June and September 2018.

A statistical evaluation of the 2018 groundwater data was prepared by Power Engineers, Inc. (Power; formerly Zephyr) (Power, 2019). Pursuant to §257.95(d)(2) and (h) of the CCR Rule, background UPLs and groundwater protection standards were established for Appendix IV constituents for the Equalization Pond and Ash Ponds (Power, 2019). Using inter-well and intra-well comparison approaches, SSIs above the groundwater protection standards were identified at several downgradient wells at the Equalization Pond and Ash Ponds (Power, 2019).

2.0 GROUNDWATER MONITORING METHODS AND PROCEDURES

2.1 Monitoring Well Network

The groundwater monitoring well network at the San Miguel Plant consists of 31 wells (25 groundwater monitoring wells; 6 piezometers/observation wells) installed between July 2015 and October 2016 (AECOM, 2018; ERM, 2017) (Figure 1). The well network includes:

- Observation wells – used for groundwater elevation measurement;
- Background wells – located upgradient of each CCR unit and used for monitoring of groundwater elevation and background groundwater quality;
- Monitoring wells – located downgradient (or side-gradient) of each CCR unit and used for monitoring of groundwater elevation and groundwater quality.

Table 1 summarizes the monitoring well network, including well identifications and well functions for the three CCR units. Well construction logs are presented in AECOM (2018). The wells are screened in the uppermost aquifer and located upgradient and downgradient of the three CCR units (Equalization Pond, Ash Ponds, and Ash Pile). Pursuant to §257.91(c)(1) of the CCR Rule, each CCR unit has a minimum of one upgradient and three downgradient wells. The well network consists of: nine monitoring wells for the Equalization Pond, 11 monitoring wells for the Ash Ponds, five monitoring wells for the Ash Pile, and six groundwater observation wells (Figure 1). To date, no groundwater monitoring wells or observation wells have been decommissioned.

2.2 Sample Collection & Analysis

Field measurements and groundwater sampling were performed in general accordance with the Draft Groundwater Sampling and Analysis Plan [SAP] (ERM, 2016). The groundwater sample collection and analytical procedures presented in the SAP are consistent with current industry standards and practices for groundwater sampling and compliant with the requirements in §257.93 of the CCR Rule. Any variances between 2018 sampling and analytical procedures and the specifications in the SAP, along with an evaluation of those variances on data usability, are discussed in the Data Usability Summaries provided in Appendix C.

Pursuant to §§257.94 and 257.95 of the CCR Rule, all groundwater samples were analyzed for Appendix III constituents. For assessment monitoring events, samples were also analyzed for Appendix IV constituents. In addition, static water levels and field parameters (dissolved oxygen, oxidation reduction potential, pH, specific conductivity, temperature, and turbidity) were measured at all wells for all sampling events.

2.3 Quality Assurance & Quality Control

During each sampling event, quality assurance/quality control samples (QA/QC) were collected in general accordance with the Draft Groundwater SAP (ERM, 2016). QA/QC samples included field equipment blanks, field blanks, and field duplicate samples. QA/QC sample data was evaluated during data validation and are included in the Data Usability Summaries provided in Appendix C. Any variances between 2018 QA/QC samples and the specifications in the SAP, along with an evaluation of those variances on data usability, are discussed in the Data Usability Summaries provided in Appendix C.

Groundwater analytical data and field notes were reviewed, and the data usability was evaluated following the Draft Groundwater SAP (ERM, 2016) and using the National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017 (USEPA, 2017) for applicable metals. Data validation generally included review of sample preservation and integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries and relative percent differences (RPDs), post digestions spikes, laboratory and field duplicate RPDs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers are applied to the data using USEPA procedures as guidance (USEPA, 2017).

3.0 2018 GROUNDWATER MONITORING RESULTS

3.1 Groundwater Flow Direction

Static water levels and groundwater elevations for the 2018 monitoring events are presented in Table 2. As shown in Figures 2A-2C, groundwater within the uppermost aquifer generally flows to the southeast across the site. A hydrologic high in the northwest corner of the site causes a localized southwesterly groundwater flow component in that area. The average hydraulic gradient across the site for the September 2018 event is approximately 0.008 ft/ft. The gradient was calculated with the following well pairs: MW-02 and EP-37, PZ-03 and MW-03, SP-31 and PZ-02, and EP-31 and EP-32. The groundwater gradient and general flow direction is consistent with those observed during previous monitoring events (AECOM, 2018).

3.2 Groundwater Analytical Results

Groundwater samples were collected in March, August, and September 2018. Groundwater samples were collected by Source Environmental Sciences Inc. and analyzed by ALS Environmental. Field parameters and groundwater analytical results for these monitoring events are presented in Tables 3 and 4, respectively. An evaluation of data quality is presented in Appendix C.

4.0 CONCLUSIONS AND PROJECTED KEY ACTIVITIES

The groundwater monitoring program at the San Miguel Plant is currently in the detection monitoring phase for the Ash Pile and in the assessment monitoring phase for the Equalization Pond and Ash Ponds. The first 2019 semi-annual monitoring event is planned for March 2019.

Projected key activities include further evaluation of historical data and other relevant information with respect to previous conclusions of SSIs for various constituents. This work would likely include, but not be limited to:

- Identification of additional data that may be relevant, potentially including additional sampling, and
- An alternative source demonstration, pursuant to §257.95(g)(3)(ii) of the CCR Rule.

5.0 REFERENCES

- AECOM, 2017. Groundwater Sampling Report – Event 8 – August 2017, October 30, 2017.
- AECOM, 2018. CCR Annual Groundwater Monitoring Report (§257.90) for the Equalization Pond, Ash Pond, and Ash Pile at the San Miguel Plant, January 31, 2018.
- ERM, 2016. Draft Groundwater Sampling and Analysis Plan - San Miguel Electric Cooperative, Inc., Christine, Texas, June 23, 2016.
- ERM, 2017. CCR Unit Groundwater Monitoring System Certification - San Miguel Electric Cooperative, Inc., Atascosa County, Texas, October 17, 2017.
- Pastor, Behling, & Wheeler, LLC (2018). Coal Combustion Residual Rule, Alternative Source Demonstration Report – Electric Cooperative, Inc., Atascosa County, Texas, May 14, 2018.
- Power Engineers, 2019. Groundwater Statistics Report for RY2018, San Miguel Electric Cooperative, Inc. January 14, 2019.
- USEPA, 2017. National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017.
- Zephyr, 2017. Groundwater Statistical Method for CCR Detection Monitoring - San Miguel Electric Cooperative, Inc., Atascosa County, Texas, November 28, 2017.
- Zephyr, 2018. Detection Groundwater Monitoring Statistical Comparisons - Coal Combustion Residual Units, San Miguel Electric Cooperative, Inc., January 18, 2018.

2018 ANNUAL GROUNDWATER MONITORING REPORT

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TABLES

Table 1	Groundwater Sampling Event Summary
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TABLE 1
Groundwater Sampling Event Summary

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Well ID	Well Type	Hydraulic Location	24 - 27 May 2016	16 - 18 August 2016	24 - 27 October 2016	10 - 11 January 2017	13 - 17 February 2017	21 - 23 March 2017	9 - 15 May 2017	13 June 2017	24 - 27 July 2017	21 - 24 August 2017	19 - 21 March 2018	5 - 7 June 2018	4 - 6 September 2018
Ash Pile															
SP-34	Background	Upgradient	--	--	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG8/D01	A01	D02	D03
SP-01	Monitoring	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	BG09	BG10/D01	A01	D02	D03
SP-02	Monitoring	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	BG09	BG10/D01	A01	D02	D03
SP-03	Monitoring	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	BG09	BG10/D01	A01	D02	D03
SP-32	Monitoring	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	BG09	BG10/D01	A01	D02	D03
Ash Pond															
PZ-02	Background	Upgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
PZ-03	Background	Upgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
AP-31	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
AP-32	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
AP-33	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
AP-34	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
AP-35	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
AP-36	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
MW-03	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
PZ-05	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
PZ-06	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
Equalization Pond															
EP-31	Background	Upgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
EP-32	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
EP-33	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
EP-34	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
EP-35	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
EP-36	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
EP-37	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
EP-38	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
MW-04	Monitoring	Downgradient	BG01	BG02	BG03	--	BG04	BG05	BG06	--	BG07	BG8/D01	A01	A02	A03
Observation Well															
SP-31	Observation Well		OBS01	OBS02	--	--	--	--	--	--	--	--	--	--	--
SP-33	Observation Well		--	--	OBS01	--	--	--	--	--	--	--	--	--	--

Notes:

1. BG## = background monitoring event; D## = detection monitoring event; A## = assessment monitoring event.
2. "--" = not sampled/ data not provided.

TABLE 2
Groundwater Elevation Data - 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Well ID	Top of Casing Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Total Depth (ft btoc)	Groundwater Elevation (ft amsl)
Ash Pile					
SP-34 (background)	334.62	Mar-18	32.25	51.78	302.37
		Jun-18	30.70	51.70	303.92
		Sep-18	31.05	52.00	303.57
SP-01	325.97	Mar-18	29.50	44.70	296.47
		Jun-18	24.60	44.70	301.37
		Sep-18	25.00	44.75	300.97
SP-02	329.8	Mar-18	25.53	46.25	304.28
		Jun-18	25.80	46.25	304.00
		Sep-18	26.40	46.20	303.40
SP-03	328.34	Mar-18	26.00	49.55	302.34
		Jun-18	26.25	49.55	302.09
		Sep-18	26.70	49.55	301.64
SP-32	327.89	Mar-18	26.65	45.45	301.24
		Jun-18	26.90	45.40	300.99
		Sep-18	27.10	45.45	300.79
Ash Pond					
PZ-02 (background)	318.92	Mar-18	29.45	66.90	289.47
		Jun-18	29.25	67.00	289.67
		Sep-18	30.25	48.60	288.67
PZ-03 (background)	323.19	Mar-18	30.35	56.65	292.84
		Jun-18	30.30	64.90	292.89
		Sep-18	29.50	56.65	293.69
AP-31	292.8	Mar-18	7.75	26.70	285.05
		Jun-18	8.10	25.70	284.70
		Sep-18	9.55	25.75	283.25
AP-32	297.94	Mar-18	14.40	36.60	283.54
		Jun-18	14.70	36.65	283.24
		Sep-18	16.00	36.70	281.94
AP-33	304.67	Mar-18	21.75	44.50	282.92
		Jun-18	20.60	44.45	284.07
		Sep-18	21.90	44.50	282.77
AP-34	296.32	Mar-18	13.45	40.55	282.87
		Jun-18	12.90	40.60	283.42
		Sep-18	15.30	40.50	281.02
AP-35	298.36	Mar-18	14.20	45.80	284.16
		Jun-18	14.50	45.80	283.86
		Sep-18	16.00	45.80	282.36
AP-36	288.75	Mar-18	6.60	42.85	282.15
		Jun-18	6.70	42.90	282.05
		Sep-18	8.50	42.95	280.25
MW-03	295.9	Mar-18	12.00	42.65	283.90
		Jun-18	12.15	42.70	283.75
		Sep-18	13.55	42.75	282.35
PZ-05	302.77	Mar-18	18.20	50.50	284.57
		Jun-18	18.35	50.10	284.42
		Sep-18	19.80	50.15	282.97
PZ-06	297.42	Mar-18	14.00	53.50	283.42
		Jun-18	14.10	53.60	283.32
		Sep-18	15.40	53.60	282.02

TABLE 2
Groundwater Elevation Data - 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Well ID	Top of Casing Elevation (ft amsl)	Date	Depth to Water (ft btoc)	Total Depth (ft btoc)	Groundwater Elevation (ft amsl)
Equalization Pond					
EP-31 (background)	316.7	Mar-18	24.35	64.90	292.35
		Jun-18	24.15	64.90	292.55
		Sep-18	24.80	64.90	291.90
EP-32	277.44	Mar-18	1.83	43.95	275.62
		Jun-18	2.05	43.95	275.39
		Sep-18	3.20	44.00	274.24
EP-33	278	Mar-18	1.00	43.65	277.00
		Jun-18	1.35	43.65	276.65
		Sep-18	2.50	43.65	275.50
EP-34	278.71	Mar-18	1.00	48.53	277.71
		Jun-18	1.30	48.45	277.41
		Sep-18	2.50	48.55	276.21
EP-35	279.86	Mar-18	2.18	46.85	277.69
		Jun-18	2.45	46.90	277.41
		Sep-18	3.50	46.90	276.36
EP-36	278.5	Mar-18	2.70	44.25	275.80
		Jun-18	2.95	44.45	275.55
		Sep-18	3.90	44.15	274.60
EP-37	277.8	Mar-18	2.18	48.73	275.63
		Jun-18	2.45	48.70	275.35
		Sep-18	3.40	48.70	274.40
EP-38	279.35	Mar-18	1.28	42.50	278.08
		Jun-18	1.50	42.55	277.85
		Sep-18	2.65	42.40	276.70
MW-04	278.58	Mar-18	1.45	47.65	277.13
		Jun-18	1.75	47.65	276.83
		Sep-18	2.80	47.60	275.78
Groundwater Observation Wells					
MW-01	289.16	Mar-18	8.83	52.45	280.34
		Jun-18	8.00	52.45	281.16
		Sep-18	8.90	52.45	280.26
MW-02	317.68	Mar-18	31.00	64.18	286.68
		Jun-18	31.70	64.18	285.98
		Sep-18	31.95	64.25	285.73
PZ-04	303.21	Mar-18	14.30	33.65	288.91
		Jun-18	14.65	33.95	288.56
		Sep-18	15.95	34.10	287.26
PZ-07	281.99	Mar-18	2.70	46.65	279.29
		Jun-18	2.95	46.60	279.04
		Sep-18	4.15	46.70	277.84
SP-31	335.01	Mar-18	31.25	60.65	303.76
		Jun-18	31.40	59.85	303.61
		Sep-18	31.95	59.90	303.06
SP-33	329.96	Mar-18	22.10	31.70	307.86
		Jun-18	22.40	31.70	307.56
		Sep-18	22.60	31.70	307.36

Notes:

1. Top of casing elevations are tabulated from Groundwater Sampling Report - Event 8 - August 2017 (AECOM, 2017).
2. Total depth and depth to water measurements are tabulated from field notes and electronic files provided by the San Miguel Electric Cooperative, Inc.
3. ft amsl = feet above mean sea level; ft btoc = feet below top of casing.

TABLE 3
Field Parameter Results - 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Well ID	Sample Date	Temperature (°C)	pH (SU)	Specific Conductance (uS/cm)	Oxidation Reduction Potential (mV)	Dissolved oxygen (%)	Turbidity (NTU)
Ash Pile							
SP-34 (background)	Mar-18	22.4	3.03	11760	239.1	13.9	120.7
	Jun-18	27.79	3.2	10483	280.4	261	18.8
	Sep-18	27.3	2.67	9588	454.7	1.3	3.06
SP-01	Mar-18	21.4	5.52	1120	119.4	28.2	7.5
	Jun-18	28.15	4.42	1024	104.9	359	16
	Sep-18	27.1	3	7009	445.5	9.2	9
SP-02	Mar-18	22	5.65	17760	78.6	68	8.8
	Jun-18	28.9	5.68	16122	82.9	84.9	32.6
	Sep-18	26.7	5.21	13958	451.2	2.1	99.9
SP-03	Mar-18	20.3	4.78	17080	62.8	20.5	4.9
	Jun-18	27.9	3.83	16305	179.3	780.1	9.22
	Sep-18	28	4.9	12457	299	2.2	8.53
SP-32	Mar-18	20.2	3.13	18040	437.5	5.9	5.1
	Jun-18	29.3	3.19	66575	421.9	34.1	7.98
	Sep-18	28.4	2.76	14599	472.8	3.8	9.06
Ash Pond							
PZ-02 (background)	Mar-18	19.9	5.79	15040	-52.7	3.9	98
	Jun-18	28.97	5.77	14295	-53.1	150.9	17.9
	Sep-18	26.9	5.34	12107	-31	2.1	7.6
PZ-03 (background)	Mar-18	20.9	2.98	20730	82.9	2.4	28.8
	Jun-18	20	2.87	15995	77.9	19.9	20.1
	Sep-18	20.7	2.88	17598	99.8	13.7	18.6
AP-31	Mar-18	19	3.58	11240	542	54	2.69
	Jun-18	26.73	3.89	9454	280.1	249	4.01
	Sep-18	26.8	3.19	8191	567.8	7.9	2.78
AP-32	Mar-18	19.8	3.54	14800	145.1	72	7.64
	Jun-18	25.69	3.38	12669	252	300.1	6.19
	Sep-18	25.2	2.91	11957	505.9	71.2	7.77
AP-33	Mar-18	20.3	3.02	19140	154.8	32.7	6.33
	Jun-18	25.01	3.07	16164	230.7	90.1	27
	Sep-18	25.5	2.72	15297	472	1.8	20.4
AP-34	Mar-18	18.4	3	18990	57.9	18.3	4.4
	Jun-18	25.33	3.19	11571	239.9	100.1	5
	Sep-18	25.3	2.75	11042	329.8	1.4	13.6
AP-35	Mar-18	19.7	3.36	11360	30.9	49.5	10.1
	Jun-18	25.74	3.47	9808	173.3	88.1	19.9
	Sep-18	24.4	3.05	9239	363.9	2.9	17.9
AP-36	Mar-18	18.5	3.8	10600	43.5	49.8	25.1
	Jun-18	26.09	4.03	9230	116.9	109	28.9
	Sep-18	26.1	3.53	8510	166.2	11	60.3
MW-03	Mar-18	20.6	3.36	13320	210.9	36.9	3.39
	Jun-18	25.46	3.46	11449	262.8	320.37	7.41
	Sep-18	25.4	2.99	10603	510.4	30.1	5.34
PZ-05	Mar-18	18	3.1	13510	41.7	18.5	19.9
	Jun-18	25.03	3.25	11732	51	170	39.9
	Sep-18	25.9	2.86	11003	397.6	3.7	28.9
PZ-06	Mar-18	18.7	5.92	10290	26.5	57.9	6.59
	Jun-18	26.09	5.8	8998	24.8	99.9	18.2
	Sep-18	25.5	5.59	8337	17.9	1.9	9.98

TABLE 3
Field Parameter Results - 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Well ID	Sample Date	Temperature (°C)	pH (SU)	Specific Conductance (uS/cm)	Oxidation Reduction Potential (mV)	Dissolved oxygen (%)	Turbidity (NTU)
Equalization Pond							
EP-31 (background)	Mar-18	18.7	3.58	6470	49.9	3.7	93.4
	Jun-18	24.64	3.75	5503	257.3	269.1	7.37
	Sep-18	26.3	3.27	5309	402.1	1.5	9.7
EP-32	Mar-18	18.6	7.16	13590	-1	57.9	15.9
	Jun-18	24.48	6.75	11588	80.8	300.3	16.4
	Sep-18	26.9	6.38	11108	-5.7	7.2	21.1
EP-33	Mar-18	18.7	7.16	17610	92.7	78.3	39.9
	Jun-18	25.45	6.78	12578	110.3	19.7	8.01
	Sep-18	27.5	6.3	12189	-23.4	1.3	11.2
EP-34	Mar-18	18.6	6.62	18440	-34.5	69.5	5.9
	Jun-18	25.53	6.76	16853	-36.5	79.9	26.1
	Sep-18	27.3	6.37	16191	-50.2	1.5	33
EP-35	Mar-18	15.5	6.6	16730	130.2	78	7.39
	Jun-18	25.46	6.42	14373	14.1	139	25.5
	Sep-18	24.4	6.06	13698	7.2	2.4	14.7
EP-36	Mar-18	16.8	6.31	16790	7.4	10.8	2.45
	Jun-18	25.72	6.28	14601	19	48.3	24.1
	Sep-18	25.4	6.01	13692	-17.8	3.9	25.8
EP-37	Mar-18	19.8	6.54	18710	2.2	21.9	6.69
	Jun-18	30.08	6.51	17111	4.1	137.5	1.5
	Sep-18	29	6.71	16703	-1.7	129	2.1
EP-38	Mar-18	8.8	5.81	7730	25.8	2.3	52.9
	Jun-18	27.79	5.74	7122	31.6	281.8	81
	Sep-18	27.6	5.42	6600	75.5	1.1	39.8
MW-04	Mar-18	18.9	6.3	10290	21.7	75.5	130
	Jun-18	26.89	6.2	9177	13.7	129.1	73.9
	Sep-18	27.2	5.9	8393	18.4	7.7	31

Notes:

- Field parameter measurements are tabulated from field notes and electronic files provided by the San Miguel Electric Cooperative, Inc.
- °C = degrees Celsius; SU - standard unit; mV = millivolts; uS/cm = micro Siemens per centimeter; mg/L = milligrams per liter; NTU = Nephelometric turbidity unit.

TABLE 4
Groundwater Analytical Results - 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Analyte			Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																	
			Boron	Calcium	Chloride	Fluoride*	pH, field	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium-226	Radium-228	Radium-226 & Radium-228		
Location ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L		
Ash Pile																											
Background (Zephyr, 2018)			23.6	823.2	2370	6.205	2.23-3.6	3900	9451	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MCL			--	--	--	4	--	--	--	0.006	0.01	2	0.004	0.005	0.1	--	0.015	--	0.002	--	0.05	0.002	--	--	5		
SP-34 (background)	3/21/2018	N	12.1	691	2050 J+	10 U	3.03	2910	7880	0.01 U	0.0323	0.0211	0.172	0.195	--	0.682	0.01 U	1.21	0.0002 UJ	0.025 U	0.244	0.0187	0.65 ± 0.31	6.1 ± 1.6	6.75 ± 1.9		
	6/7/2018	N	12.9	651	2350	1.09	3.2	3210	7960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/2018	N	11.2	711	2120	4.98	2.67	2770	8420	0.01 U	0.0139	0.02 U	0.171	0.197	0.02 U	0.702	0.01 U	1.38	0.000262 J-	0.025 U	0.122	0.0187	--	--	--		
SP-01	3/21/2018	N	3.88	280	3020 J+	11.9	5.52	6280	13900	0.01 U	0.0518	0.02 U	0.292	0.28	--	1.45	0.01 U	1.58	0.0002 UJ	0.025 U	0.375	0.01 U	0.65 ± 0.3	1.85 ± 0.67	2.5 ± 0.97		
	6/7/2018	N	7.96	545	3690	1.25	4.42	7330	14500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/2018	N	5.3	423	2540	14	3	5340	11300	0.01 U	0.0377	0.02 U	0.348	0.413	0.02 U	2.16	0.01 U	1.82	0.0002 UJ	0.025 U	0.113	0.0113	--	--	--		
SP-02	3/21/2018	N	9.13	1200	4430 J+	10 U	5.65	1660	13100	0.01 U	0.01 U	0.02 U	0.0116	0.0164	--	0.025 U	0.01 U	0.65	0.00101 J-	0.025 U	0.107	0.01 U	ND ± 0.44 U	4 ± 1.1	4 ± 1.5		
	6/7/2018	N	10.6	1220	4980	0.163	5.68	1790	13100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/2018	N	8.92	1070	4420	0.5 U	5.21	1710	13300	0.01 U	0.01 U	0.02 U	0.0146	0.016	0.02 U	0.025 U	0.01 U	0.646	0.000511 J-	0.025 U	0.114	0.01 U	--	--	--		
SP-03	3/21/2018	N	6.75	786	3960 J+	10 U	4.78	2520	11100	0.01 U	0.01 U	0.0235	0.0491	0.0482	--	0.16	0.01 U	2	0.0002 UJ	0.025 U	0.0897	0.01 U	1.58 ± 0.52	7.6 ± 1.9	9.18 ± 2.4		
	6/7/2018	N	7.34	761 J	4760	0.901	3.83	2930	11900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	6/7/2018	Dup	6.78	447 J	4810	0.854	--	2920	11400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/2018	N	6.7	876	4250	0.846	4.9	2680	11900	0.01 U	0.01 U	0.0251	0.1 U	0.0525 J	0.02 U	0.154 J	0.01 U	1.59	0.0002 UJ	0.025 U	0.0464	0.01 U	--	--	--		
	9/6/2018	Dup	7.71	791	3730	0.517	--	2700	11400	0.01 U	0.01 U	0.0229	0.1 U	0.0339 J	0.02 U	0.109 J	0.01 U	1.37	0.0002 UJ	0.025 U	0.0367 J	0.01 U	--	--	--		
SP-32	3/21/2018	N	8.54	431	1470 J+	11	3.13	9720	17600	0.01 U	0.116	0.02 U	0.449	0.402	--	2.55	0.01 U	3.3	0.0002 UJ	0.025 U	0.806	0.0167	0.43 ± 0.25	1.86 ± 0.72	2.29 ± 0.97		
	6/7/2018	N	9.2	422	1720	0.89	3.19	10100	16600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	9/6/2018	N	7.54	465	1560	15.2	2.76	9450	17900	0.01 U	0.0589	0.02 U	0.346	0.414	0.02 U	2.66	0.01 U	3.03	0.0002 UJ	0.025 U	0.169	0.0141	--	--	--		

TABLE 4
Groundwater Analytical Results - 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Analyte			Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																
			Boron	Calcium	Chloride	Fluoride*	pH, field	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium-226	Radium-228	Radium-226 & Radium-228	
Location ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	
Ash Pond																										
Background (Zephyr, 2018)			15.01	908.6	4430	9.837	3.43-4.09	5630	15819	0.004	0.0868	0.0403	0.584	0.618	0.067	1.94	0.006	3.911	0.00008	0.006	0.528	0.02	3.567	4.991	8.558	
MCL			--	--	--	4	--	--	--	0.006	0.01	2	0.004	0.005	0.1	--	0.015	--	0.002	--	0.05	0.002	--	--	5	
PZ-02 (background)	3/21/2018	N	5.13	726	3000 J+	10 U	5.79	2600	9760	0.01 U	0.01 U	0.0272	0.01 U	0.01 U	--	0.025 U	0.01 U	1.87	0.0002 UJ	0.025 U	0.01 U	0.01 U	ND ± 0.16 U	1.11 ± 0.56	1.11 ± 0.72	
	6/6/2018	N	5.23	715	3790	0.26	5.77	2880	10200	0.01 U	0.01 U	0.0266	0.1 U	0.01 U	--	0.025 U	0.01 U	1.59	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.46 ± 0.25 U	2.07 ± 0.62	2.53 ± 0.87	
	9/6/2018	N	5.97	801	3600	0.5 U	5.34	2660	10600	0.01 U	0.01 U	0.0309	0.1 U	0.01 U	0.02 U	0.025 U	0.01 U	1.71	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.6 ± 0.34 U	2.23 ± 0.7 U	2.83 ± 1.04 U	
PZ-03 (background)	3/21/2018	N	10.2	694	4390 J+	10 U	2.98	4160	14000	0.01 U	0.0743	0.0245	0.425	0.463	--	1.69	0.01 U	3.57	0.0002 UJ	0.025 U	0.518	0.01 U	0.54 ± 0.28	3.7 ± 1.1	4.24 ± 1.4	
	6/7/2018	N	10.6	686	5050	1.44	2.87	4610	14100	0.01 U	0.0838	0.399	0.289	0.501	--	1.78	0.109	2.41	0.0002 U	0.025 U	0.146	0.01 U	0.54 ± 0.26	4.9 ± 1.2	5.44 ± 1.5	
	9/6/2018	N	5.48	818	3500	0.5 U	2.88	2650	10500	0.01 U	0.01 U	0.03	0.1 U	0.01 U	0.02 U	0.025 U	0.01 U	1.68	0.0002 UJ	0.025 U	0.01 U	0.01 U	ND ± 0.21 U	ND ± 0.37 U	ND ± 0.58 U	
AP-31	3/19/2018	N	43.3	566	1570	5 U	3.58	3260	7580	0.01 U	0.01 U	0.02 U	0.02 U	0.01 U	--	0.253	0.02 U	0.883	0.000505 J-	0.025 U	0.0372	0.01 U	0.44 ± 0.25	1.13 ± 0.54	1.57 ± 0.79	
	6/5/2018	N	43.1	562	1620	0.308	3.89	3220	7740	0.01 U	0.01 U	0.02 U	0.0123	0.01 U	--	0.234	0.01 U	0.771	0.000457	0.025 U	0.0329	0.01 U	ND ± 0.29 U	0.99 ± 0.4	0.99 ± 0.69	
	9/4/2018	N	34.7	601	1550	0.406	3.19	3020	8220	0.01 U	0.01 U	0.02 U	0.011 J	0.01 UJ	0.02 U	0.229 J	0.01 U	0.947	0.000403	0.025 U	0.0243 J	0.01 U	0.35 ± 0.27 U	1.38 ± 0.53 U	1.73 ± 0.8 U	
AP-32	3/19/2018	N	14	682	2730	10 U	3.54	3240	9780	0.01 U	0.0379	0.02 U	0.0564	0.0817	--	0.559	0.02 U	1.57	0.00194 J-	0.025 U	0.116	0.01 U	1.29 ± 0.52	9.6 ± 2.4	10.89 ± 2.9	
	6/5/2018	N	14.9	670	2870	0.383	3.38	3350	9720	0.01 U	0.0191	0.02 U	0.1 U	0.0862	--	0.573	0.01 U	1.36	0.00181	0.025 U	0.0746	0.01 U	0.61 ± 0.34	9.2 ± 2.2	9.81 ± 2.5	
	9/4/2018	N	19.3 J	673	2760	1.48	2.91	3230	10200	0.01 U	0.0215	0.02 U	0.1 UJ	0.0859 J	0.02 U	0.595 J	0.01 U	1.51	0.00222	0.025 U	0.0613 J	0.01 U	0.99 ± 0.47 U	11.3 ± 2.7	12.29 ± 3.17	
	9/4/2018	Dup	15.6 J	718	2760	1.48	--	3210	10400	0.01 U	0.0212	0.02 U	0.2 UJ	0.0917 J	0.02 U	0.589 J	0.01 U	1.35	0.00206	0.025 U	0.0629 J	0.01 U	1.29 ± 0.52 U	9.5 ± 2.3	10.79 ± 2.82	
AP-33	3/19/2018	N	56.1	839	4380	10 U	3.02	3240	12900	0.01 U	0.0707	0.02 U	0.302	0.131	--	1.2	0.02 U	1.09	0.00381 J-	0.025 U	0.234	0.01 U	0.93 ± 0.33	8.5 ± 2.1	9.43 ± 2.43	
	6/6/2018	N	59.2	770	4840	0.853	3.07	3520	13000	0.01 U	0.0355	0.0212	0.311	0.141	--	1.31	0.01 U	1.13	0.00398	0.025 U	0.144	0.01 U	1.17 ± 0.52	7.3 ± 1.8	8.47 ± 2.3	
	9/4/2018	N	55.3	812	4350	6.82	2.72	3160	12900	0.01 U	0.0406	0.02 U	0.309 J	0.139 J	0.02 U	1.36 J	0.01 U	1.19	0.00412	0.025 U	0.112 J	0.01 U	0.43 ± 0.28 U	8.2 ± 2	8.63 ± 2.28	
AP-34	3/20/2018	N	25	704	2310	10 U	3	3190	9840	0.01 U	0.041	0.02 U	0.252	0.0461	--	1.18	0.02 U	1.19	0.00358 J-	0.025 U	0.129	0.01 U	ND ± 0.18 U	2.87 ± 0.86	2.87 ± 1	
	6/6/2018	N	27.7	608	2960	1.04	3.19	3990	9620	0.01 U	0.0205	0.02 U	0.242	0.0399	--	1.09	0.01 U	1.13	0.00302 J-	0.025 U	0.0715	0.01 U	0.35 ± 0.25 U	3.23 ± 0.87	3.58 ± 1.1	
	9/4/2018	N	77.1	1690	2520	7.78	2.75	3330	10900	0.02 U	0.0243	0.04 U	0.281 J	0.0394 J	0.04 U	1.14 J	0.02 U	1.37	0.00217	0.05 U	0.068 J	0.02 U	1.99 ± 0.8	3.37 ± 0.91 U	5.36 ± 1.71 U	
AP-35	3/20/2018	N	41.1	645	2000	5 U	3.36	2670	7460	0.01 U	0.01 U	0.02 U	0.0665	0.0195	--	0.148	0.02 U	0.896	0.00972 J-	0.025 U	0.0325	0.01 U	5.1 ± 1.4	31.2 ± 7.3	36.3 ± 8.7	
	6/6/2018	N	47.1	631	2280	1.26	3.47	2970	7300	0.01 U	0.01 U	0.02 U	0.1 U	0.0219	--	0.149	0.01 U	0.906	0.00679 J-	0.025 U	0.0306	0.01 U	7 ± 1.9	30.8 ± 7.2	37.8 ± 9.1	
	9/5/2018	N	44.4	652	1940	1.5	3.05	2470	8540	0.01 U	0.01 U	0.02 U	0.0737 J	0.0213 J	0.02 U	0.148 J	0.01 U	1.17	0.0083	0.025 U	0.0203 J	0.01 U	3.4 ± 1.1	30.1 ± 7	33.5 ± 8.1	
AP-36	3/20/2018	N	2.28	650	1800	10 U	3.8	2510	7280	0.01 U	0.01 U	0.02 U	0.02 U	0.01 U	--	0.0689	0.02 U	0.983	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.81 ± 0.33	3.41 ± 0.97	4.22 ± 1.3	
	6/6/2018	N	3.23	678	1970	0.681	4.03	2700	6780	0.01 U	0.01 U	0.0217	0.1 U	0.01 U	--	0.0665	0.01 U	0.888	0.0002 UJ	0.025 U	0.0119	0.01 U	ND ± 0.32 U	2.93 ± 0.81	2.93 ± 1.1	
	9/5/2018	N	4.05	661	1730	0.652	3.53	2420	7760	0.01 U	0.01 U	0.0247	0.0187 J	0.01 U	0.02 U	0.0663 J	0.01 U	1.18	0.0002 U	0.025 U	0.01 U	0.01 U	0.4 ± 0.3 U	3.21 ± 0.86 U	3.61 ± 1.16 U	
MW-03	3/19/2018	N	14.3	528	1720	10 U	3.36	4010 J	9100	0.01 U	0.0196	0.02 U	0.0299	0.055	--	0.343	0.02 U	1.6 J	0.0002 UJ	0.025 U	0.0409 J	0.01 U	0.44 ± 0.27	5 ± 1.3	5.44 ± 1.6	
	3/19/2018	Dup	14.5	524	1530 J+	10 U	--	3130 J	7780	0.01 U	0.0226	0.02 U	0.0337	0.0625	--	0.356	0.01 U	2.08 J	0.000523 J-	0.025 U	0.148 J	0.01 U	0.62 ± 0.28	3.5 ± 1	4.12 ± 1.28	
	6/5/2018	N	17	528	1790	0.481	3.46	4180	9220	0.01 U	0.0101 J	0.02 U	0.0379	0.0633	--	0.37	0.01 U	1.64	0.0002 U	0.025 U	0.0321	0.01 U	0.76 ± 0.33	4.9 ± 1.2 J	5.66 ± 1.5	
	6/5/2018	Dup	15.3	489	1870	0.411	--	4310	9940	0.01 U	0.01 UJ	0.02 U	0.1 U	0.0541	--	0.332	0.01 U	1.58	0.0002 UJ	0.025 U	0.0347	0.01 U	0.44 ± 0.32	1.59 ± 0.53 J	2.03 ± 0.85 J	
PZ-05	3/20/2018	N	45	718	2710	10 U	3.1	2880	9760	0.01 U	0.0332	0.02 U	0.232	0.0458	--	0.659	0.02 U	0.724	0.000249 J-	0.025 U	0.111	0.01 U	ND ± 0.2 U	3.3 ± 0.94	3.3 ± 1.1	
	6/6/2018	N	41.7	695	2910	0.891	3.25	2980	9620	0.01 U	0.0197	0.02 U	0.246	0.0496	--	0.718	0.01 U	0.708	0.000287 J-	0.025 U	0.0722	0.01 U	0.44 ± 0.26 U	3.14 ± 0.85	3.58 ± 1.1	
	9/4/2018	N	37.1	682	2680	3.56	2.86	2760	9980	0.01 U	0.0202	0.02 U	0.26 J	0.0462 J	0.02 U	0.705 J	0.01 U	0.82	0.00033	0.025 U	0.0622 J	0.01 U	ND ± 0.2 U	3.69 ± 0.98 U	3.69 ± 1.18 U	
PZ-06	3/20/2018	N	2.93	578	P	10 U	5.92	2890	7260	0.01 U	0.01 U	0.02 U	0.02 U	0.01 U	--	0.025 U	0.02 U	0.921	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.47 ± 0.21	1.93 ± 0.68	2.4 ± 0.89	
	6/6/2018	N	3.38	569	1620	0.468	5.8	3390	6820	0.01 U	0.01 U	0.02 U	0.1 U	0.01 U	--	0.025 U	0.01 U	0.842	0.0002 UJ	0.025 U	0.01 U	0.01 U	ND ± 0.15 U	1.89 ± 0.58	1.89 ± 0.73	
	9/5/2018	N	4.17	637	1370	0.5 U	5.59	2850	7700	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.02 U	0.025 U	0.01 U	1.07	0.0002 U	0.025 U	0.01 U	0.01 U	0.25 ± 0.21 U	1.88 ± 0.58 U	2.13 ± 0.79 U	

TABLE 4
Groundwater Analytical Results - 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Analyte			Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																
			Boron	Calcium	Chloride	Fluoride*	pH, field	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium-226	Radium-228	Radium-226 & Radium-228	
Location ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L		
Equilization Pond																										
Background (Zephyr, 2018)			4.829	493.2	282.5	4.839	2.78-6.11	3982	8114	0.004	0.0222	0.0182	0.148	0.0291	0.002	0.146	0.0015	1.111	0.00008	0.006	0.103	0.00157	0.738	2.346	3.084	
MCL			--	--	--	4	--	--	--	0.006	0.01	2	0.004	0.005	0.1	--	0.015	--	0.002	--	0.05	0.002	--	--	5	
EP-31 (background)	3/21/2018	N	4.15	451	108 J+	5 U	3.58	3160	4770	0.01 U	0.0191	0.02 U	0.0766	0.0156	--	0.112	0.01 U	0.624	0.0002 UJ	0.025 U	0.0794	0.01 U	ND ± 0.17 U	ND ± 0.48 U	ND ± 0.65 U	
	3/21/2018	Dup	4.3	428	104 J+	5 U	--	3050	4830	0.01 U	0.0166	0.02 U	0.0735	0.015	--	0.112	0.01 U	0.587	0.0002 UJ	0.025 U	0.0699	0.01 U	0.28 ± 0.19	ND ± 0.45 U	0.28 ± 0.64	
	6/7/2018	N	4.25	439	172	1.6	3.75	3520	4990	0.01 U	0.01 U	0.02 U	0.1 U	0.0162	--	0.1	0.01 U	0.517	0.0002 UJ	0.025 U	0.0183	0.01 U	ND ± 0.19 U	0.94 ± 0.4	0.94 ± 0.59	
EP-32	9/6/2018	N	4.46	411	146	1.79	3.27	3110	4920	0.002 U	0.0118	0.00488	0.1 U	0.0156 J	0.004 U	0.101 J	0.002 U	0.56	0.0002 UJ	0.005 U	0.0176 J	0.002 U	ND ± 0.21 U	0.95 ± 0.44 U	0.95 ± 0.67 U	
	3/20/2018	N	28.6	454	2060 J+	10 U	7.16	3770	9720	0.01 U	0.01 U	0.02 UJ	0.02 U	0.01 U	--	0.025 U	0.02 U	1.01 J	0.0002 UJ	0.025 U	0.01 U	0.02 U	1.09 ± 0.4	3.49 ± 0.99 J	4.58 ± 1.4 J	
	3/20/2018	Dup	27	455	2070 J+	10 U	--	3700	9700	0.01 U	0.01 U	0.0223 J	0.01 U	0.01 U	--	0.025 U	0.01 U	1.33 J	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.4 ± 0.23	1.24 ± 0.58 J	1.64 ± 0.81 J	
	6/7/2018	N	25.4	450	2420	0.442	6.75	4220	10000	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	--	0.025 U	0.01 U	1.02	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.78 ± 0.35	2.04 ± 0.62	2.82 ± 0.97	
EP-33	9/5/2018	N	28.7	458	2120	0.5 U	6.38	3510	9300	0.01 U	0.01 U	0.02 U	0.1 U	0.01 U	0.02 U	0.025 U	0.01 U	1.05	0.0002 UJ	0.025 U	0.01 U	0.01 U	ND ± 0.31 U	1.76 ± 0.56 U	1.76 ± 0.87 U	
	3/20/2018	N	85.8	577	2720 J+	10 U	7.16	2760	9800	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	--	0.025 U	0.01 U	0.696	0.0002 UJ	0.0284	0.01 U	0.01 U	0.37 ± 0.22	1.18 ± 0.55	1.55 ± 0.77	
	6/7/2018	N	72.4	596	3250	0.442	6.78	3180	9820	0.01 U	0.01 U	0.02 U	0.1 U	0.01 U	--	0.025 U	0.01 U	0.613	0.0002 UJ	0.0427	0.0161	0.01 U	0.3 ± 0.2	0.89 ± 0.39	1.19 ± 0.59	
	9/5/2018	N	63.8	660	2970	0.5 U	6.3	2780	10300	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.02 U	0.025 U	0.01 U	0.718	0.0002 UJ	0.0588	0.01 U	0.01 U	ND ± 0.28 UJ	0.97 ± 0.43 U	0.97 ± 0.71 UJ	
EP-34	9/5/2018	Dup	70.4	639	3480	0.5 U	--	2930	10300	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.02 U	0.025 U	0.01 U	0.712	0.0002 U	0.0588	0.01 U	0.01 U	2.15 ± 0.79 J	1.46 ± 0.55 U	3.61 ± 1.34 J	
	3/20/2018	N	50.8	483	3430 J+	10 U	6.62	3160	11500	0.01 U	0.01 U	0.0208	0.01 U	0.01 U	--	0.025 U	0.01 U	1	0.0002 UJ	0.025 U	0.01 U	0.01 U	1.5 ± 0.5	4.9 ± 1.3	6.4 ± 1.8	
	6/7/2018	N	48.5	484	4130	0.169	6.76	3780	11500	0.01 U	0.01 U	0.0203	0.1 U	0.01 U	--	0.025 U	0.1 U	0.813	0.0002 UJ	0.025 U	0.0126	0.1 U	1.78 ± 0.59	5 ± 1.3	6.78 ± 1.9	
EP-35	9/5/2018	N	46.9	492	3610	0.5 U	6.37	3280	11500	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.02 U	0.025 U	0.01 U	0.961	0.0002 UJ	0.025 U	0.01 U	0.01 U	1.42 ± 0.6 U	5.4 ± 1.4 U	6.82 ± 2 U	
	3/21/2018	N	32.3	273	3040 J+	10 U	6.6	2610	10200	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	--	0.025 U	0.01 U	1.23	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.63 ± 0.27	ND ± 0.46 U	0.63 ± 0.73	
	6/7/2018	N	34.5	272	4000	0.174	6.42	3370	10200	0.01 U	0.01 U	0.0248	0.1 U	0.01 U	--	0.025 U	0.01 U	1.01	0.0002 UJ	0.025 U	0.013	0.01 U	0.45 ± 0.27	1.54 ± 0.51	1.99 ± 0.78	
EP-36	9/6/2018	N	30.1	306	3310	0.5 U	6.06	2730	10200	0.01 U	0.01 U	0.0221	0.2 U	0.01 U	0.02 U	0.025 U	0.01 U	0.951	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.57 ± 0.39 U	ND ± 0.46 U	0.57 ± 0.85 U	
	3/21/2018	N	21.5	456	3500 J+	10 U	6.31	2510	10200	0.01 U	0.01 U	0.0305	0.01 U	0.01 U	--	0.025 U	0.01 U	1.45	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.89 ± 0.36	2.3 ± 0.79	3.19 ± 1.2	
	6/7/2018	N	21.5	435	3620	0.176	6.28	2580	10100	0.01 U	0.01 U	0.0251	0.1 U	0.01 U	--	0.025 U	0.01 U	1.07	0.0002 UJ	0.025 U	0.01 U	0.01 U	ND ± 0.27 U	3.46 ± 0.93	3.46 ± 1.2	
EP-37	9/6/2018	N	20.3	475	3850	0.5 U	6.01	2720	10300	0.01 U	0.01 U	0.0245	0.2 U	0.01 U	0.02 U	0.025 U	0.01 U	1.11	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.94 ± 0.51 U	2.7 ± 0.78 U	3.64 ± 1.29 U	
	3/21/2018	N	7.59	531	4040 J+	10 U	6.54	2840	11200	0.01 U	0.01 U	0.0242	0.01 U	0.01 U	--	0.025 U	0.01 U	1.73	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.63 ± 0.28	2.81 ± 0.89	3.44 ± 1.2	
	6/7/2018	N	8.94	495	4280	0.188	6.51	3090	10900	0.01 U	0.01 U	0.0238	0.1 U	0.01 U	--	0.025 U	0.01 U	1.32	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.66 ± 0.28	3.53 ± 0.93	4.19 ± 1.2	
EP-38	9/6/2018	N	21	471	3410	0.5 U	6.71	2480	10400	0.01 U	0.01 U	0.0251	0.2 U	0.01 U	0.02 U	0.025 U	0.01 U	1.11	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.57 ± 0.38 U	3.22 ± 0.88 U	3.79 ± 1.26 U	
	3/20/2018	N	2.42	239	1030	5 U	5.81	1910	4780	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	--	0.025 U	0.01 U	0.591	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.53 ± 0.24	ND ± 0.52 U	0.53 ± 0.76	
	6/6/2018	N	2.5	302	1170	0.235	5.74	1920	4780	0.01 U	0.01 U	0.02 U	0.1 U	0.01 U	--	0.025 U	0.01 U	0.573	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.71 ± 0.42	1.57 ± 0.53	2.28 ± 0.95	
MW-04	9/5/2018	N	3.21	310	1130	0.5 U	5.42	1840	4950	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.02 U	0.025 U	0.01 U	0.685	0.0002 U	0.025 U	0.01 U	0.01 U	0.61 ± 0.37 U	1.22 ± 0.46 U	1.83 ± 0.83 U	
	3/20/2018	N	8.91	278	1650	5 U	6.3	2250	5940	0.01 U	0.01 U	0.02 U	0.02 U	0.01 U	--	0.025 U	0.02 U	0.663	0.0002 UJ	0.025 U	0.01 U	0.01 U	0.34 ± 0.23	1.84 ± 0.66	2.18 ± 0.89	
	6/6/2018	N	8.17	297	1830	0.132	6.2	2440	6150	0.01 U	0.01 U	0.02 U	0.1 U	0.01 U	--	0.025 U	0.01 U	0.619	0.0002 UJ	0.025 U	0.01 UJ	0.01 U	0.44 ± 0.25 U	2.9 ± 0.8	3.34 ± 1	
	6/6/2018	Dup	7.82	301	1780	0.128	--	2380	6120	0.01 U	0.01 U	0.02 U	0.1 U	0.01 U	--	0.025 U	0.01 U	0.632	0.00181 J-	0.025 U	0.0109 J	0.01 U	0.51 ± 0.28 U	3.8 ± 1	4.31 ± 1.3	
9/5/2018	N	8.82	309	1570	0.5 U	5.9	2110	6460	0.01 U	0.01 U	0.02 U	0.01 U	0.01 U	0.02 U	0.025 U	0.01 U	0.737	0.0002 UJ	0.025 U	0.01 U	0.01 U	ND ± 0.29 U	1.92 ± 0.61 U	1.92 ± 0.9 U		

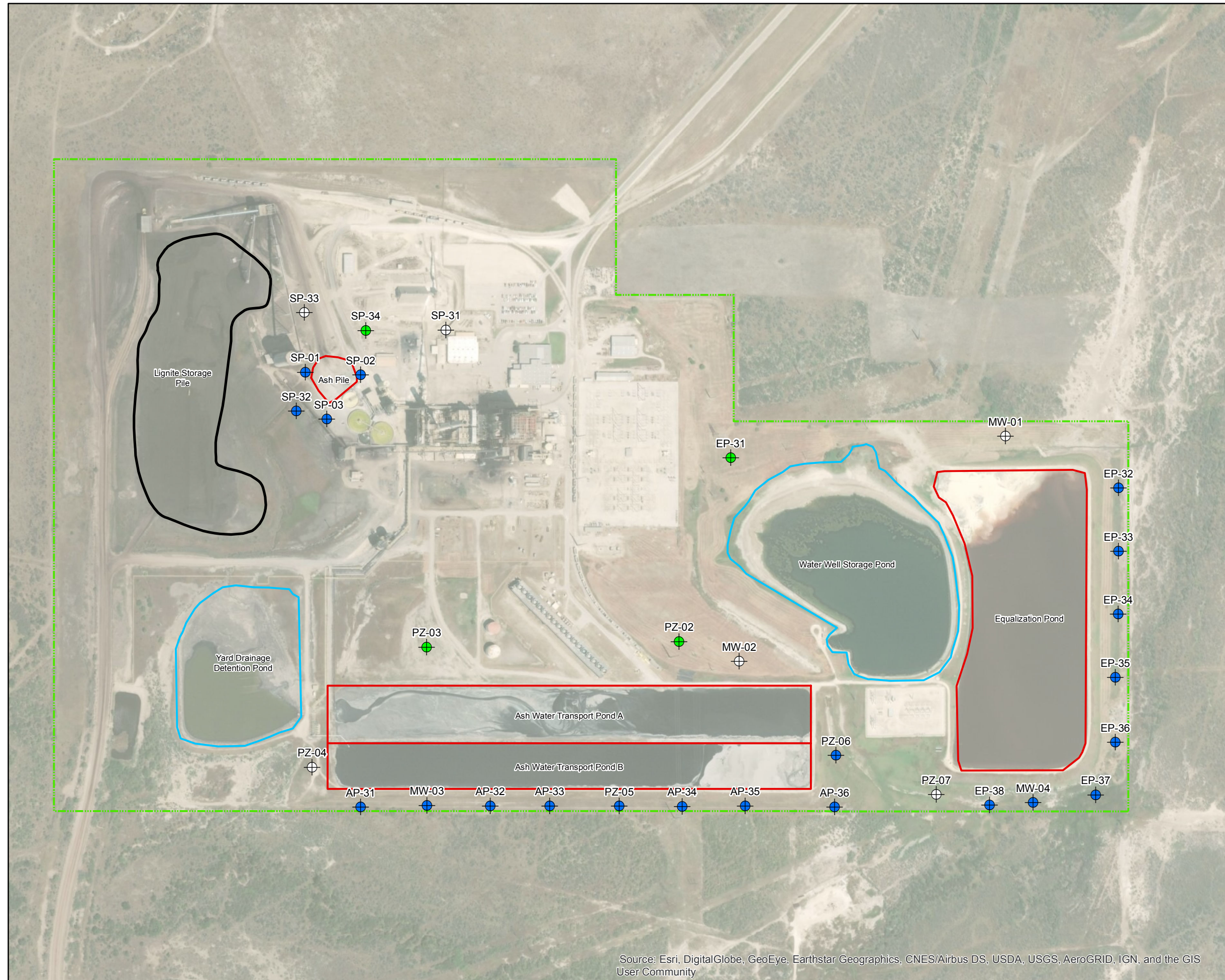
- Notes:**
- Analytical data collected by Source Environmental Sources Inc. and analyzed by ALS Environmental.
 - mg/L = milligrams per liter; pCi/L = pico Curies per liter; SU = standard units.
 - N = normal sample; Dup = field duplicate sample.
 - "U"-flag = analyte not detected above specified limit (reporting limit); "UJ"-flag = analyte not detected above specified limit (reporting limit) and specified limit is an estimate; "J+"-flag = reported concentration is an estimate and is biased high; "J"-flag = reported concentration is an estimate and is biased low; "J"-flag = reported concentration is an estimate.
 - ND = not detected; "--" = not analyzed/data not provided.
 - * = Fluoride is required for both Appendix III and Appendix IV monitoring.

2018 ANNUAL GROUNDWATER MONITORING REPORT

San Miguel Electric Cooperative, Inc.
Christine, Atascosa County, Texas

FIGURES

Figure 1	Site Map
Figure 2A	Potentiometric Surface – March 2018
Figure 2B	Potentiometric Surface – June 2018
Figure 2C	Potentiometric Surface – September 2018



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



LEGEND

- Background Monitor Well
- Downgradient Monitor Well
- Groundwater Elevation Observation Well
- Approximate Plant Boundary
- CCR Impoundment/Unit
- Non-CCR Impoundment
- Lignite Storage Pile

Note

Aerial imagery provided by Esri ArcGIS Online, September 2017.

Projected Coordinate System
 Datum: NAD 83
 State Plane Texas South Central
 Units: Feet

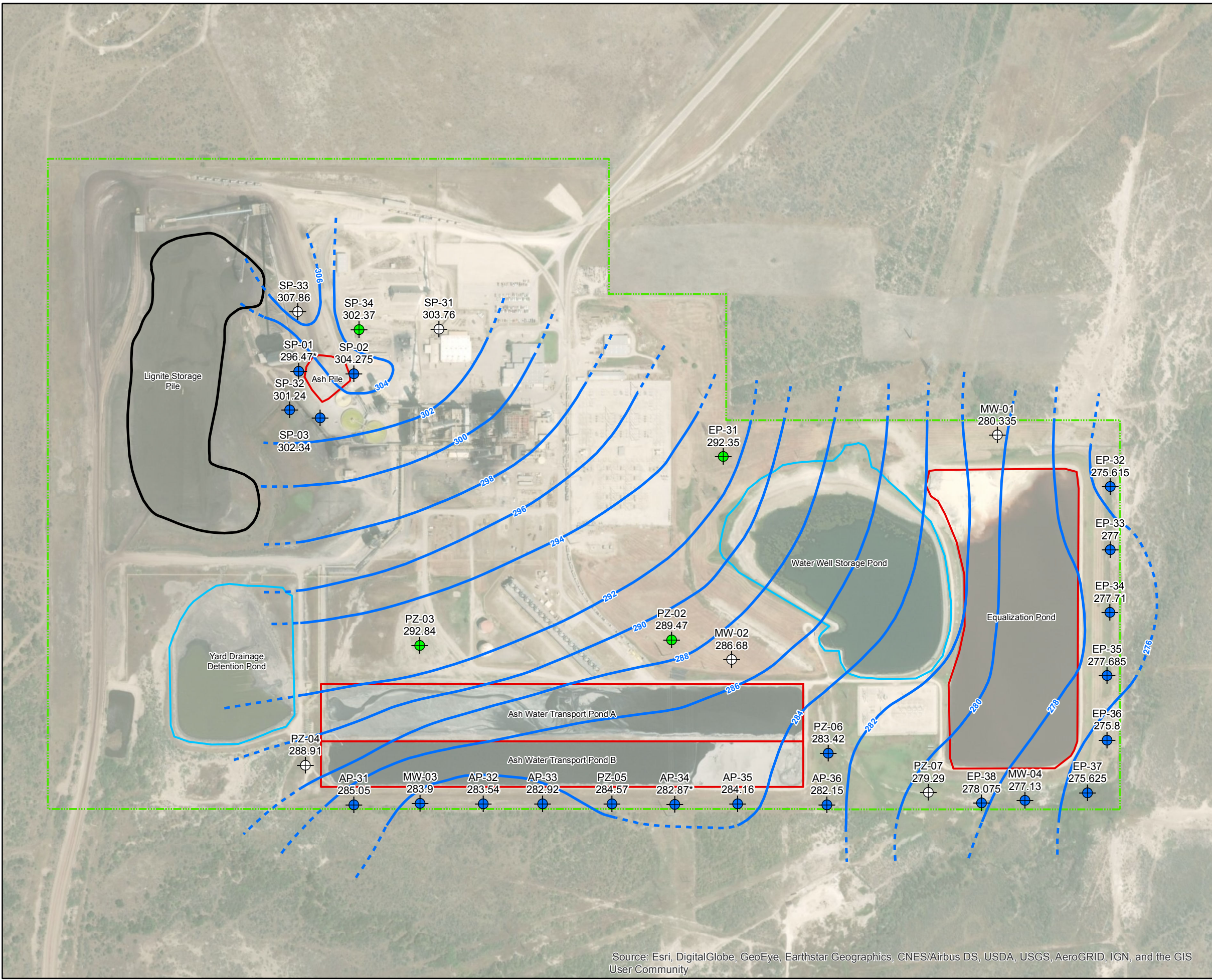


SITE MAP

San Miguel Electric Cooperative, Inc. Facility
 Atacosa County, Texas

GSI Job No.	5076	Drawn By:	AV
Issued:	29-Jan-2019	Chk'd By:	VPS
Map ID:	SMEC_SiteMap	Appv'd By:	SDR

FIGURE 1

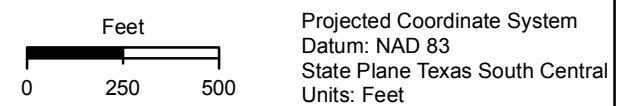


LEGEND

- Background Monitor Well
- Downgradient Monitor Well
- ⊕ Groundwater Elevation Observation Well
- Potentiometric Surface Contour; Dashed where Inferred
- Approximate Plant Boundary
- CCR Impoundment/Unit
- Non-CCR Impoundment
- Lignite Storage Pile

Notes

- 1) Aerial imagery provided by Esri ArcGIS Online, September 2017.
- 2) Groundwater elevations are calculated using top of casing elevations reported in "Groundwater Sampling Report - Event 8 - August 2017 (AECOM, 2017) and depth to water measurements by Source Environmental Sciences Inc. in March 2018.
- 3) CCR = Coal Combustion Residuals ; ft amsl = feet above mean sea level.
- 4) * = Groundwater elevations in wells SP-01 and AP-34 were omitted from potentiometric surface contouring. These values are anomalously low and may be due to incorrect measurements.



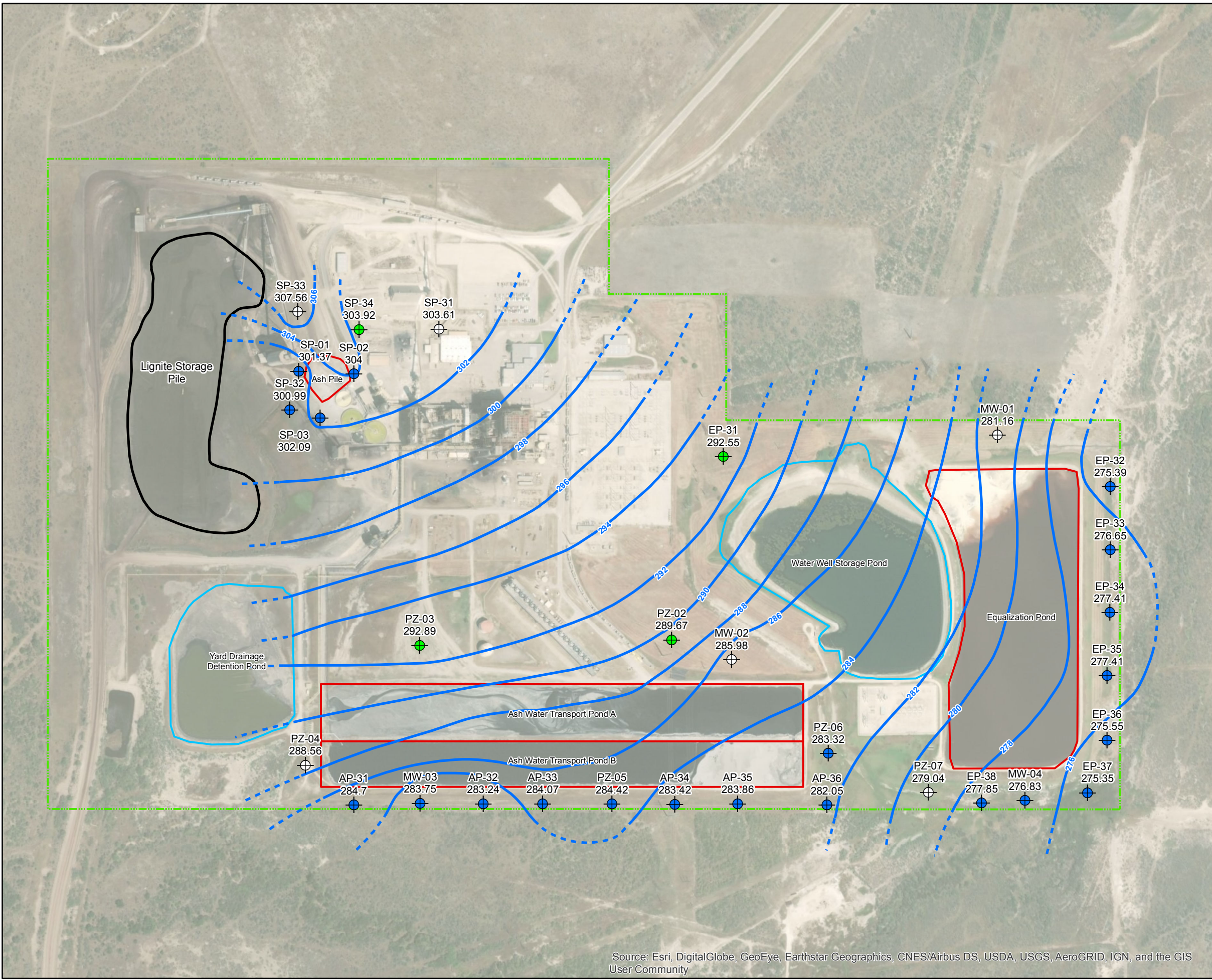
POTENTIOMETRIC SURFACE - MARCH 2018

San Miguel Electric Cooperative, Inc. Facility
Atacosa County, Texas

GSI Job No.	5076	Drawn By:	AV
Issued:	29-Jan-2019	Chk'd By:	VPS
Map ID:	SMEC_Potential0318	App'v'd By:	SDR

FIGURE 2A

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

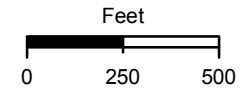


LEGEND

- Background Monitor Well
- Downgradient Monitor Well
- Groundwater Elevation Observation Well
- Potentiometric Surface Contour; Dashed where Inferred
- Approximate Plant Boundary
- CCR Impoundment/Unit
- Non-CCR Impoundment
- Lignite Storage Pile

Notes

- 1) Aerial imagery provided by Esri ArcGIS Online, September 2017.
- 2) Groundwater elevations are calculated using top of casing elevations reported in "Groundwater Sampling Report - Event 8 - August 2017 (AECOM, 2017) and depth to water measurements by Source Environmental Sciences Inc. in June 2018.
- 3) CCR = Coal Combustion Residuals ; ft amsl = feet above mean sea level.



Projected Coordinate System
Datum: NAD 83
State Plane Texas South Central
Units: Feet

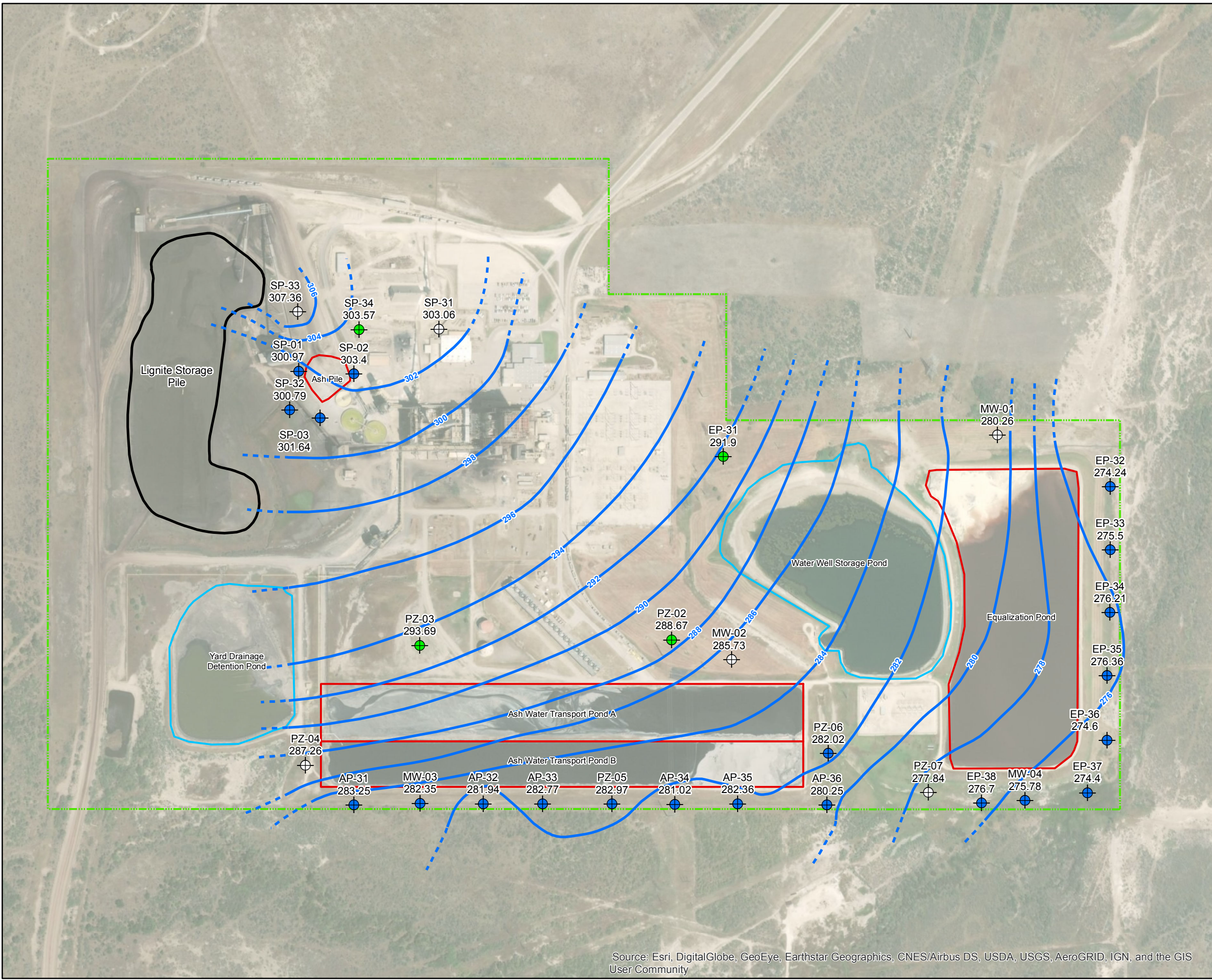


POTENTIOMETRIC SURFACE - JUNE 2018

San Miguel Electric Cooperative, Inc. Facility
Atacosa County, Texas

GSI Job No.	5076	Drawn By:	AV
Issued:	29-Jan-2019	Chk'd By:	VPS
Map ID:	SMEC_Potential0618	App'd By:	SDR

FIGURE 2B



LEGEND

- Background Monitor Well
- Downgradient Monitor Well
- Groundwater Elevation Observation Well
- Potentiometric Surface Contour; Dashed where Inferred
- Approximate Plant Boundary
- CCR Impoundment/Unit
- Non-CCR Impoundment
- Lignite Storage Pile

Notes

- 1) Aerial imagery provided by Esri ArcGIS Online, September 2017.
- 2) Groundwater elevations are calculated using top of casing elevations reported in "Groundwater Sampling Report - Event 8 - August 2017 (AECOM, 2017) and depth to water measurements by Source Environmental Sciences Inc. in June 2018.
- 3) CCR = Coal Combustion Residuals ; ft amsl = feet above mean sea level.

Projected Coordinate System
 Datum: NAD 83
 State Plane Texas South Central
 Units: Feet



**POTENTIOMETRIC SURFACE -
SEPTEMBER 2018**

San Miguel Electric Cooperative, Inc. Facility
Atacosa County, Texas

GSI Job No.	5076	Drawn By:	AV
Issued:	29-Jan-2019	Chk'd By:	VPS
Map ID:	SMEC_Potential0918	Appv'd By:	SDR

FIGURE 2C

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

2018 ANNUAL GROUNDWATER MONITORING REPORT

San Miguel Electric Cooperative, Inc.
Christine, Atascosa County, Texas

APPENDICES

- Appendix A Groundwater Analytical Results – Background Monitoring
- Appendix B Alternative Source Demonstration (PBW, 2018)
- Appendix C Laboratory Analytical Reports and Data Usability Summaries

APPENDIX A

Groundwater Analytical Results – Background Monitoring

APPENDIX A
Groundwater Analytical Results - Background Monitoring

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Location ID	Sample Date	Sample Type	Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																
			Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride* mg/L	pH, field SU	Sulfate mg/L	Total Dissolved Solids mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	Selenium mg/L	Thallium mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & Radium-228 pCi/L	
Ash Pile																										
SP-34 (background)	10/26/2016	N	12	715	2370	4.57	3.6	3070	8420	0.004 U	0.0139 J	0.0535	0.164	0.161	0.0045 J	0.558	0.0089 J	1.17	0.00004 U	0.0068 J	0.109	0.0127 J	1.03 ± 0.37	2.97 ± 0.87	4 ± 1.24	
	1/11/2017	N	12.3	636	2300	2.31 U	3.53	2790	8500	0.000948 J	0.0228	0.0337	0.141	0.162	0.0022 J	0.592	0.00718	1.07 J-	0.00008 U	0.00426 J	0.17	0.0178	0.715 ± 0.204	5.16 ± 0.515	5.88 ± 0.719	
	2/14/2017	N	11.9 J	670	2350	2.55	2.23	2730	8040	0.0008 U	0.0234	0.0228	0.164	0.181	0.00306 J	0.648	0.00732	1.22	0.00008 U	0.002 U	0.216	0.0195	1.39 ± 0.57	6.46 ± 0.584	7.85 ± 1.15	
	3/21/2017	N	12 J	602	1780	2.34	3.09	2690 J-	8080	0.0008 U	0.0295	0.0335	0.119 J	0.171	0.00435 J	0.572	0.00827	0.966	0.00008 U	0.002 U	0.191 J	0.0197	0.796 ± 0.534 U	6.70 ± 0.624	7.50 ± 1.16	
	5/10/2017	N	13.6 J	672	2140	0.1 U	3.41	2560	8820	0.0008 U	0.018	0.0168	0.148	0.189	0.00353 J	0.619	0.00427	1.29	0.00008 U	0.002 U	0.161	0.0187	1.33 ± 0.378	7.19 ± 0.543	8.52 ± 0.921	
	6/13/2017	N	12.4	647	2370	0.5 UJ	3.23	2860	7980	0.0008 U	0.0177	0.0182	0.142	0.19	0.00452 J	0.649	0.00574	1.27	0.00008 U	0.002 U	0.176	0.0176	6.41 ± 0.694	7.00 ± 0.641	13.4 ± 1.34	
	7/25/2017	N	21 J	758	2370	1.37 J	3.34	3900	8820	0.0008 U	0.0238 J	0.0155	0.157	0.203	0.00627	0.602 J	0.00353	1.26	0.00008 U	0.002 U	0.21 J	0.0201	1.53 ± 0.449	7.84 ± 0.655	9.37 ± 1.10	
	8/22/2017	N	10.5 J	656	2320	1.09 J	3.26	2880	8080	0.0008 U	0.0343	0.0169	0.132 J	0.185	0.00604	0.605	0.0054	1.07	0.00008 U	0.002 U	0.203 J	0.0194	1.82 ± 0.520	6.33 ± 0.466	8.15 ± 0.986	
SP-01	5/26/2016	N	10.3	577	3330	22	2.86	7570	16900	0.004 U	0.0387 J	0.0254 J	0.746	0.662	0.0115 J	3.01	0.006 U	4.03	0.00004 U	0.006 U	0.0769	0.0162 J	0.66 ± 0.23	8.2 ± 2	8.86 ± 2.23	
	8/17/2016	N	8.8	509	3270	15.4	3.02	7190	15600	0.002 U	0.0344	0.0245 J	0.612	0.57	0.00713 J	2.82	0.003 U	3.16	0.00004 U	0.003 U	0.0995	0.0167	0.87 ± 0.29	10.1 ± 2.4	10.97 ± 2.69	
	10/26/2016	N	11.3	694	3470	8.14	3.16	6530	15100	0.004 U	0.0435 J	0.0245 J	0.76	0.633	0.0101 J	3.24	0.006 U	4.09	0.00004 U	0.006 U	0.132	0.0211	0.89 ± 0.32	11.3 ± 2.7	12.19 ± 3.02	
	1/10/2017	N	8	525	3430	9.23 U	3.21	6750	14500	0.0008 U	0.0623	0.0228	0.437	0.524	0.007	3.17	0.00141	2.76 J-	0.00008 U	0.002 U	0.317	0.0182	2.37 ± 0.377	10.6 ± 0.566	13.0 ± 0.943	
	1/10/2017	Dup	7.48	517	3290	9.87 U	--	7200	16400	0.0008 U	0.0649	0.0231	0.483	0.595	0.00595	3.37	0.00144	3.04 J-	0.00008 U	0.002 U	0.336	0.0184	2.32 ± 0.333	13.3 ± 0.632	15.6 ± 0.965	
	2/14/2017	N	7.64 J	508	3190	16.8	2.07	7310	15300	0.0008 U	0.0632	0.0209	0.504	0.637	0.00641	3.51	0.00129	3.03	0.00008 U	0.002 U	0.52	0.018	1.29 ± 0.510	12.5 ± 0.673	13.8 ± 1.18	
	2/14/2017	Dup	7.76 J	503	3160	17	--	7630	15900	0.0008 U	0.0646	0.0213	0.514	0.656	0.00786	3.47	0.00144	3	0.00008 U	0.002 U	0.527	0.0183	1.26 ± 0.51	12.9 ± 0.693	14.2 ± 1.20	
	3/21/2017	N	7.56 J	461	3120	16.1	2.95	8200 J-	15600	0.0008 U	0.0855	0.02	0.396 J	0.596	0.00707	3.29	0.00137 J+	3.09	0.00008 U	0.002 U	0.416 J	0.0191	1.01 ± 0.322	12.0 ± 0.688 J	13.0 ± 1.01 J	
	3/21/2017	Dup	7.63 J	473	3170	16	--	8420 J-	15500	0.0008 U	0.086	0.0197	0.398 J	0.598	0.00666	3.38	0.00136 J+	3.12	0.00008 U	0.002 U	0.417 J	0.0195	1.13 ± 0.284	14.1 ± 0.786 J	15.2 ± 1.07 J	
	5/9/2017	N	7.71 J	537	3120	11.5	3.43	7270	16100	0.0008 U	0.0599	0.0192	0.559	0.665	0.00607	3.35	0.00117	3.29	0.00008 U	0.002 U	0.412	0.018	1.33 ± 0.444	12.7 ± 0.715	14.0 ± 1.16	
	6/13/2017	N	7.64	523	3200	8.53 J-	3.3	7060	15500	0.0008 U	0.081	0.0189	0.568	0.646	0.0052	3.15	0.00108 U	3.1	0.00008 U	0.002 U	0.565	0.0183	2.95 ± 0.472	14.8 ± 0.864	17.8 ± 1.34	
7/25/2017	N	11 J	640	3550	0.5 U	3.3	8530	15700	0.0008 U	0.088 J	0.0183	0.529	0.603	0.00695	2.21 J	0.00101	2.88	0.00008 U	0.002 U	0.659 J	0.0196	1.11 ± 0.408	14.1 ± 0.698	15.2 ± 1.11		
8/22/2017	N	7.65 J	529	3310	3.58	3.16	7680	15700	0.0008 U	0.0981	0.0181	0.428 J	0.591	0.00412 J	3.14	0.00121	2.89	0.00008 U	0.002 U	0.486 J	0.0189	1.24 ± 0.414	15.2 ± 0.624	16.4 ± 1.04		
SP-02	5/27/2016	N	8.01	1280	4980	0.5 U	5.68	1660	15000	0.0004 U	0.00229 J	0.0106	0.0173	0.0169	0.000806 J	0.000805 J	0.0006 U	1.61	0.000469	0.0006 U	0.0957	0.00287	0.81 ± 0.28	4.2 ± 1.1	5.01 ± 1.38	
	8/16/2016	N	8.88	1210	5230	0.5 U	5.88	1680	17100	0.002 U	0.002 U	0.0118 J	0.00684 J	0.0169	0.002 U	0.00132 J	0.003 U	0.623	0.000499	0.003 U	0.0929	0.00315 J	0.82 ± 0.28	4.5 ± 1.2	5.32 ± 1.48	
	10/27/2016	N	10.7	1420	4680	0.513 J	5.63	1560	14500	0.004 U	0.004 U	0.019 U	0.00928 J	0.0182 J	0.004 U	0.002 U	0.006 U	0.678	0.000529	0.006 U	0.0973	0.0036 J	1.03 ± 0.36	5 ± 1.4	6.03 ± 1.76	
	1/11/2017	N	9.33	1240	5320	0.1 U	5.74	1660	12600	0.0008 U	0.00252 J	0.0152	0.00827	0.0162	0.002 U	0.003 U	0.00189	0.572 J-	0.00125	0.002 U	0.113	0.00342	0.909 ± 0.361	3.33 ± 0.455 U	4.24 ± 0.816	
	2/14/2017	N	9.18 J	1190	4850	0.5 U	5.09	1610	12500	0.0008 U	0.002 U	0.0111	0.00699	0.0156	0.002 U	0.003 U	0.0003 U	0.596	0.000526	0.002 U	0.101	0.00337	1.21 ± 0.704	5.14 ± 0.477	6.35 ± 1.18	
	3/22/2017	N	8.14	1180	4770	0.5 U	5.54	1610	12600	0.0008 U	0.002 U	0.0103	0.00653	0.0156	0.002 U	0.003 U	0.0003 U	0.564 J-	0.000437	0.002 U	0.104	0.00333	1.08 ± 0.355	3.31 ± 0.767	4.39 ± 1.12	
	5/10/2017	N	10.5 J	1240	4720	0.2 U	5.66	1570	11500	0.0008 U	0.002 U	0.0103	0.00809	0.0161	0.002 U	0.003 U	0.0003 U	0.576	0.000459	0.002 U	0.094	0.00326	1.20 ± 0.337	3.38 ± 0.577	4.58 ± 0.914	
	6/13/2017	N	9.35	1210	4730	0.5 UJ	5.66	1720	11000	0.0008 U	0.002 U	0.0103	0.00879	0.0164	0.002 U	0.003 U	0.0003 U	0.642	0.000483	0.01 U	0.1	0.00322	0.253 ± 0.226	4.72 ± 0.757	4.97 ± 0.983	
	7/25/2017	N	11.7 J	1310	4950	0.5 U	5.65	2580	11800	0.0008 U	0.002 UJ	0.0116	0.0102	0.0155	0.002 U	0.003 UJ	0.0003 U	0.564	0.000401	0.002 U	0.107 J	0.00346	0.833 ± 0.364	4.19 ± 0.626 U	5.02 ± 0.990	
	8/22/2017	N	8.77 J	1190	4770	0.5 U	5.56	1700	11700	0.0008 U	0.002 U	0.0113	0.0073 J	0.0145	0.002 U	0.003 U	0.0003 U	0.533	0.000378	0.002 U	0.107 J	0.00344	0.198 ± 0.206 U	3.64 ± 0.549	3.84 ± 0.755	
SP-03	5/26/2016	N	7.66	815	4260	1.09	3.81	2870	11500	0.004 U	0.00481 J	0.031 J	0.0544	0.0589	0.0161 J	0.166	0.006 U	1.94	0.00004 U	0.006 U	0.0335 J	0.00552 J	1.37 ± 0.41	8 ± 1.9	9.37 ± 2.31	
	8/17/2016	N	7.12	693	4230	0.975 J	5.15	3040	13500	0.002 U	0.002 U	0.0252	0.0446	0.0479	0.002 U	0.151	0.003 U	1.73	0.00004 U	0.003 U	0.0357	0.00529 J	1.13 ± 0.35	7 ± 1.7	8.13 ± 2.05	
	10/26/2016	N	7.54	826	3240	0.552 J	4.65	3010	9620	0.004 U	0.004 U	0.0269 J	0.0274	0.0324	0.004 U	0.0952	0.006 U	1.69	0.00004 U	0.006 U	0.0261 J	0.00554 J	0.8 ± 0.3	7.3 ± 1.8	8.1 ± 2.1	
	1/11/2017	N	7.1	751	4230	2.38 U	3.9	2750	11500	0.0008 U	0.00584	0.0266	0.0402	0.0506	0.00214 J	0.171	0.000807 J	1.47 J-	0.00008 U	0.002 U	0.0595	0.00632	1.33 ± 0.491	7.28 ± 0.519	8.61 ± 1.01	
	2/14/2017	N	6.41 J	732	4050	1.16 J	3.3	2610	10800	0.0008 U	0.00502	0.0246	0.0381	0.0487	0.00224 J	0.163	0.000412 J	1.56	0.00008 U	0.002 U	0.0668	0.00627	1.04 ± 0.472	7.95 ± 0.578	8.99 ± 1.05	
	3/21/2017	N	6.36 J	694	4110	0.905 J	3.53	3200 J-	10600	0.0008 U	0.00645	0.0229	0.0303 J	0.0442	0.002 U	0.154	0.0003 U	1.23	0.00008 U	0.002 U	0.0613 J	0.00662	1.71 ± 0.415	5.70 ± 0.519	7.41 ± 0.934	
	5/10/2017	N	6.6 J	781	3980	0.5 U	3.89	2420	11500	0.0008 U	0.0049 J	0.0221	0.0416	0.051	0.002 U	0.165	0.0003 U	1.65	0.00008 U	0.002 U	0.0615	0.00618	1.35 ± 0.358	6.20 ± 0.617	7.55 ± 0.975	
	6/13/2017</																									

APPENDIX A
Groundwater Analytical Results - Background Monitoring

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Location ID	Sample Date	Sample Type	Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																
			Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride* mg/L	pH, field SU	Sulfate mg/L	Total Dissolved Solids mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	Selenium mg/L	Thallium mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & Radium-228 pCi/L	
Ash Pond																										
PZ-02 (background)	5/26/2016	N	6.89	823	4050	0.5 U	5.77	2830	11400	0.004 U	0.00444 J	0.0293 J	0.002 U	0.002 U	0.004 U	0.002 U	0.006 U	2.38	0.00004 U	0.006 U	0.011 U	0.002 U	0.91 ± 0.3	3.84 ± 0.98	4.75 ± 1.28	
	8/17/2016	N	4.39	681	4040	0.5 U	5.74	2840	12600	0.002 U	0.002 U	0.0259	0.001 U	0.001 U	0.002 U	0.00157 J	0.003 U	2.42	0.00004 U	0.003 U	0.00555 J	0.001 U	0.83 ± 0.27	2.43 ± 0.68	3.26 ± 0.95	
	10/27/2016	N	6.49	807	4140	0.563 J	6.07	2950	11000	0.004 U	0.00503 J	0.0403 J	0.002 U	0.002 U	0.00436 J	0.00305 J	0.006 U	2.27	0.00004 U	0.006 U	0.0128 J	0.002 U	1.09 ± 0.35	3.6 ± 1	4.69 ± 1.35	
	2/15/2017	N	5.45 J	741	3740	0.5 U	4.73	2640	10500	0.0008 U	0.002 U	0.0265	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.77	0.00008 U	0.002 U	0.002 U	0.0005 U	0.657 ± 0.360 U	2.25 ± 0.500	2.91 ± 0.860	
	3/21/2017	N	5.34 J	706	3820	0.5 U	5.49	3120 J-	10300	0.0008 U	0.002 U	0.0275	0.0003 UJ	0.0003 U	0.002 U	0.003 U	0.0003 U	1.41	0.00008 U	0.002 U	0.002 UJ	0.0005 U	2.05 ± 0.481	2.74 ± 0.475	4.79 ± 0.956	
	5/10/2017	N	5.67 J	778	3880	0.1 U	5.89	2720	10800	0.0008 U	0.002 U	0.0257	0.0003 UJ	0.0003 U	0.002 U	0.003 U	0.0003 U	2.06	0.00008 U	0.002 U	0.002 U	0.0005 U	0.774 ± 0.299	3.21 ± 0.522	3.98 ± 0.821	
	7/26/2017	N	5.43 J	790	4050	0.5 U	6.11	3010	10000	0.0008 U	0.002 U	0.0257	0.0003 UJ	0.0003 U	0.002 U	0.003 U	0.0003 U	1.88	0.00008 U	0.002 U	0.002 U	0.0005 U	2.29 ± 0.595	3.70 ± 0.507 U	5.99 ± 1.10	
8/22/2017	N	5.42	767	3830	0.5 U	5.76	2720	10800	0.0008 U	0.002 U	0.027	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.82	0.00008 U	0.002 U	0.002 U	0.0005 U	0.704 ± 0.303	2.93 ± 0.460	3.63 ± 0.763		
PZ-03 (background)	5/26/2016	N	13.5	635	4010	8.26	3.17	4590	13900	0.004 U	0.026 J	0.019 U	0.365	0.34	0.00485 J	1.89	0.006 U	3.21	0.00004 U	0.006 U	0.0527	0.00309 J	0.35 ± 0.16	3.63 ± 0.96	3.98 ± 1.12	
	8/18/2016	N	8.43	565	4140	7.41	3.4	4720	13700	0.002 U	0.0248 J	0.0143 J	0.463	0.319	0.00448 J	1.66	0.003 U	3.68	0.00004 U	0.003 U	0.0666	0.00291 J	0.5 ± 0.18	3.78 ± 0.98	4.28 ± 1.16	
	10/26/2016	N	12.3	670	4210	5.56	3.26	4720	13400	0.004 U	0.0324 J	0.019 U	0.371	0.379	0.00514 J	1.92	0.006 U	3.28	0.00004 U	0.006 U	0.093	0.00499 J	0.48 ± 0.2	3.9 ± 1.1	4.38 ± 1.3	
	2/14/2017	N	9.67 J	590	3980	5.76	2.78	4410	12600	0.0008 U	0.0588	0.0142	0.275	0.344	0.00416 J	1.84	0.000306 J	2.44	0.00008 U	0.002 U	0.424 J	0.00338	0.701 ± 0.417	3.57 ± 0.513	4.27 ± 0.930	
	3/22/2017	N	9.82 J	567	4200	6.04	3.16	5120 J-	12500	0.0008 U	0.058	0.015	0.295 J	0.326	0.00369 J	1.94	0.000355 J+	2.57	0.00008 U	0.002 U	0.265 J	0.00366	1.25 ± 0.296	4.38 ± 0.710	5.63 ± 1.01	
	5/10/2017	N	10.3 J	630	4130	0.1 U	3.47	4430	14100	0.0008 U	0.0421	0.0137	0.294	0.371	0.00443 J	1.52	0.0003 U	2.69	0.00008 U	0.002 U	0.274	0.00344	0.641 ± 0.282	3.41 ± 0.511	4.05 ± 0.793	
	7/24/2017	N	10.1 J	709	4200	1.14 J	3.42	5630	13800	0.0008 U	0.0606 J	0.0149	0.281	0.382	0.00555	1.42 J	0.00041 J	2.3	0.00008 U	0.002 U	0.453 J	0.00357	0.934 ± 0.346	3.92 ± 0.585	4.85 ± 0.931	
8/21/2017	N	9.16 J	633	4230	0.526 J	3.49	4470	13200	0.0008 U	0.0684	0.0142	0.225 J	0.337	0.00375 J	1.53	0.0003 U	1.98	0.00008 U	0.002 U	0.331 J	0.00337	0.565 ± 0.280	4.32 ± 0.472	4.89 ± 0.752		
AP-31	5/25/2016	N	37.6	547	1550	0.5 U	3.93	3310	7990	0.004 U	0.00639 J	0.019 U	0.0089 J	0.00403 J	0.004 U	0.218	0.006 U	0.757	0.000685	0.006 U	0.0173 J	0.002 U	0.21 ± 0.14	1.24 ± 0.47	1.45 ± 0.61	
	8/17/2016	N	35.5	505	1760	0.579 J	3.75	3590	9580	0.002 U	0.00322 J	0.0128 J	0.011	0.00432 J	0.00286 J	0.237	0.003 U	0.908	0.000766	0.003 U	0.0258	0.00199 J	0.49 ± 0.18	2.37 ± 0.67	2.86 ± 0.85	
	10/27/2016	N	44.6	602	1550	0.725 J	3.84	3300	7820	0.00787 J	0.00542 J	0.019 U	0.0107 J	0.00427 J	0.004 U	0.219	0.006 U	0.826	0.000689	0.006 U	0.0309 J	0.00286 J	0.32 ± 0.16	1.15 ± 0.49	1.47 ± 0.65	
	2/16/2017	N	44.3	592	1560	0.288 J-	3.56	3190	7310	0.0008 U	0.0115	0.0124 J	0.00834	0.00377	0.00243 J	0.235	0.0003 U	0.717	0.000723	0.002 U	0.0631 J+	0.00252	0.447 ± 0.313	0.540 ± 0.625 U	0.987 ± 0.938 U	
	3/23/2017	N	40.8	499	1550	0.5 U	3.66	3310	7010	0.0008 U	0.00806	0.0114	0.00805	0.00361	0.00236 J	0.214	0.0003 U	0.739 J-	0.000814	0.002 U	0.0609	0.00205	1.39 ± 0.384	0.512 ± 0.492 U	1.90 ± 0.876	
	5/15/2017	N	42.3 J	534	1580	0.1 U	2.96	3180	7590	0.0008 U	0.00779	0.0116	0.00938	0.00398	0.00236 J	0.225	0.0003 U	0.814	0.000816	0.002 U	0.0511	0.00213	0.623 ± 0.276	1.55 ± 0.899 U	2.17 ± 1.18	
	7/26/2017	N	45.1 J	510	1720	0.2 U	3.98	3730	7740	0.0008 U	0.0128	0.0119	0.00715	0.00369	0.00239 J	0.238	0.0003 U	0.717	0.000665	0.002 U	0.0579	0.00244	0.741 ± 0.318	1.20 ± 0.379 U	1.94 ± 0.697 U	
8/23/2017	N	41.4	530	1680	0.2 U	3.72	3260	7800	0.0008 U	0.0113	0.013	0.00876	0.00392	0.00239 J	0.253	0.0003 U	0.846	0.000681	0.002 U	0.0704	0.00222	0.491 ± 0.260	2.40 ± 0.489 U	2.89 ± 0.749		
AP-32	5/25/2016	N	15.4	679	3120	1.42	3.45	3570	10200	0.004 U	0.0154 J	0.0255 J	0.0588	0.077	0.004 U	0.558	0.006 U	1.71	0.000933	0.006 U	0.0271 J	0.00414 J	1.28 ± 0.4	7.2 ± 1.8	8.48 ± 2.2	
	8/17/2016	N	14	589	3160	2.06	3.49	3500	10300	0.002 U	0.0136 J	0.0181 J	0.068	0.0788	0.002 U	0.553	0.003 U	1.87	0.0019	0.003 U	0.0404	0.004 J	0.32 ± 0.14	7.9 ± 1.9	8.22 ± 2.04	
	10/26/2016	N	15.8	698	3020	1.62	3.75	3360	9780	0.0004 U	0.0134	0.0187	0.0548	0.0636	0.004 U	0.411	0.000774 J	1.81	0.00156	0.0006 U	0.0322	0.00331	0.82 ± 0.3	7.7 ± 1.9	8.52 ± 2.2	
	2/17/2017	N	15	726	2880	1.24 J-	3.31	3180	10400	0.0008 U	0.0375	0.0184 J	0.0434	0.0707	0.00453 J	0.508	0.000478 J	1.56	0.00186	0.002 U	0.188 J+	0.0048	1.64 ± 0.485	7.94 ± 0.596	9.58 ± 1.08	
	3/23/2017	N	19.8	636	2880	1.36 J	3.4	3210	8840	0.0008 U	0.029	0.0182	0.0538	0.0797	0.00211 J	0.552	0.000447 J	1.34 J-	0.0028	0.002 U	0.213	0.00446	1.95 ± 0.393	7.45 ± 0.637	9.40 ± 1.03	
	5/15/2017	N	15.2 J	658	2910	0.1 U	2.7	3230	9600	0.0008 U	0.0267	0.0179	0.053	0.0761	0.002 U	0.525	0.000454 J	1.56	0.00197	0.002 U	0.177	0.00414	0.775 ± 0.335	7.60 ± 0.897 U	8.38 ± 1.26	
	7/26/2017	N	16 J	637	2880	0.5 U	3.75	3790	9760	0.0008 U	0.0441	0.0177	0.0403	0.0712	0.002 U	0.532	0.000436 J	1.25	0.00206	0.002 U	0.203	0.0047	2.04 ± 0.513	7.97 ± 0.605	10.0 ± 1.12	
8/23/2017	N	14.8	656	2960	0.5 U	3.48	3320	9780	0.0008 U	0.064	0.0186	0.0567	0.0769	0.002 U	0.62	0.000436 J	1.62	0.00197	0.002 U	0.282	0.00411	1.28 ± 0.438	8.33 ± 0.564	9.61 ± 1.00		
AP-33	5/25/2016	N	62.4	752	4390	7.36	2.94	3270	13400	0.004 U	0.0274 J	0.0193 J	0.342	0.124	0.004 U	1.17	0.006 U	1.23	0.00343	0.006 U	0.0499 J	0.0049 J	0.2 ± 0.12	6.2 ± 1.5	6.4 ± 1.62	
	8/17/2016	N	56.7	708	4820	7.3	3.31	3660	13400	0.002 U	0.0269	0.019 J	0.372	0.12	0.00268 J	1.12	0.003 U	1.36	0.00389	0.003 U	0.0711	0.00467 J	0.79 ± 0.25	6.2 ± 1.5	6.99 ± 1.75	
	10/26/2016	N	53.5	820	4490	6.15	3.58	3380	12900	0.0004 U	0.0267	0.0176	0.333	0.121	0.004 U	0.933	0.0006 U	1.39	0.0041	0.0006 U	0.0664	0.00451	0.9 ± 0.32	6.1 ± 1.5	7 ± 1.82	
	2/17/2017	N	69.1	857	4170	3.16 J-	3.13	3020	13500	0.0008 U	0.0655	0.0189 J	0.252	0.118	0.002 U	1.03	0.00106	1.2	0.00382	0.002 U	0.344 J+	0.00618	0.662 ± 0.307	6.20 ± 0.561	6.86 ± 0.868	
	3/23/2017	N	64.8	737	4300	5.56	3.24	3160	12000	0.0008 U	0.0479	0.0177	0.282	0.121	0.002 U	0.987	0.000331 J	1.03 J-	0.00345	0.002 U	0.378	0.00527	1.97 ± 0.487	6.10 ± 0.613	8.07 ± 1.10	
	5/12/2017	N	71.4 J	793	4530	0.1 U	3.4	3330	10500	0.0008 U	0.0453	0.018	0.29	0.127	0.002 U	1.01	0.000358 J	1.29	0.00424	0.002 U	0.319	0.00525				

APPENDIX A
Groundwater Analytical Results - Background Monitoring

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

			Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																	
Location ID	Sample Date	Analyte Sample Type	Boron	Calcium	Chloride	Fluoride*	pH, field	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium-226	Radium-228	Radium-226 & Radium-228		
			mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
Ash Pond																											
AP-36	5/25/2016	N	4.38	697	2180	0.55 J	4.32	2610	7920	0.004 U	0.00885 J	0.0389 J	0.02 J	0.002 U	0.004 U	0.072	0.006 U	1.03	0.00004 U	0.006 U	0.011 U	0.002 U	1.11 ± 0.37	2.58 ± 0.72	3.69 ± 1.09		
	8/16/2016	N	3.68	613	2320	1.13	4.43	2770	9200	0.002 U	0.00482 J	0.0268	0.022	0.001 U	0.002 U	0.067	0.003 U	1.07	0.00004 U	0.003 U	0.0162 J	0.001 U	1.24 ± 0.37	2.52 ± 0.72	3.76 ± 1.09		
	10/25/2016	N	2.26	725	2150	1.11	4.22	2550	7420	0.0004 U	0.00755	0.022	0.022	0.0002 U	0.004 U	0.0622	0.0006 U	0.997	0.00004 U	0.0006 U	0.00687	0.000903 J	0.71 ± 0.28	2.18 ± 0.72	2.89 ± 1		
	2/17/2017	N	2.45	734	1970	0.517 J-	3.63	2350	6600	0.0008 U	0.0111	0.0222 J	0.0177	0.0003 U	0.002 U	0.0695	0.00039 J	0.984	0.00008 U	0.002 U	0.0274 J+	0.00114 J	0.647 ± 0.405	1.38 ± 0.564	2.03 ± 0.969		
	3/23/2017	N	2.25	626	2000	0.658 J	3.84	2490	6540	0.0008 U	0.00902	0.0222	0.0179	0.0003 U	0.002 U	0.0675	0.000389 J	0.977 J-	0.00008 U	0.002 U	0.0298	0.000956 J	0.482 ± 0.188 U	2.29 ± 0.475 U	2.77 ± 0.663		
	5/11/2017	N	3.19 J	672	2040	0.1 U	3.97	2490	6510	0.0008 U	0.00829	0.0216	0.0192	0.0003 U	0.002 U	0.0674	0.000363 J	0.938	0.00008 U	0.002 U	0.0262	0.00104 J	0.432 ± 0.205 U	2.07 ± 0.663	2.50 ± 0.868		
	7/27/2017	N	2.44 J	676	1980	0.2 U	3.95	2400	6420	0.0008 U	0.011	0.021	0.0152	0.0003 U	0.002 U	0.0695	0.000401 J	0.804	0.00008 U	0.002 U	0.0282	0.00111 J	0.844 ± 0.324	4.02 ± 0.596 U	4.86 ± 0.920		
8/24/2017	N	2.32	647	2020	0.2 U	4.15	2530	7010	0.0008 U	0.011	0.0231	0.0202	0.0003 U	0.002 U	0.0715	0.0004 J	0.997	0.00008 U	0.002 U	0.0356	0.00106 J	0.475 ± 0.261	4.73 ± 0.569	5.21 ± 0.830			
MW-03	5/25/2016	N	15.6	535	2070	1.05	3.18	4260	9810	0.004 U	0.00805 J	0.019 U	0.0279	0.061	0.004 U	0.328	0.006 U	1.99	0.00004 U	0.006 U	0.0177 J	0.002 U	0.56 ± 0.22	3.57 ± 0.94	4.13 ± 1.16		
	8/17/2016	N	13.9	478	2200	1.59	3.56	4560	9780	0.002 U	0.00544 J	0.0095 U	0.0343	0.0556	0.002 U	0.325	0.003 U	2.12	0.00004 U	0.003 U	0.0295	0.00178 J	0.41 ± 0.16	3.72 ± 0.99	4.13 ± 1.15		
	10/27/2016	N	17.8	563	1990	1.19	3.66	4270	9440	0.004 U	0.00836 J	0.019 U	0.0297	0.0625	0.004 U	0.338	0.006 U	2.13	0.00004 U	0.006 U	0.0278 J	0.002 U	0.44 ± 0.19	3.7 ± 1	4.14 ± 1.19		
	2/16/2017	N	14.9	573	1980	0.54 J-	3.34	3990	9780	0.0008 U	0.019	0.01 J	0.0211	0.0507	0.002 U	0.321	0.0003 U	1.87	0.00008 U	0.002 U	0.0928 J+	0.00229	0.263 ± 0.278 U	3.42 ± 0.508	3.68 ± 0.786		
	3/23/2017	N	15.5	488	1950	0.8 J	3.45	4110	9480	0.0008 U	0.0142	0.00892 J	0.0226	0.052	0.002 U	0.321	0.0003 U	1.45 J-	0.00008 U	0.002 U	0.0991	0.00197	0.494 ± 0.394 U	2.45 ± 0.532 U	2.94 ± 0.926		
	5/15/2017	N	14.2 J	486	1880	0.1 U	2.79	3990	9780	0.0008 U	0.0138	0.00988 J	0.026	0.0558	0.002 U	0.325	0.0003 U	1.65	0.00008 U	0.002 U	0.0898	0.00204	0.241 ± 0.203 U	4.66 ± 0.877 U	4.90 ± 1.08		
	7/26/2017	N	16 J	515	1860	0.1 U	3.82	4650	9200	0.0008 U	0.0236	0.0101	0.0214	0.0529	0.002 U	0.353	0.0003 U	1.46	0.00008 U	0.002 U	0.102	0.00237	1.08 ± 0.391	3.89 ± 0.751 U	4.97 ± 1.14		
8/23/2017	N	15.2	521	1870	0.2 U	3.59	4100	9120	0.0008 U	0.0318	0.0112	0.026 J	0.0629	0.002 U	0.386	0.0003 U	1.71	0.00008 U	0.002 U	0.133	0.00231	0.577 ± 0.277	4.68 ± 0.568	5.26 ± 0.845			
PZ-05	5/25/2016	N	46.5	663	2900	4.73	3.29	2870	9640	0.004 U	0.0137 J	0.0219 J	0.282	0.0359	0.00489 J	0.569	0.006 U	0.679	0.000086 J	0.006 U	0.0259 J	0.00241 J	0.41 ± 0.18	3.24 ± 0.86	3.65 ± 1.04		
	8/17/2016	N	42.8	651	3100	4.86	3.51	3020	11300	0.00878 J	0.0114 J	0.0193 J	0.321	0.0472	0.00393 J	0.686	0.003 U	0.81	0.000198 J	0.003 U	0.0351	0.00298 J	0.28 ± 0.14	3.16 ± 0.84	3.44 ± 0.98		
	10/26/2016	N	41.2	724	3060	3.66	3.63	2950	9160	0.0004 U	0.0125	0.0175	0.282	0.0394	0.004 U	0.564	0.0006 U	0.701	0.000153 J	0.0006 U	0.0317	0.00251	0.73 ± 0.28	2.85 ± 0.84	3.58 ± 1.12		
	2/17/2017	N	50.4	752	2770	3.4 J-	3.22	2660	9900	0.0008 U	0.03	0.0169 J	0.279	0.0366	0.00304 J	0.713	0.000731 J	0.742 J	0.000146 J	0.002 U	0.169 J+	0.00315	0.151 ± 0.241 U	3.67 ± 0.590	3.82 ± 0.831		
	2/17/2017	Dup	51.9	768	2720	1.34 J-	--	2600	8780	0.0008 U	0.0296	0.0172 J	0.215	0.0369	0.00289 J	0.619	0.000725 J	0.569 J	0.000142 J	0.002 U	0.165 J+	0.00303	-0.048 ± 0.251 U	2.89 ± 0.552	2.89 ± 0.803		
	3/23/2017	N	48.8	632	2790	3.24	3.37	2760	8600	0.0008 U	0.0206	0.0157	0.223	0.0328	0.00281 J	0.564	0.000648 J	0.605 J-	0.000117 J	0.002 U	0.166	0.00251	0.656 ± 0.318 U	3.67 ± 0.696 U	4.33 ± 1.01		
	3/23/2017	Dup	49	637	2840	3.23	--	2800	9040	0.0008 U	0.0204	0.016	0.228	0.0328	0.00278 J	0.566	0.00066 J	0.618 J-	0.000128 J	0.002 U	0.169	0.00256	0.848 ± 0.343 U	4.11 ± 0.522 U	4.96 ± 0.865		
	5/11/2017	N	50.5 J	699	2950	0.1 U	3.5	2860	8220	0.0008 U	0.0223	0.0164	0.251	0.0439	0.00307 J	0.65	0.000719 J	0.83	0.000268	0.002 U	0.164	0.00274	0.203 ± 0.125 U	2.59 ± 0.730	2.79 ± 0.855		
	7/26/2017	N	48.6 J	686	2920	0.2 U	3.71	3720	8360	0.0008 U	0.0358	0.0169	0.195	0.0372	0.00292 J	0.62	0.00102	0.578	0.000179 J	0.002 U	0.181	0.00302	0.606 ± 0.290	2.88 ± 0.492 U	3.49 ± 0.782		
8/23/2017	N	43.3	685	2970	0.2 U	3.42	2910	9080	0.0008 U	0.0516	0.0185	0.267	0.0505	0.00318 J	0.766	0.000929 J	0.751	0.000273	0.002 U	0.26	0.0029	0.217 ± 0.201	3.80 ± 0.609	4.02 ± 0.810			
PZ-06	5/25/2016	N	5.94	598	1600	0.5 U	5.65	3230	7560	0.004 U	0.00418 J	0.019 U	0.002 U	0.002 U	0.004 U	0.002 U	0.006 U	0.932	0.00004 U	0.006 U	0.011 U	0.002 U	0.47 ± 0.2	3.04 ± 0.81	3.51 ± 1.01		
	8/16/2016	N	3.86	557	1610	0.669 J	5.95	3130	9020	0.00208 J	0.002 U	0.019 J	0.00391 J	0.001 U	0.002 U	0.00341 J	0.003 U	0.961	0.00004 U	0.003 U	0.00667 J	0.001 U	0.34 ± 0.15	2.19 ± 0.63	2.53 ± 0.78		
	10/25/2016	N	3.13	653	1540	0.726 J	5.98	3030	7560	0.0004 U	0.000719 J	0.0184	0.00266 J	0.0002 U	0.004 U	0.00211 J	0.0006 U	0.911	0.00004 U	0.0006 U	0.00111 J	0.0002 U	0.87 ± 0.31	1.94 ± 0.72	2.81 ± 1.03		
	2/17/2017	N	3.44	674	1420	0.2 UJ	5.36	2760	6450	0.0008 U	0.002 U	0.0187 J	0.00215	0.0003 U	0.002 U	0.003 U	0.0003 U	0.919	0.00008 U	0.002 U	0.0005 U	0.0005 U	0.096 ± 0.263 U	-1.05 ± 1.19 U	0.096 ± 1.45 U		
	3/21/2017	N	3.56 J	538	1480	0.316 J	5.45	3180 J-	6120	0.0008 U	0.002 U	0.0194	0.00135 J	0.0003 U	0.002 U	0.003 U	0.0003 U	0.714	0.00008 U	0.002 U	0.002 UJ	0.0005 U	0.297 ± 0.387 U	1.87 ± 0.484	2.17 ± 0.871		
	5/11/2017	N	5.5 J	592	1460	0.1 U	5.71	2970	6500	0.0008 U	0.002 U	0.0173	0.00241	0.0003 U	0.002 U	0.003 U	0.0003 U	0.923	0.00008 U	0.002 U	0.002 U	0.0005 U	0.520 ± 0.226	0.429 ± 0.689 U	0.949 ± 0.915 U		
	5/11/2017	Dup	5.17 J	588	1550	0.1 U	--	3090	6440	0.0008 U	0.002 U	0.0181	0.00268	0.0003 U	0.002 U	0.003 U	0.0003 U	0.985	0.00008 U	0.002 U	0.002 U	0.0005 U	0.451 ± 0.258 U	2.29 ± 0.550 J	2.74 ± 0.808 J		
	7/27/2017	N	3.34 J	610	1550	0.2 U	5.75	3030	7360	0.0008 U	0.002 U	0.0183	0.0022	0.0003 U	0.002 U	0.003 U	0.0003 U	0.749	0.00008 U	0.002 U	0.002 U	0.0005 U	0.351 ± 0.213	2.06 ± 0.506 U	2.41 ± 0.719		
8/24/2017	N	2.93	582	1550	0.2 U	5.87	3160	6780	0.0008 U	0.002 U	0.0197	0.00207	0.0003 U	0.002 U	0.003 U	0.0003 U	0.905	0.00008 U	0.002 U	0.002 U	0.0005 U	0.613 ± 0.318	2.21 ± 0.673 U	2.82 ± 0.991			
Equalization Pond																											
EP-31 (background)	5/26/2016	N	4.14	438	156	2.65	3.56	3260	5820	0.0004 U	0.00758	0.0139	0.0737	0.0181	0.0016 J	0.123	0.0006 U	0.616	0.00004 U	0.0006 U	0.00934	0.00112 J	0.41 ± 0.17	1.38 ± 0.46	1.79 ± 0.63		
	8/17/2016	N	4.49	410	139	2.04	3.8	3430	7060	0.0004 U	0.00918	0.00734	0.128	0.016	0.000816 J	0.107	0.000608 J	0.95	0.00004 U	0.0006 U	0.00903	0.00116 J	0.31 ± 0.2	1.28 ± 0.56	1.59 ± 0.76		

APPENDIX A
Groundwater Analytical Results - Background Monitoring

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Location ID	Sample Date	Sample Type	Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																
			Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride* mg/L	pH, field SU	Sulfate mg/L	Total Dissolved Solids mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	Selenium mg/L	Thallium mg/L	Radium-226 pCi/L	Radium-228 pCi/L	Radium-226 & Radium-228 pCi/L	
Equalization Pond																										
EP-33	5/25/2016	N	68	598	2830	0.5 U	6.69	3290	10300	0.004 U	0.0113 J	0.0284 J	0.002 U	0.002 U	0.004 U	0.00236 J	0.006 U	0.439	0.00004 U	0.0676	0.0128 J	0.002 U	0.61 ± 0.24	0.75 ± 0.34	1.36 ± 0.58	
	8/18/2016	N	68.2	531	2980	0.781 J	6.81	3360	9940	0.002 U	0.002 U	0.0153 J	0.001 U	0.001 U	0.002 U	0.001 U	0.003 U	0.403	0.00004 U	0.0468	0.0055 U	0.001 U	0.53 ± 0.22	1.51 ± 0.57	2.04 ± 0.79	
	10/26/2016	N	57	608	2890	0.916 J	6.88	3320	9560	0.004 U	0.004 U	0.019 U	0.002 U	0.002 U	0.004 U	0.002 U	0.006 U	0.414	0.00004 U	0.0401 J	0.011 U	0.002 U	0.45 ± 0.2	ND ± 0.42 U	0.45 ± 0.62	
	2/15/2017	N	69.9 J	577	2940	0.2 U	6.53	2770	9440	0.0008 U	0.002 U	0.0159	0.0003 U	0.0003 U	0.00206 J	0.003 U	0.0003 U	0.544	0.00008 U	0.0233	0.002 U	0.0005 U	0.646 ± 0.451 U	0.235 ± 0.456 U	0.88 ± 0.907 U	
	3/22/2017	N	69.3	587	3110	0.378 J	6.57	2880	9260	0.0008 U	0.002 U	0.0161	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.557 J-	0.00008 U	0.0199	0.002 U	0.0005 U	1.03 ± 0.349	1.64 ± 0.440	2.67 ± 0.789	
	5/11/2017	N	78.3 J	618	3370	0.1 U	6.69	2900	9960	0.0008 U	0.002 U	0.0178	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.8	0.00008 U	0.0161	0.002 U	0.0005 U	0.358 ± 0.224	0.735 ± 0.544 U	1.09 ± 0.768	
	7/25/2017	N	69.9 J	709	3290	0.5 U	6.66	3610	10200	0.0008 U	0.002 U	0.0165	0.0003 U	0.0003 U	0.0027 J	0.003 U	0.0003 U	0.745	0.00008 U	0.0133	0.002 U	0.0005 U	0.326 ± 0.148	1.63 ± 0.545 U	1.96 ± 0.693	
8/23/2017	N	70.2	605	3020	0.5 U	6.47	3100	9860	0.0008 U	0.002 U	0.0157	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.712	0.00008 U	0.0125	0.002 U	0.0005 U	0.237 ± 0.228	1.40 ± 0.521 U	1.64 ± 0.749		
EP-34	5/24/2016	N	50.2	517	3640	0.5 U	6.79	2910	10800	0.004 U	0.00596 J	0.0294 J	0.002 U	0.002 U	0.004 U	0.002 U	0.006 U	0.874	0.00004 U	0.0227 J	0.011 U	0.002 U	0.7 ± 0.26	1.51 ± 0.47	2.21 ± 0.73	
	8/18/2016	N	74.6	483	3900	0.589 J	6.66	3000	10700	0.002 U	0.002 U	0.0227 J	0.001 U	0.001 U	0.002 U	0.00174 J	0.003 U	0.698	0.00004 U	0.029	0.0055 U	0.001 U	0.7 ± 0.29	1.79 ± 0.62	2.49 ± 0.91	
	10/26/2016	N	61.6	533	3780	0.651 J	6.74	3150	10700	0.004 U	0.004 U	0.019 U	0.002 U	0.002 U	0.004 U	0.002 U	0.006 U	0.78	0.00004 U	0.0249 J	0.011 U	0.002 U	0.76 ± 0.3	1.61 ± 0.6	2.37 ± 0.9	
	2/15/2017	N	51.7 J	448	3660	0.5 U	6.37	3100	11300	0.0008 U	0.002 U	0.02	0.0003 U	0.0003 U	0.00298 J	0.003 U	0.0003 U	0.852	0.00008 U	0.0174	0.002 U	0.0005 U	1.17 ± 0.464 U	5.11 ± 0.541	6.28 ± 1.01	
	2/15/2017	Dup	54.6 J	457	3670	0.5 U	--	3090	10700	0.0008 U	0.002 U	0.0189	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.823	0.00008 U	0.0187	0.002 U	0.0005 U	0.721 ± 0.372 U	4.33 ± 0.476	5.05 ± 0.848	
	3/22/2017	N	53.5	447	3670	0.5 U	6.41	3030	10300	0.0008 U	0.002 U	0.0164	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.727 J-	0.00008 U	0.0175	0.002 U	0.0005 U	1.61 ± 0.489	3.21 ± 0.549	4.82 ± 1.04	
	3/22/2017	Dup	50.2	427	3710	0.5 U	--	3110	12300	0.0008 U	0.002 U	0.0163	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.721 J-	0.00008 U	0.0171	0.002 U	0.0005 U	1.51 ± 0.419	2.41 ± 0.574	3.92 ± 0.993	
5/11/2017	N	52.1 J	476	3740	0.1 U	6.49	3230	11100	0.0008 U	0.002 U	0.0168	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.983	0.00008 U	0.0154	0.002 U	0.0005 U	0.696 ± 0.269	3.60 ± 0.632	4.30 ± 0.901		
7/25/2017	N	55.8 J	510	3860	0.5 U	6.59	3500	11400	0.0008 U	0.002 U	0.0173	0.0003 U	0.0003 U	0.00322 J	0.003 U	0.0003 U	0.862	0.00008 U	0.0118	0.002 U	0.0005 U	0.971 ± 0.288	2.24 ± 0.618	3.21 ± 0.906		
8/23/2017	N	53.5	489	3700	0.5 U	6.46	3210	11300	0.0008 U	0.002 U	0.0172	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.887	0.00008 U	0.0111	0.002 U	0.0005 U	0.574 ± 0.324	3.03 ± 0.459	3.60 ± 0.783		
EP-35	5/24/2016	N	23.4	367	3170	0.5 U	6.27	3450	10700	0.004 U	0.0191 J	0.0392 J	0.002 U	0.002 U	0.00425 J	0.00554 J	0.006 U	1.08	0.00004 U	0.00701 J	0.011 U	0.002 U	0.77 ± 0.27	1.23 ± 0.41	2 ± 0.68	
	8/18/2016	N	33.7	276	3410	0.5 U	6.48	3340	10100	0.002 U	0.00211 J	0.0199 J	0.001 U	0.001 U	0.002 U	0.00104 J	0.003 U	1.16	0.00004 U	0.00426 J	0.0055 U	0.001 U	0.61 ± 0.22	1.1 ± 0.4	1.71 ± 0.62	
	10/26/2016	N	25.2	298	3440	0.536 J	6.51	3340	9960	0.004 U	0.004 U	0.02 J	0.002 U	0.002 U	0.004 U	0.002 U	0.006 U	1.02	0.00004 U	0.006 U	0.011 U	0.002 U	0.47 ± 0.22	1.19 ± 0.51	1.66 ± 0.73	
	2/15/2017	N	35.2 J	283	3130	0.2 U	6.05	2870	9600	0.0008 U	0.00263 J	0.0184	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.06	0.00008 U	0.00407 J	0.002 U	0.0005 U	0.345 ± 0.305 U	1.65 ± 0.495	2.00 ± 0.800 U	
	3/22/2017	N	34.1	269	3230	0.5 U	6.22	3170	10600	0.0008 U	0.002 U	0.0167	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.937 J-	0.00008 U	0.00359 J	0.002 U	0.0005 U	1.36 ± 0.298	1.55 ± 0.440	2.91 ± 0.738	
	5/11/2017	N	36.7 J	294	3270	0.1 U	6.35	3040	9720	0.0008 U	0.002 U	0.0174	0.0003 U	0.0003 U	0.00209 J	0.003 U	0.0003 U	1.06	0.00008 U	0.00349 J	0.002 U	0.0005 U	0.544 ± 0.240	1.20 ± 0.539	1.74 ± 0.779	
	5/11/2017	Dup	36.1 J	283	3320	0.1 U	--	3010	10200	0.0008 U	0.002 U	0.0168	0.0003 U	0.0003 U	0.00212 J	0.003 U	0.0003 U	1	0.00008 U	0.00363 J	0.002 U	0.0005 U	0.606 ± 0.262	0.737 ± 0.510 U	1.34 ± 0.772	
7/25/2017	N	34.6 J	265	3460	0.5 U	6.4	3130	9860	0.0008 U	0.002 U	0.0176	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	0.893	0.00008 U	0.00374 J	0.002 U	0.0005 U	0.708 ± 0.309	0.845 ± 0.459 U	1.55 ± 0.768		
8/23/2017	N	32.8	271	3310	0.5 U	6.27	2890	9660	0.0008 U	0.002 U	0.0161	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.06	0.00008 U	0.00301 J	0.002 U	0.0005 U	0.299 ± 0.247	2.09 ± 0.537 U	2.39 ± 0.784		
EP-36	5/24/2016	N	17.6	439	3350	0.5 U	6.27	2470	10200	0.004 U	0.014 J	0.0604	0.002 U	0.002 U	0.004 U	0.00218 J	0.006 U	1.26	0.00004 U	0.006 U	0.011 U	0.002 U	0.97 ± 0.32	2.07 ± 0.62	3.04 ± 0.94	
	8/18/2016	N	22.3	353	3810	0.5 U	6.22	2600	9820	0.002 U	0.00389 J	0.0239 J	0.001 U	0.001 U	0.002 U	0.001 U	0.003 U	1.34	0.00004 U	0.003 U	0.0055 U	0.001 U	0.77 ± 0.3	1.47 ± 0.56	2.24 ± 0.86	
	10/26/2016	N	16.2	397	3740	0.5 U	6.5	2580	9720	0.004 U	0.00456 J	0.0232 J	0.002 U	0.002 U	0.004 U	0.002 U	0.006 U	1.19	0.00004 U	0.006 U	0.011 U	0.002 U	0.93 ± 0.35	2.43 ± 0.76	3.36 ± 1.11	
	2/16/2017	N	24.6	434	3600	0.5 U	5.88	2450	10700	0.0008 U	0.00333 J	0.0224 J	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.2	0.00008 U	0.002 U	0.002 U	0.0005 U	0.368 ± 0.648	2.09 ± 0.699	2.46 ± 1.35	
	3/22/2017	N	23.4	382	3570	0.5 U	6.04	2540	11000	0.0008 U	0.00259 J	0.0231	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.11 J-	0.00008 U	0.002 U	0.002 U	0.0005 U	0.485 ± 0.374 U	1.81 ± 0.467	2.30 ± 0.841	
	5/11/2017	N	25.9 J	418	3650	0.1 U	6.08	2530	9800	0.0008 U	0.00228 J	0.0217	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.3	0.00008 U	0.002 U	0.002 U	0.0005 U	0.959 ± 0.288	2.67 ± 0.534	3.63 ± 0.822	
	7/25/2017	N	22.8 J	416	3830	0.5 U	6.2	2700	9220	0.0008 U	0.00238 J	0.0222	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.01	0.00008 U	0.002 U	0.002 U	0.0005 U	1.03 ± 0.359	1.13 ± 0.544 U	2.16 ± 0.903	
8/23/2017	N	22.4	420	3660	0.5 U	6.09	2520	10000	0.0008 U	0.002 U	0.0216	0.0003 U	0.0003 U	0.002 U	0.003 U	0.0003 U	1.23	0.00008 U	0.002 U	0.002 U	0.0005 U	0.618 ± 0.288	1.54 ± 0.529 U	2.16 ± 0.817		
EP-37	5/24/2016	N	7.15	534	4270	0.5 U	6.56	3130	11700	0.004 U	0.0092 J	0.0412 J	0.002 U	0.002 U	0.004 U	0.00318 J	0.006 U	1.46	0.00004 U	0.006 U	0.011 U	0.002 U	0.89 ± 0.29	3.67 ± 0.96	4.56 ± 1.25	
	8/18/2016	N	9.47	479	4500	0.5 U	6.3	3040	11300	0.002 U	0.00233 J	0.0232 J	0.001 U	0.001 U	0.002 U	0.001 U	0.003 U	1.64	0.00004 U	0.003 U	0.0055 U	0.001 U	0.65 ± 0.27	0.85 ± 0.45	1.5 ± 0.72	
	10/24/2016	N	7.48	518	4340	0.528 J	6.47	3010	11300	0.004 U	0.004 U	0.0259 J	0.002 U	0												

APPENDIX A
Groundwater Analytical Results - Background Monitoring

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Analyte			Detection Monitoring (Appendix III) Constituents							Assessment Monitoring (Appendix IV) Constituents																	
			Boron	Calcium	Chloride	Fluoride*	pH, field	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium-226	Radium-228	Radium-226 & Radium-228		
Location ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L		
Observation Wells																											
SP-31	5/26/2016	N	7.99	441	486	9.94	3.71	4840	8740	0.004 U	0.0168 J	0.0248 J	0.377	0.15	0.00785 J	0.723	0.006 U	3.17	0.00004 U	0.006 U	0.0366 J	0.002 U	1.31 ± 0.4	2.07 ± 0.59	3.38 ± 0.99		
	8/17/2016	N	5.7	436	320	11	3.48	4720	8040	0.0004 U	0.0125	0.0281	0.39	0.144	0.00445 J	0.565	0.00519	3.08	0.00004 U	0.000803 J	0.0368	0.00134 J	1.34 ± 0.4	1.88 ± 0.58	3.22 ± 0.98		
SP-33	10/27/2016	N	--	--	--	--	--	--	12400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Notes:

- Analytical data collected by ERM Southwest Inc. and AECOM and analyzed by ALS Environmental, DHL Analytical Inc., and ESC Lab Sciences. Data from 2016 was compiled from laboratory reports provided in CCR Annual Groundwater Monitoring Report (AECOM, 2018). Data from 2017 was provided in electronic format from Power Engineers.
- mg/L = milligrams per liter; pCi/L = pico Curies per liter; SU = standard units.
- N = normal sample; Dup = field duplicate sample.
- "U"-flag = analyte not detected above specified limit (reporting limit); "UJ"-flag = analyte not detected above specified limit (reporting limit) and specified limit is an estimate; "J+"-flag = reported concentration is an estimate and is biased high; "J"-flag = reported concentration is an estimate and is biased low; "J"-flag = reported concentration is an estimate.
- ND = not detected; "--" = not analyzed/data not provided.
- * = Fluoride is required for both Appendix III and Appendix IV monitoring.

APPENDIX B

Alternative Source Demonstration (PBW, 2018)

**COAL COMBUSTION RESIDUAL RULE
ALTERNATE SOURCE DEMONSTRATION REPORT**

**SAN MIGUEL ELECTRIC COOPERATIVE, INC.
ATASCOSA COUNTY, TEXAS**

MAY 14, 2018

Prepared By:

Pastor, Behling & Wheeler, LLC
2201 Double Creek Drive, Suite 4004
Round Rock, Texas 78664
Texas Engineering Firm No. 4760

May 14, 2018

PROFESSIONAL CERTIFICATION

This document and all attachments were prepared by Pastor, Behling & Wheeler, LLC under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that the alternate source demonstration at the referenced facility meets the requirements of Section 257.94(e)(2) of the CCR Rule.



A handwritten signature in black ink that reads "Patrick J. Behling".

Patrick J. Behling, P.E.
Principal Engineer
PASTOR, BEHLING & WHEELER, LLC

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1.0 INTRODUCTION

San Miguel Electric Cooperative, Inc. (SMECI) operates a 440 MW mine-mouth, lignite-fired power plant near Christine, Texas (hereafter, the “Facility”). Coal Combustion Residuals (CCRs) including fly ash, bottom ash and flue gas desulfurization (FGD) scrubber wastewater are generated as part of Facility operations. CCRs generated at the Facility are managed by SMECI in surface impoundments or piles at the Facility prior to transportation off-site for beneficial use. A Site Plan for the Facility is shown on Figure 1.

The CCR Rule (40 CFR 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) was promulgated to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. The CCR Rule established national design, construction and operating criteria for existing and new CCR surface impoundments and piles/landfills (known as CCR Units). SMECI operates three CCR Units at the Facility (two CCR Surface Impoundments referred to as the Ash Pond and Equalization Pond, and one CCR pile referred to as the Ash Pile) that are subject to the CCR Rule.

Sections 257.90 through 257.95 of the CCR Rule specify groundwater monitoring program requirements for CCR Units, including implementation of a detection monitoring program at each CCR Unit (Section 257.94). SMECI performed the initial detection monitoring event for the three CCR Units in 2017 and completed a statistical evaluation of the detection monitoring data in January 2018. The statistical evaluation identified statistically significant increases (SSIs) above background levels for several detection monitoring constituents. This Alternate Source Demonstration Report was prepared in accordance with Section 257.94(e)(2) to demonstrate that a source other than the CCR Units caused the SSIs observed for these constituents.

2.0 CCR GROUNDWATER MONITORING SYSTEM

2.1 Description of CCR Units

The CCR Units at the Facility are described below (AECOM, 2018). The locations of the CCR Units are shown on Figure 1.

- Equalization Pond. The Equalization Pond is a diked impoundment that covers an area of approximately 25 acres. The Equalization Pond receives FGD scrubber wastewater and treated sewage wastewater from the San Miguel Plant.
- Ash Pond. The Ash Water Transport Ponds (Ash Pond) consists of two pond cells (Ash Pond A and Ash Pond B) and covers an area of approximately 26 acres. The Ash Pond was constructed as a side-hill impoundment with the northern side dike at or near natural grade and includes a central “splitter dike” with a connecting weir that separates the pond into two sections. The Ash Pond receives bottom ash transport water, boiler blowdown, cooling tower blowdown, boiler feedwater treatment wastewater, and storm water runoff from a limited portion of the Facility. In addition, the Ash Pond receives wastewater from the Equalization Pond as needed to manage water levels in the Equalization Pond.
- Ash Pile. The Ash Pile is an approximately one acre temporary storage area that is classified as an existing CCR pile. The Ash Pile is used to stage a stabilized mixture of fly ash and FGD scrubber wastewater treatment sludge.

2.2 CCR Groundwater Monitoring System

The CCR groundwater monitoring system at the Facility consists of a network of groundwater monitoring wells screened in the uppermost aquifer installed upgradient and downgradient of each CCR Unit (AECOM, 2018; ERM, 2017). The monitoring well locations are shown on Figure 1. Soil boring and well construction logs for the CCR wells are reproduced in Appendix A.

- Equalization Pond Monitoring Wells. The monitoring well network for the Equalization Pond consists of nine monitoring wells. Well EP-31 is located upgradient of the Equalization Pond and wells MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, and EP-38 are installed downgradient of the pond.
- Ash Pond Monitoring Wells. The monitoring well network for the Ash Pond consists of eleven monitoring wells. Wells PZ-2 and PZ-3 are located upgradient of the Ash Pond and wells AP-31 through AP-36, PZ-5, PZ-6, and MW-3 are installed downgradient of the pond.
- Ash Pile Groundwater Monitoring. The monitoring well network for the Ash Pile consists of five monitoring wells. Well SP-34 is located upgradient of the Ash Pile and wells SP-1, SP-2, SP-3, and SP-32 are installed downgradient of the pile.

May 14, 2018

All CCR monitoring wells are screened in the shallow sediments of the Eocene (lower Tertiary) Jackson Group and Yegua Formation (AECOM, 2018). The sediments consist largely of clay and silty clay deposited in a coastal lagoon or lagoonal margin depositional environment and coarser sandy sediments deposited in back barrier flats of a coastal barrier island. The uppermost aquifer at the Facility consists of a relatively laterally continuous silty sand and clayey sand interval that varies between approximately 5 to 25 feet thick and is encountered at between 5 to 30 feet below ground surface and locally dips to the southeast at approximately 45 feet per mile.

3.0 DETECTION MONITORING RESULTS

3.1 Detection Monitoring Program

Section 257.94 of the CCR Rule requires that detection monitoring of groundwater be performed at all CCR units. The following constituents are evaluated as part of the detection monitoring program (from Appendix III to the CCR Rule):

- Boron
- Calcium
- Chloride
- Fluoride
- pH
- Sulfate
- Total Dissolved Solids (TDS)

If a statistically significant increase (SSI) over background is determined for one or more of the constituents listed above at any downgradient CCR monitoring well, within 90 days the owner or operator must:

- Establish an assessment monitoring program as described in Section 257.95 of the Rule; or
- Demonstrate that a source other than the CCR unit caused the SSI over background levels for a constituent or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with the detection monitoring program.

3.2 Detection Monitoring Results

The initial detection monitoring samples from the Facility were collected in August 2017 (AECOM, 2018). The detection monitoring data for downgradient monitoring wells at each CCR Unit are summarized in Table 1.

3.3 Statistical Analysis of Detection Monitoring Results

Statistical analysis of detection monitoring data is required under Section 257.93 of the CCR Rule. Eight background groundwater monitoring events were performed at the Facility using the CCR monitoring well system during 2016 and 2017 and documented in the 2017 Annual Groundwater Monitoring Report (AECOM, 2018). Groundwater samples collected during the background monitoring events were

evaluated for each Appendix III parameter at the following upgradient background CCR wells to establish prediction limits based on an interwell approach in accordance with procedures outlined in the CCR Statistical Analysis Plan (Zephyr, 2017):

- Equalization Pond: EP-31
- Ash Pond: PZ-2 and PZ-3
- Ash Pile: SP-34

Based on the interwell prediction limits, a statistical analysis of the 2017 detection monitoring data was performed in January 2018 (Zephyr, 2018). A copy of the statistical analysis report is reproduced in Appendix B. The statistical analysis concluded that “statistical exceedances of Appendix III detection monitoring parameters were observed in each downgradient monitoring well at each CCR waste management unit.” Downgradient wells with reported SSIs can be summarized as follows:

- Equalization Pond:
 - Boron: MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, and EP-37
 - Calcium: EP-33
 - Chloride: MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, and EP-38
 - Sulfate: EP-32
 - TDS: EP-32, EP-33, EP-34, EP-35, EP-36, and EP-37
 - pH: MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, and EP-38
- Ash Pond:
 - Boron: AP-31, AP-33, AP-34, AP-35, MW-3 and PZ-5
- Ash Pile:
 - Calcium: SP-2
 - Chloride: SP-1, SP-2 and SP-3
 - Sulfate: SP-1 and SP-32
 - TDS: SP-1, SP-2 SP-3 and SP-32
 - pH: SP-3 and SP-32

4.0 ALTERNATE SOURCE DEMONSTRATION

As described in Section 3, SSIs over background groundwater concentrations were identified for the initial detection monitoring event in downgradient monitoring wells at each CCR Unit at the Facility. In accordance with Section 257.94(e)(2) of the CCR Rule, SMECI desires to assess the possibility that the reported SSIs in the downgradient monitoring wells are due to sources other than the CCR Units. This section describes the evaluation performed to demonstrate that a source other than the CCR Units caused the SSIs.

4.1 Equalization Pond

As shown in Appendix B, SSIs were noted for many detection monitoring constituents in most of the wells downgradient of the Equalization Pond; however, it should be noted that the statistically derived prediction limits used to identify the reported increases were based on eight background samples collected from one upgradient monitoring well (EP-31) over a period of only approximately 15 months.

In addition to the CCR monitoring wells installed at the Facility, SMECI monitors numerous other monitoring wells screened in the same uppermost aquifer at the adjacent San Miguel Lignite Mine. To be consistent with the naming convention of the San Miguel Lignite Mine, the uppermost aquifer in the mine area is referred to as “Unit 22” (MK, 1997). Figure 2 shows a map of the Mine Unit 22 monitoring wells located within approximately 2 miles of the Facility.

SMECI has been monitoring these wells on a quarterly basis for many years, most as far back as 1985 (more than 100 sampling events per well). Data from the Unit 22 wells is summarized in Appendix C. The historical concentration ranges of CCR Rule detection monitoring parameters reported in samples from the Unit 22 wells is presented in Table 2. As shown in Table 2, the historical well data demonstrates a high degree of natural variability, both over time in each specific well and spatially across the Unit 22 aquifer.

Table 3 compares the detection monitoring results for the Equalization Pond CCR wells to the maximum concentrations of these constituents historically observed in the Unit 22 wells. As shown in Table 3, the calcium, chloride, sulfate, TDS and pH levels reported for all Equalization Pond CCR wells during the detection monitoring event were well below the maximum concentrations historically reported in the Unit 22 sampling events. These data indicate that the SSIs reported for these constituents in the Equalization

Pond CCR wells are due to natural variations in groundwater quality rather than caused by a release from the Equalization Pond.

Similarly, boron concentrations reported for Equalization Pond CCR wells MW-4 and EP-37 for the detection monitoring event were also well below the maximum boron concentration historically reported in the Unit 22 wells, indicating that the SSIs reported for boron in these wells are due to natural variations in groundwater quality. However, it should be noted that the boron concentrations reported for Equalization Pond CCR wells EP-32 through EP-36 from the detection monitoring event exceeded the maximum boron concentration historically reported in the Unit 22 wells. As a result, these data do not support the conclusion that the SSIs reported for boron in wells EP-32 through EP-36 are due to natural variations in groundwater quality.

4.2 Ash Pond

SSIs were identified for boron in wells AP-31, AP-33, AP-34, AP-35, MW-3 and PZ-5 located downgradient of the Ash Pond (See Appendix B). The statistically derived prediction limits used to identify the reported increases were based on eight background samples collected from two upgradient monitoring wells (PZ-2 and PZ-3) over a period of only approximately 15 months.

Using an approach similar to that described above for the Equalization Pond, the detection monitoring boron results for the Ash Pond CCR wells were compared to the maximum boron concentration historically observed in the Unit 22 wells (see Table 3). The boron concentration reported for Ash Pond CCR well MW-3 for the detection monitoring event was well below the maximum boron concentration historically reported in the Unit 22 wells, indicating that the SSI reported for boron in this well is due to natural variations in groundwater quality. However, the boron concentrations reported for Ash Pond CCR wells AP-31, AP-33, AP-34, AP-35, and PZ-5 from the detection monitoring event exceeded the maximum boron concentration historically reported in the Unit 22 wells. As a result, these data do not support the conclusion that the SSIs reported for boron in wells AP-31, AP-33, AP-34, AP-35, and PZ-5 are due to natural variations in groundwater quality.

It should also be noted that the detection monitoring pH results for most of the Ash Pond CCR wells were not within the maximum range of pH levels historically observed in the Unit 22 wells (see Table 3). However, since SSIs for pH were not identified for the Ash Pond CCR wells, no further evaluation of these data was necessary.

4.3 Ash Pile

SSIs were identified for calcium, chloride, sulfate, TDS and pH in wells downgradient of the Ash Pile (see Appendix B). The statistically derived prediction limits used to identify the reported increases were based on eight background samples collected from one upgradient monitoring wells (SP-24) over a period of only approximately 15 months.

Using an approach similar to that described above, the detection monitoring calcium, chloride, sulfate, TDS and pH results for the Ash Pile CCR wells were compared to the maximum concentrations of these constituents historically observed in the Unit 22 wells (see Table 3). The calcium, chloride, and TDS levels reported for all Ash Pile CCR wells during the detection monitoring event were well below the maximum concentrations historically reported in the Unit 22 sampling events. These data indicate that the SSIs reported for calcium, chloride, and TDS in the Ash Pile CCR wells are due to natural variations in groundwater quality and not caused by a release from the Ash Pile.

The sulfate concentrations reported for Ash Pile CCR wells SP-1 and SP-32 and the pH levels in wells SP-1, SP-3 and SP-32 from the detection monitoring event exceeded the maximum concentrations historically reported for these constituents in the Unit 22 wells. As a result, these data do not support the conclusion that the SSIs reported for sulfate and pH in these wells are due to natural variations in groundwater quality. However, it should be noted that Ash Pile CCR wells SP-1, SP-3 and SP-32 are located near the large lignite storage pile at the Facility, between the lignite pile and the Ash Pile (see Figure 2). Lignite has been stored in this area for approximately 40 years and has been exposed to precipitation throughout that period. Studies have been performed on similar long-term coal/lignite storage piles to assess the effects of the piles on underlying groundwater quality (EPRI, 2000; Denham, 1995). These studies reported the following sulfate and pH levels in groundwater underlying the piles:

Reference	Sulfate Concentration (mg/L)	pH (s.u.)
EPRI, 2000	14,000 – 31,000	Not Reported
Denham, 1995	22,755	2.0

These groundwater results are consistent with the geochemical reactions that occur when coal/lignite is exposed to precipitation and oxygen for extended periods of time. Lignite contains pyrite (FeS_2) which becomes oxidized when exposed to the atmosphere. Oxidation of the pyrite releases iron and sulfate and causes precipitation that comes in contact with the pile to become acidic. As the precipitation infiltrates

May 14, 2018

through the lignite pile and into the underlying groundwater, the pH of the groundwater is lowered and the sulfate concentrations increase.

The proximity of Ash Pile CCR wells SP-1, SP-3 and SP-32 to the lignite storage pile suggest that the lignite pile is the source of elevated sulfate concentrations and low pH levels in these wells. The SSIs reported for sulfate and pH in the Ash Pile CCR wells during the detection monitoring event were due to infiltration through the nearby lignite storage pile and not caused by a release from the Ash Pile.

5.0 CONCLUSIONS

SMECI operates three CCR Units at the Facility (Ash Pond, Equalization Pond, and Ash Pile) that are subject to the CCR Rule. SMECI performed the initial detection monitoring event required under Section 257.94 of the CCR Rule for the three CCR Units in 2017 and completed a statistical evaluation of the detection monitoring data in January 2018. The statistical evaluation identified statistically significant increases (SSIs) above background levels for several detection monitoring constituents at each CCR Unit.

An Alternate Source Demonstration was performed in accordance with Section 257.94(e)(2) of the CCR Rule to demonstrate that a source other than the CCR Units caused the SSIs observed for these constituents. The results of the Alternate Source Demonstration were as follows:

- Equalization Pond:
 - SSIs were reported for the following constituents in wells downgradient of the Equalization Pond:
 - Boron: MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, and EP-37
 - Calcium: EP-33
 - Chloride: MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, and EP-38
 - Sulfate: EP-32
 - TDS: EP-32, EP-33, EP-34, EP-35, EP-36, and EP-37
 - pH: MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, and EP-38
 - SSIs reported for calcium, chloride, sulfate, TDS and pH in all Equalization Pond CCR wells were due to natural variations in groundwater quality and not caused by a release from the Equalization Pond. A source other than the Equalization Pond caused the statistically significant increase over background levels for these constituents.
 - SSIs reported for boron in Equalization Pond CCR wells MW-4 and EP-37 were due to natural variations in groundwater quality. A source other than the Equalization Pond caused the statistically significant increase over background levels for boron at wells MW-4 and EP-37.
 - SSIs reported for boron in Equalization Pond CCR wells EP-32 through EP-36 do not appear to be associated with natural variations in groundwater quality.
- Ash Pond:
 - SSIs were reported for boron in Ash Pond Wells AP-31, AP-33, AP-34, AP-35, MW-3 and

PZ-5.

- The SSI reported for boron in Ash Pond CCR well MW-3 is due to natural variations in groundwater quality and not caused by a release from the Ash Pond. A source other than the Ash Pond caused the statistically significant increase over background levels for boron at well MW-3.
- SSIs reported for boron in Ash Pond CCR wells AP-31, AP-33, AP-34, AP-35, and PZ-5 do not appear to be associated with natural variations in groundwater quality.
- Ash Pile:
 - SSIs were reported for the following constituents in wells downgradient of the Ash Pile:
 - Calcium: SP-2
 - Chloride: SP-1, SP-2 and SP-3
 - Sulfate: SP-1 and SP-32
 - TDS: SP-1, SP-2 SP-3 and SP-32
 - pH: SP-3 and SP-32
 - SSIs reported for calcium, chloride, and TDS in the Ash Pile CCR wells are due to natural variations in groundwater quality and not caused by a release from the Ash Pile.
 - Ash Pile CCR wells SP-1, SP-3 and SP-32 are located near the large lignite storage pile at the Facility, between the lignite pile and the Ash Pile. Lignite has been stored in this area for approximately 40 years and has been exposed to the atmosphere throughout that period. Lignite contains pyrite (FeS_2) and oxidation of the pyrite releases iron and sulfate and causes precipitation that comes in contact with the pile to become acidic. As the precipitation infiltrates through the lignite pile and into the underlying groundwater, the pH of the groundwater is lowered and the sulfate concentrations increase. The proximity of Ash Pile CCR wells SP-1, SP-3 and SP-32 suggest that the SSIs reported for sulfate and pH in the Ash Pile CCR wells were due to infiltration through the nearby lignite storage pile and not caused by a release from the Ash Pile.
 - A source other than the Ash Pile caused the statistically significant increase over background levels for all constituents noted above.

6.0 REFERENCES

- AECOM, 2018. CCR Annual Groundwater Monitoring Report (§257.90) for the Equalization Pond, Ash Pond, and Ash Pile at the San Miguel Plant, January 31.
- Denham, M. E. and Nichols, R. L., 1995. The Speciation of Groundwater Contaminated with Coal Pile Leachate at the Savannah River Site.
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- ERM, 2017. CCR Unit Groundwater Monitoring System Certification - San Miguel Electric Cooperative, Inc., Atascosa County, Texas, October 17.
- Morrison Knudsen (MK) Corp., 1997. SMLM IV Permit Application - Section 127, prepared for San Miguel Lignite Cooperative, Inc., September.
- Denham, M. E. and Nichols, R. L., 1995. The Speciation of Groundwater Contaminated with Coal Pile Leachate at the Savannah River Site.
- Zephyr, 2018. Detection Groundwater Monitoring Statistical Comparisons - Coal Combustion Residual Units, San Miguel Electric Cooperative, Inc., January 18.
- Zephyr, 2017. Groundwater Statistical Method for CCR Detection Monitoring - San Miguel Electric Cooperative, Inc., Atascosa County, Texas, November 28.

Tables

Table 1

**San Miguel Electric Cooperative, Inc Power Plant
CCR Groundwater Detection Monitoring Data**

Sample Location	Sample Date	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	pH (s.u.)
Ash Pile								
SP-1	8/22/2017	7.65J	529	3,310	3.58	7,680	15,700	3.16
SP-2	8/22/2017	8.77J	1,190	4,770	<0.5	1,700	11,700	5.56
SP-3	8/22/2017	6.26J	762	4,150	<0.5	2,660	11,000	4.27
SP-32	8/22/2017	7.57J	429	1,640	<0.5	10,100	16,500	3.35
Ash Pond								
AP-31	8/23/2017	41.4	530	1,680	<0.2	3,260	7,800	3.72
AP-32	8/23/2017	14.8	656	2,960	<0.5	3,320	9,780	3.48
AP-33	8/23/2017	64.9	800	4,310	1.12J	3,170	12,500	3.28
AP-34	8/24/2017	26.7	630	2,730	0.88J	3,480	9,660	3.56
AP-35	8/24/2017	41.4	609	2,100	<0.2	2,610	7,600	3.78
AP-36	8/24/2017	2.32	647	2,020	<0.2	2,530	7,010	4.15
MW-3	8/23/2017	15.2	521	1,870	<0.2	4,100	9,120	3.59
PZ-5	8/23/2017	43.3	685	2,970	<0.2	2,910	9,080	3.42
PZ-6	8/24/2017	2.93	582	1,550	<0.2	3,160	6,780	5.87
Equalization Pond								
MW-4	8/24/2017	9.15	297	1,810	<0.2	2,310	6,460	6.22
EP-32	8/22/2017	30.6J	447	2,200	<0.5	4,120	9,800	6.42
EP-33	8/23/2017	70.2	605	3,020	<0.5	3,100	9,860	6.47
EP-34	8/23/2017	53.5	489	3,700	<0.5	3,210	11,300	6.46
EP-35	8/23/2017	32.8	271	3,310	<0.5	2,890	9,660	6.27
EP-36	8/23/2017	22.4	420	3,660	<0.5	2,520	10,000	6.09
EP-37	8/23/2017	6.7	488	4,070	<0.5	2,810	11,300	6.23
EP-38	8/24/2017	2.32	287	1,130	<0.2	1,970	4,820	5.82

Notes:

1. Abbreviations: mg/L - milligrams per liter; TDS - total dissolved solids; s.u. - standard units.
2. J - concentration is below method quantitation limit; result is an estimate.

Table 2

**San Miguel Electric Cooperative, Inc Power Plant
Range of Concentrations - Unit 22 Groundwater Monitoring Data**

Unit 22 Monitoring Well	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
MWA1							
Minimum	0.06	89	100	ND	110	655	4.33
Maximum	21.19	1,502	9,597	1.30	6,380	20,664	7.50
Average	4.71	711	4,876	0.51	2,907	12,004	6.11
No. of Samples	116	86	116	82	116	117	56
MWA2							
Minimum	1.60	70	1,100	ND	8	662	5.25
Maximum	7.91	828	6,560	1.20	3,902	15,646	7.66
Average	4.01	135	4,353	0.27	340	9,259	7.17
No. of Samples	115	86	116	85	114	117	44
MWA3							
Minimum	0.51	42	540	ND	40	595	5.17
Maximum	7.72	380	7,500	1.42	3,200	9,670	7.72
Average	3.79	76	2,643	0.33	758	6,744	7.40
No. of Samples	123	85	123	86	123	124	55
MWA4							
Minimum	1.50	165	2,700	ND	ND	1,275	5.33
Maximum	9.90	513	9,470	67.00	1,620	18,600	7.43
Average	4.06	225	6,587	0.99	151	13,033	7.07
No. of Samples	122	88	121	87	117	122	56
MWA5							
Minimum	0.10	179	4,550	ND	0.8	10,202	5.18
Maximum	7.69	1,610	14,000	0.70	4,850	27,000	7.64
Average	4.80	411	8,005	0.20	327	15,602	7.26
No. of Samples	106	89	105	88	103	106	54
MWA6							
Minimum	2.15	194	5,250	ND	ND	10,476	5.18
Maximum	6.98	1,020	19,500	0.70	2,210	21,874	7.70
Average	4.76	419	8,662	0.18	313	15,856	7.33
No. of Samples	84	84	83	83	82	84	56

Notes:

1. Abbreviations: mg/L - milligrams per liter; TDS - total dissolved solids; s.u. - standard units.
2. ND: constituent not detected in sample.

Table 3

San Miguel Electric Cooperative, Inc Power Plant
CCR Groundwater Detection Monitoring Data Compared to Maximum Concentrations in Unit 22 Wells

Sample Location	Sample Date	Boron (mg/L)		Calcium (mg/l)		Chloride (mg/l)		Fluoride (mg/l)		Sulfate (mg/l)		TDS (mg/l)		pH (s.u.)	
		Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.
Ash Pile															
SP-1	8/22/2017	7.65J	21.19	529	1,610	3,310	14,000	3.58	67	7,680	6,380	15,700	27,000	3.16	4.33 - 7.72
SP-2	8/22/2017	8.77J		1,190		4,770		<0.5		1,700		11,700		5.56	
SP-3	8/22/2017	6.26J		762		4,150		<0.5		2,660		11,000		4.27	
SP-32	8/22/2017	7.57J		429		1,640		<0.5		10,100		16,500		3.35	
Ash Pond															
AP-31	8/23/2017	41.4	21.19	530	1,610	1,680	14,000	<0.2	67	3,260	6,380	7,800	27,000	3.72	4.33 - 7.72
AP-32	8/23/2017	14.8		656		2,960		<0.5		3,320		9,780		3.48	
AP-33	8/23/2017	64.9		800		4,310		1.12J		3,170		12,500		3.28	
AP-34	8/24/2017	26.7		630		2,730		0.88J		3,480		9,660		3.56	
AP-35	8/24/2017	41.4		609		2,100		<0.2		2,610		7,600		3.78	
AP-36	8/24/2017	2.32		647		2,020		<0.2		2,530		7,010		4.15	
MW-3	8/23/2017	15.2		521		1,870		<0.2		4,100		9,120		3.59	
PZ-5	8/23/2017	43.3		685		2,970		<0.2		2,910		9,080		3.42	
PZ-6	8/24/2017	2.93		582		1,550		<0.2		3,160		6,780		5.87	
Equalization Pond															
MW-4	8/24/2017	9.15	21.19	297	1,610	1,810	14,000	<0.2	67	2,310	6,380	6,460	27,000	6.22	4.33 - 7.72
EP-32	8/22/2017	30.6J		447		2,200		<0.5		4,120		9,800		6.42	
EP-33	8/23/2017	70.2		605		3,020		<0.5		3,100		9,860		6.47	
EP-34	8/23/2017	53.5		489		3,700		<0.5		3,210		11,300		6.46	
EP-35	8/23/2017	32.8		271		3,310		<0.5		2,890		9,660		6.27	
EP-36	8/23/2017	22.4		420		3,660		<0.5		2,520		10,000		6.09	
EP-37	8/23/2017	6.7		488		4,070		<0.5		2,810		11,300		6.23	
EP-38	8/24/2017	2.32		287		1,130		<0.2		1,970		4,820		5.82	

Notes:

1. Abbreviations: mg/L - milligrams per liter; TDS - total dissolved solids; s.u. - standard units
2. J - concentration is below method quantitation limit; result is an estimate
3. Highlighted sample results exceed the maximum concentrations detected in Unit 22 monitoring well samples

Table 4

San Miguel Electric Cooperative, Inc Power Plant
March 2018 CCR Groundwater Detection Monitoring Data Compared to Maximum Concentrations in Unit 22 Wells

Sample Location	Sample Date	Boron (mg/L)		Calcium (mg/l)		Chloride (mg/l)		Fluoride (mg/l)		Sulfate (mg/l)		TDS (mg/l)		pH (s.u.)	
		Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.	Sample Result	Max. Unit 22 Conc.
Ash Pile															
SP-1	8/22/2017	3.88	21.19	280	1,610	3,020	14,000	11.9	67	6,280	6,380	13,900	27,000	3.19	4.33 - 7.72
SP-2	8/22/2017	9.13		1,200		4,430		<10.0		1,660		13,100		5.55	
SP-3	8/22/2017	6.75		786		3,960		<10.0		2,520		11,100		3.51	
SP-32	8/22/2017	8.54		431		1,470		11		9,720		17,600		3.35	
Ash Pond															
AP-31	8/23/2017	43.3	21.19	566	1,610	1,570	14,000	<5.0	67	3,260	6,380	7,580	27,000	3.49	4.33 - 7.72
AP-32	8/23/2017	14.0		682		2,730		<10.0		3,240		9,780		3.46	
AP-33	8/23/2017	56.1		839		4,380		<10.0		3,240		12,900		3.12	
AP-34	8/24/2017	25.0		704		2,310		<10.0		3,190		9,840		3.33	
AP-35	8/24/2017	41.1		645		2,000		<5.0		2,670		7,460		3.54	
AP-36	8/24/2017	2.28		650		1,800		<10.0		2,510		7,280		4.05	
MW-3	8/23/2017	14.3		528		1,720		<10.0		4,010		9,100		3.46	
PZ-5	8/23/2017	45.0		718		2,710		<10.0		2,880		9,760		3.32	
PZ-6	8/24/2017	2.93		578		1,340		<10.0		2,890		7,260		5.84	
Equalization Pond															
MW-4	8/24/2017	8.91	21.19	278	1,610	1,650	14,000	<5.0	67	2,250	6,380	5,940	27,000	6.16	4.33 - 7.72
EP-32	8/22/2017	28.6		454		2,060		<10.0		3,770		9,720		6.61	
EP-33	8/23/2017	85.8		577		2,720		<10.0		2,760		9,800		6.46	
EP-34	8/23/2017	50.8		483		3,430		<10.0		3,160		11,500		6.82	
EP-35	8/23/2017	32.3		273		3,040		<10.0		2,610		10,200		6.45	
EP-36	8/23/2017	21.5		456		3,500		<10.0		2,510		10,200		6.23	
EP-37	8/23/2017	7.59		531		4,040		<10.0		2,840		11,200		6.36	
EP-38	8/24/2017	2.42		239		1,030		<5.0		1,910		4,780		5.78	

Notes:

1. Abbreviations: mg/L - milligrams per liter; TDS - total dissolved solids; s.u. - standard units
2. J - concentration is below method quantitation limit; result is an estimate
3. Highlighted sample results exceed the maximum concentrations detected in Unit 22 monitoring well samples

Figures



EXPLANATION

- Approx. Plant Boundary
- ▭ CCR Impoundment/Unit
- ▭ Non-CCR Impoundment
- Background Monitoring Well
- ⊕ Groundwater Elevation Observation Well
- ⊕ Point of Compliance Monitoring Well



Scale in Feet
0 250 500

SOURCE:
Imagery from www.tnris.org, Atascosa Co., 2015 photography.
Monitoring well locations from Figure 1 - CCR Unit Groundwater Monitoring System, ERM, 10/16/2017.

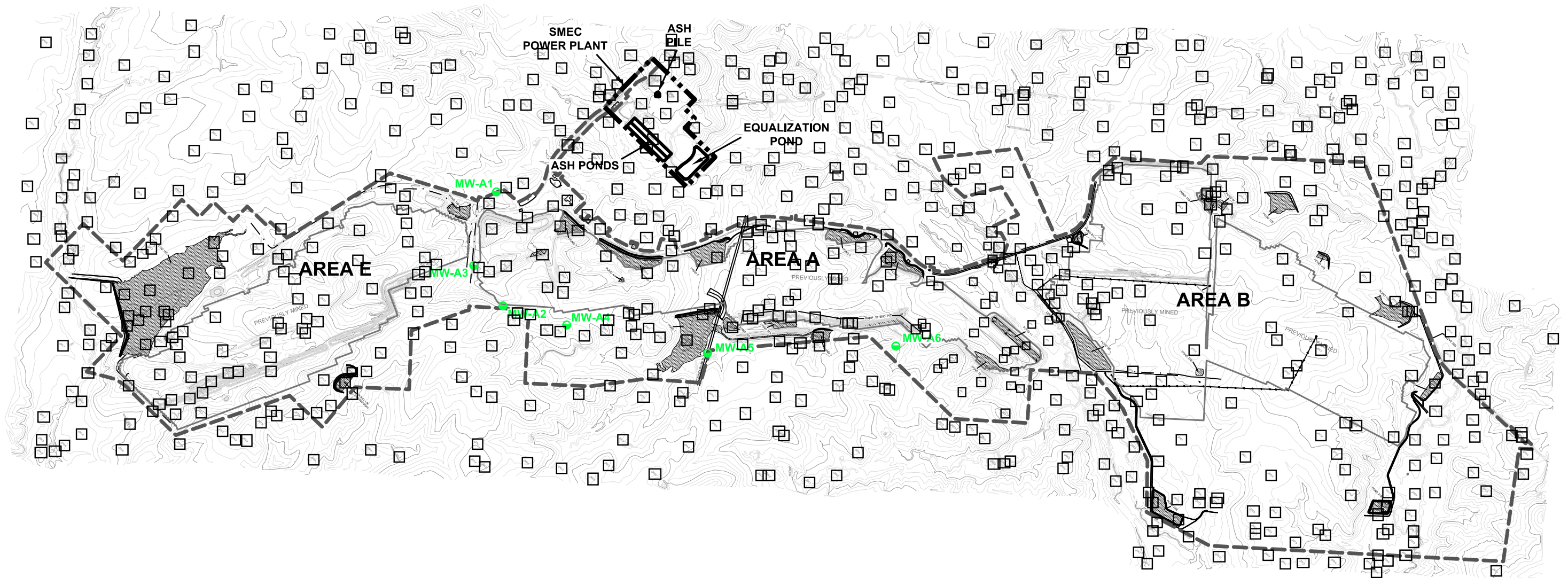
SAN MIGUEL ELECTRIC COOPERATIVE
ATASCOSA COUNTY, TEXAS

Figure 1

SITE PLAN

PROJECT: 5407	BY: AJD	REVISIONS
DATE: MAR., 2018	CHECKED: ECM	

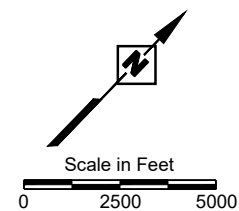
PASTOR, BEHLING & WHEELER, LLC
CONSULTING ENGINEERS AND SCIENTISTS



SOURCE:
 Vertical Datum: National Geodetic Vertical Datum dated 1929, topographic contours
 5 Ft intervals, based on 1997 topography.
 Horizontal Datum: Texas State Plane NAD27, South Central Zone, in feet.

EXPLANATION

- Mine Permit Boundary
- Background Unit 22 Well



SAN MIGUEL ELECTRIC COOPERATIVE
 ATASCOSA COUNTY, TEXAS

Figure 2

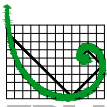
BACKGROUND UNIT 22
MONITORING WELLS IN VICINITY
OF POWER PLANT

PROJECT: 5407	BY: AJD	REVISIONS
DATE: MAR., 2018	CHECKED: ECM	

PASTOR, BEHLING & WHEELER, LLC
 CONSULTING ENGINEERS AND SCIENTISTS

Appendix A


CCR Well Soil Boring and Well Construction Logs



ERM Environmental Resources Management

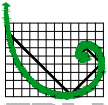
**MW-1
DRILLING LOG**

Proj. No. 0309575 Boring/Well ID MW-1 Date Drilled 7-30-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 50.0' Boring Diam. 8"
 N. Coord. 13440389.33' E. Coord. 2138976.52' Surface Elevation 285.22' Ft MSL Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 289.16' Stickup 3.94'
 Depth to Water: 1. Ft. btoc 8.72 (8/5/15) 2.Ft. btoc 8.94 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

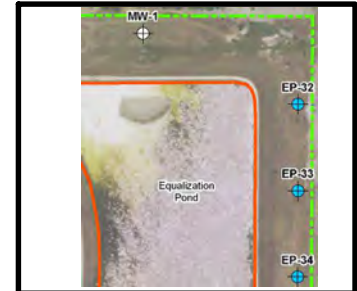
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
285.66 285	0				0-50	0-5	NO RECOVERY: No recovery due to hydrovac from 0-5 ft.
280	5					5-14	SILTY CLAY: Gley 1/3/5GY, very dark greenish gray, damp, semi-plastic, sticky, PP = 1.0 TSF. At 6.3 ft. 7.5YR/3/4, dark brown, laminae present, non-plastic, crumbly, occasional lenticular pockets of fine grained sand. At 10 ft. Alternating 7.5YR/3/3, dark brown and 10YR/5/2, grayish brown; dry to damp.
275	10					14-20	SILTY CLAY: 10YR/4/4, dark yellowish brown, dry to damp, crumbly, non-plastic, PP = 0-0.5 TSF, gradational contact with unit below, thin calcareous lenses throughout.
270	15					20-24	CLAY: 2.5Y/5/3, light olive brown, damp, semi-plastic, sticky. At 23 ft. 2.5Y/5/3, light olive brown mottled with Gley 1/4/10GY, dark greenish gray.
265	20					24-25	NO RECOVERY: No recovery.
260	25					25-30	SILTY SAND: Gley 1/3/5GY, very dark greenish gray, dry to damp, very fine grained, moderately sorted, angular to rounded, uncemented to weakly cemented, small lenticular black fragments occasionally, no bedding present, silt content decreases with depth.
260	30						



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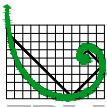
**MW-1
DRILLING LOG**

Proj. No. 0309575 Boring/Well ID MW-1 Date Drilled 7-30-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 50.0' Boring Diam. 8"
 N. Coord. 13440389.33' E. Coord. 2138976.52' Surface Elevation 285.22' Ft MSL Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 289.16' Stickup 3.94'
 Depth to Water: 1. Ft. btoc 8.72 (8/5/15) 2.Ft. btoc 8.94 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
255	30	[Stippled pattern]	[Vertical lines]	[Vertical lines]	30-40	30-40	SAND: 5Y/4/2, olive gray, damp to moist, very fine grained, well sorted, rounded, uncemented, thinly bedded from 31.7-31.9 ft.
250	35	[Stippled pattern]	[Vertical lines]	[Vertical lines]			
245	40	[Stippled pattern]	[Vertical lines]	[Vertical lines]	40-50	40-50	SAND: Gley 1/3/10GY, very dark greenish gray, damp, same as above.
240	45	[Stippled pattern]	[Vertical lines]	[Vertical lines]			
235	50	[Stippled pattern]	[Vertical lines]	[Vertical lines]			T.D. = 50.0'
230	55	[Stippled pattern]	[Vertical lines]	[Vertical lines]			
60	60	[Stippled pattern]	[Vertical lines]	[Vertical lines]			



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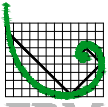
**MW-2
DRILLING LOG**

Proj. No. 0309575 Boring/Well ID MW-2 Date Drilled 7-28-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 62.0' Boring Diam. 8"
 N. Coord. 13439223.51' E. Coord. 2137596.56' Surface Elevation 314.73" Ft MSL Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 42.00' Sump Length 0'
 Top of Casing Elevation 317.68' Stickup 2.95'
 Depth to Water: 1. Ft. btoc 30.88 (8/5/15) 2.Ft. btoc 32.01 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
315.19	0				0-62	0-5	NO RECOVERY: No recovery due to hydrovac from 0-5 ft.
310	5					5-8.25	CLAYEY SAND: 5YR/4/1, dark gray, damp; sand is fine grained, angular; clay is semi-plastic, PP = 0 TSF.
305	10					8.25-10.1	SILTY SAND: 10YR/7/3, very pale brown, damp, PP = 1.25 TSF. At 8.3 ft. Poorly sorted, angular, weakly cemented.
						10.1-10.5	At 10 ft. fine to medium grained, poorly sorted, angular, uncemented to weakly cemented, friable, possible calcite seams.
						10.5-15	CLAYEY SAND: 10YR/7/4, very pale brown, damp, sticky, fine grained, semi-plastic.
300	15					15-18	SILTY SAND: 10YR/7/4, very pale brown, damp.
						18-18.5	SILTY SAND: 10YR/7/1, light gray with bands of 10YR/5/6, yellowish brown; dry to damp, fine to medium grained, moderately sorted, angular, uncemented to weakly cemented, black seams occasionally.
						18.5-20	At 16.6-16.8 ft. moist.
295	20					20-32	CLAY: 10YR/7/1, light gray with bands of 10YR/5/6, yellowish brown; dry to damp, thinly laminated.
							SILTY SAND: 10YR/7/1, light gray with bands of 10YR/5/6, yellowish brown; dry to damp.
							SILTY CLAY: 7.5YR/5/2, brown, dry, hard, non-plastic, thinly laminated, breaks along laminae, has yellow seams.
290	25						At 27.2 ft. 2.5YR/3/3, dark reddish brown.
							At 27.4 ft. 7.5YR/5/2, brown.
285	30					32-33.1	SILTY SAND: 7.5Yr/5/4, brown, moist, very fine grained, subangular to rounded, uncemented.
						33.1-40	SILTY CLAY: 7.5YR/5/2, brown, dry, semi- to non-plastic, thinly laminated, thin (0.01 ft) calcareous seams approx. every 0.4 ft. from 31-55 ft., sticky from 35-36.7 ft.



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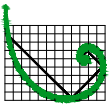
**MW-2
DRILLING LOG**

Proj. No. 0309575 Boring/Well ID MW-2 Date Drilled 7-28-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 62.0' Boring Diam. 8"
 N. Coord. 13439223.51' E. Coord. 2137596.56' Surface Elevation 314.73" Ft MSL Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 42.00' Sump Length 0'
 Top of Casing Elevation 317.68' Stickup 2.95'
 Depth to Water: 1. Ft. btoc 30.88 (8/5/15) 2.Ft. btoc 32.01 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204; ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
280	35	[Hatched pattern]	[Solid black]	[Solid black]			At 35 ft. 2.5Y/5/3, light olive brown, dry to damp.
275	40	[Dotted pattern]	[Dotted pattern]	[Dotted pattern]	40-42	40-42	CLAYEY SAND: 5Y/4/1, dark gray mottled with 5Y/6/2, light olive gray, dry, fine grained, well sorted, hard, subrounded to subangular, weakly cemented.
270	45	[Dotted pattern]	[Dotted pattern]	[Dotted pattern]	42-60	42-60	SILTY SAND: 5Y/3/1, very dark gray, dry, very fine to fine grained, angular to rounded, well sorted, uncemented to weakly cemented, thinly bedded, friable, no bedding from 45-47 ft. At 45 ft. Gley 1/4/10Y, dark greenish gray, damp. At 47 ft. moist.
265	50	[Dotted pattern]	[Dotted pattern]	[Dotted pattern]			At 50 ft. Gley 1/4/10Y, dark greenish gray, very fine to fine grained, angular to rounded, well sorted, uncemented to weakly cemented, thinly bedded, friable. At 51 ft. damp.
260	55	[Dotted pattern]	[Dotted pattern]	[Dotted pattern]			
255	60	[Dotted pattern]	[Dotted pattern]	[Dotted pattern]	60-62	60-62	SILTY SAND: Gley 1/4/10Y, dark greenish gray, damp, same as above.
250	65	[Dotted pattern]	[Dotted pattern]	[Dotted pattern]			T.D. = 62.0'
70		[Dotted pattern]	[Dotted pattern]	[Dotted pattern]			



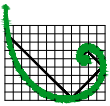
MW-3
DRILLING LOG

Proj. No. 0309575 Boring/Well ID MW-3 Date Drilled 7-30-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 40.0' Boring Diam. 8"
 N. Coord. 13438476.28' E. Coord. 2135977.76' Surface Elevation 293.74' Ft MSL Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 20.00' Sump Length 0'
 Top of Casing Elevation 295.90' Stickup 2.16'
 Depth to Water: 1. Ft. btoc 12.01 (8/5/15) 2.Ft. btoc 12.53 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
294.01	0				0-40	0-5	NO RECOVERY: No recovery due to hydrovac from 0-5 ft.
290	5					5-7	CLAY: 10YR/6/3, pale brown, dry to damp, semi- to non-plastic, crumbly.
285	10					7-10	At 6.8 ft. thin lenticular calcareous lenses. NO RECOVERY: No recovery.
280	15					10-15	SILTY SAND: 10YR/5/3, brown mottled with Gley 1/7/N, light gray, damp, very fine grained, well sorted, uncemented.
275	20					15-30	SILTY SAND: 5Y/5/3, olive, moist, very fine grained, uncemented, subangular to rounded.
270	25						At 20 ft. damp, moderately to well sorted, thinly bedded. At 22 ft. 5Y/5/4, olive, wet to saturated.
265	30						At 25 ft. 5Y/5/3, olive, wet. At 25.8 ft. damp.



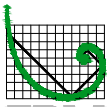
MW-3
DRILLING LOG

Proj. No. 0309575 Boring/Well ID MW-3 Date Drilled 7-30-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 40.0' Boring Diam. 8"
 N. Coord. 13438476.28' E. Coord. 2135977.76' Surface Elevation 293.74' Ft MSL Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 20.00' Sump Length 0'
 Top of Casing Elevation 295.90' Stickup 2.16'
 Depth to Water: 1. Ft. btoc 12.01 (8/5/15) 2.Ft. btoc 12.53 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
30						30-35	SILTY SAND: 5Y5/3, olive, damp, very fine grained, uncemented, moderately to well sorted, thinly bedded. At 33.2 ft. Gley 1/3/5GY, very dark greenish gray.
260						35-35.4	SILTY SAND: Gley 1/3/5GY, very dark greenish gray, damp, very fine grained, uncemented, moderately to well sorted, thinly bedded.
						35.4-35.8	CLAY: Gley 1/3/5GY, very dark greenish gray, dry, non-plastic, PP = 1.5
						35.8-37.6	TSF, crumbly.
						37.6-40	SILTY SAND: Gley 1/3/5GY, very dark greenish gray, damp, same as above. CLAY: Gley 1/3/5GY, very dark greenish gray, dry, same as above. T.D. = 40.0'
255							
40							
250							
45							
245							
50							
240							
55							
235							
60							



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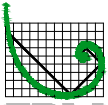
**MW-4
DRILLING LOG**

Proj. No. 0309575 Boring/Well ID MW-4 Date Drilled 7-31-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 45.0' Boring Diam. 8"
 N. Coord. 13438491.17' E. Coord. 2139120.57' Surface Elevation 275.83' Feet Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 25.00' Sump Length 0'
 Top of Casing Elevation 278.58' Stickup 2.75'
 Depth to Water: 1. Ft. btoc 2.29 (8/5/15) 2.Ft. btoc 2.83 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
276.43	0				0-45	0-5	NO RECOVERY: No recovery due to hydrovac from 0-5 ft.
275	5					5-8.6	SILTY CLAY: 10YR/5/1, gray, damp to moist, semi-plastic, sticky, PP = 0-1.0 TSF.
270	10					8.6-10	NO RECOVERY: No recovery.
265	15					10-13.25	CLAYEY SAND: 10YR/5/1, gray, damp, very fine grained, well sorted, subrounded, uncemented, sticky.
260	20					13.25-15.25	SILTY SAND: 10YR/5/1, gray mottled with 2.5Y/6/3, light yellowish brown, dry to damp, very fine grained, moderately sorted, uncemented, no bedding, calcareous lenses throughout.
255	25					15.25-19.25	CLAY: 2.5Y/6/3, light yellowish brown, damp, semi- to non-plastic, PP = 1.0-2.0 TSF, has lenticular calcareous pockets throughout, no laminae, has orange discoloration seams.
250	30					19.25-45	SILTY SAND: 10YR/5/1, gray mottled with 2.5Y/6/3, light yellowish brown, damp, same as above. At 22 ft. Gley 1/3/10Y, very dark greenish gray. At 23 ft. lenticular "clay-type" fragments. At 24 ft. black "clay-type" seam. At 25 ft. Gley 1/4/N, dark gray, wet to saturated, very fine grained, well sorted, subrounded, uncemented. At 28.4 ft. moist.



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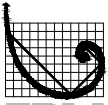
**MW-4
DRILLING LOG**

Proj. No. 0309575 Boring/Well ID MW-4 Date Drilled 7-31-15
 Project Phase I - SMECI Well Installation Owner San Miguel Electric Coop.
 Location Atascosa County, Tx Boring T.D. 45.0' Boring Diam. 8"
 N. Coord. 13438491.17' E. Coord. 2139120.57' Surface Elevation 275.83' Feet Datum
 Screen: Type Sch 40 PVC Diam. 2.00" Length 20.00' Slot Size 0.10"
 Casing: Type Sch 40 PVC Diam. 2.00" Length 25.00' Sump Length 0'
 Top of Casing Elevation 278.58' Stickup 2.75'
 Depth to Water: 1. Ft. btoc 2.29 (8/5/15) 2.Ft. btoc 2.83 (9/3/15)
 Drilling Company Tolunay-Wong Engineers Driller Keith Barge
 Drilling Method Hollow Stem Auger Log By Mike Kristoff



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Sample Type	Sample Interval (Feet)	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
245	30	[Patterned]	[Patterned]	[Patterned]			At 30.2 ft. wet to saturated.
240	35	[Patterned]	[Patterned]	[Patterned]			At 34.2 ft. Gley 1/4/10GY, dark greenish gray, moist, becomes thinly bedded.
235	40	[Patterned]	[Patterned]	[Patterned]			At 40 ft. moist.
230	45	[Patterned]	[Patterned]	[Patterned]			At 42 ft. dry to damp.
225	50	[Patterned]	[Patterned]	[Patterned]			T.D. = 45.0'
220	55	[Patterned]	[Patterned]	[Patterned]			
215	60	[Patterned]	[Patterned]	[Patterned]			



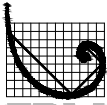
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**PZ-2
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-2 Date Drilled 2015-11-14
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 76.50' Boring Diam. 6.00"
 N. Coord. 13439326.33' E. Coord. 2137285.33' Surface Elevation 315.86' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 2.00'
 Top of Casing Elevation 318.92' Stickup 3.06'
 Depth to Water: 1. Ft. btoc 31.16 (2015-11-21) 2.Ft. btoc 31.47 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Jesse Houghton

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
315.80	0					0-2	CLAYEY SILT: Brown (10 YR 5/3) with some yellow (10 YR 8/6) and strong brown (2.5 YR 5/8) coloration; damp; soft; friable.
315				>4.5		2-4	At 1.75' bgs: Color change to very dark brown (10 YR 2/2); dry; some calcareous nodules present. CLAY: Very dark brown (10 YR 2/2); dry; hard; low plasticity; some silt content and calcareous nodules present.
	5			1.75		4-5	At 2.5' bgs: Color change to dark greenish brown (10 YR 4/2) with very dark brown (10 YR 2/2) mottling; damp; friable.
310				0.5		5-8.75	At 3' bgs: Color change to pale brown (10 YR 6/3); some gravel (2-5 mm) and root content present. SILT: Very pale brown (10 YR 7/4); dry; medium dense; slight clay content. At 4.5' bgs: Gravel present (up to 30 mm); Color change at 4.9' bgs to brownish yellow (10 YR 7/8) with black (10 YR 2/1) coloring.
	10			1.5		8.75-11	SILTY CLAY: Reddish black (2.5 YR 2.5/1); damp; medium stiff; firm; high plasticity; moderate toughness; clay content increases with depth; occasional thin calcareous stringers.
305				4.0		11-15.75	CLAYEY SANDY SILT: Pale brown (10 YR 6/3); soft; damp; medium plasticity; low toughness; occasional sub-angular chalky pebbles and iron oxide staining.
	15			4.0		15.75-20.5	CLAYEY SILT: Dark greyish brown (10 YR 4/2); soft; moist; medium to high plasticity; low toughness; occasional iron oxide staining; trace small calcareous concretions; possible gypsum or anhydrite (<5mm) present.
300				4.0			CLAY: Reddish brown (5 YR 4/4) and yellowish red (5 YR 4/6); damp; stiff to hard; high plasticity; moderate toughness; some silt content; abundant iron oxide staining; some small, white calcareous concretions; gypsum or anhydrite (<2 mm); planar fractures.
	20						



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**PZ-2
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-2 Date Drilled 2015-11-14
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 76.50' Boring Diam. 6.00"
 N. Coord. 13439326.33' E. Coord. 2137285.33' Surface Elevation 315.86' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 2.00'
 Top of Casing Elevation 318.92' Stickup 3.06'
 Depth to Water: 1. Ft. btoc 31.16 (2015-11-21) 2.Ft. btoc 31.47 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Jesse Houghton

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
295	20			2.75 1.0 2.75		20.5-23.3	CLAY: Dark red (2.5 YR 3/6); damp; very stiff; medium to high plasticity; medium to high toughness; some silt and trace very fine sand content; abundant iron staining; occasional yellow (2.5 Y 7/8) chalky parting planes.
290	25			3.0		23.3-26.3	At 22.8' bgs: Color change to dark reddish brown (2.5 YR 2.5/4); damp; medium stiff; very high plasticity. SILTY SANDY CLAY: Reddish brown (5 YR 4/4); stiff; damp; medium plasticity; medium to high toughness; abundant iron staining; occasional yellow parting planar fractures.
285	30			2.5 3.0		26.3-33	SANDY SILTY CLAY: Very dark greyish brown (10 YR 3/2) to yellowish red (5 YR 4/6); dry; soft; low to medium plasticity; moderate toughness; pulverized/blocky texture (possibly due to drilling technique); abundant iron oxide staining. At 27' bgs: Very fine sand increases with depth to 28' bgs; trace small gypsum crystals. At 28.5' bgs: Higher degree of consolidation with slight laminations.
280	35			3.5 >4.5	PZ-2_36-37.5 USCS: Fat Clay (CH) AL: 102 / 37 / 65 - #200: 99.1 k: 2.92x10 ⁻⁸	33-37.5	At 32' bgs: Reddish brown (5 YR 3/4), stiff clay lens with white calcareous concretions at top of interval. Reddish brown (5 YR 5/4), very stiff silty clay lens with white gypsum filled fissures at bottom of interval. CLAY: Brown (7.5 YR 5/3); dry; hard; medium to high plasticity; high toughness; well consolidated; homogeneous with silty clay throughout; occasional iron oxide staining; common calcite or gypsum/anhydrite crystals forming primarily in horizontal parting planes. At 36' bgs: Cohesive sample (shelby tube) collected from 36'-37.5' bgs.
40	40			0.25		37.5-41.4	CLAY: Yellowish brown (10 YR 5/4); damp; hard; high plasticity; high toughness; silty clay throughout, trace very fine grained sand; common iron oxide staining.



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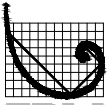
PZ-2 DRILLING LOG

Proj. No. 0322807 Boring/Well ID PZ-2 Date Drilled 2015-11-14
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 76.50' Boring Diam. 6.00"
 N. Coord. 13439326.33' E. Coord. 2137285.33' Surface Elevation 315.86' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 2.00'
 Top of Casing Elevation 318.92' Stickup 3.06'
 Depth to Water: 1. Ft. btoc 31.16 (2015-11-21) 2.Ft. btoc 31.47 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Jesse Houghton



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
275	40			0.25		41.4-43	SANDY CLAY: Very dark grey (2.5 Y 3/1); dry; hard; slight plasticity; sand content increases with depth, grades rapidly with following interval.
45	45			1.5		43-46	CLAYEY SILTY SAND: Very dark grey (2.5 Y 3/1); damp; fine grained; sub-rounded; well sorted; loose to medium dense; slight plasticity. Top of Transmissive Sand Unit.
270						46-46.6	At 45.75' bgs: Abundant black massive (possibly organic) material occurring in small broken blocks (0.25 to 1" diameter).
						46.6-58	CLAY: Dark yellowish brown (10 YR 4/6); damp; stiff to very stiff; very high plasticity; medium toughness; silty clay throughout; homogeneous. SILTY SAND: Dark greenish grey (Gley-1 3/1 to Gley-2 4/1); moist, fine to very fine grained; sub-rounded; well sorted; uncemented; loose; slight plasticity to non-plastic; homogeneous.
265	50			<0.25			At 51' bgs: Wet.
							At 52' bgs: Non-cohesive grab sample collected from 52'-54' bgs.
260	55			<0.25			
					PZ-2_52-54 USCS: Silty Sand (SM) AL: Non-plastic - #200: 12.1		
						58-61	SANDY SILTY CLAY: Dark greenish grey (Gley-1 4/1); dry to damp; low plasticity; hard; homogeneous.
60	60			>4.5			



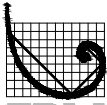
ERM Environmental Resources Management

**PZ-2
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-2 Date Drilled 2015-11-14
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 76.50' Boring Diam. 6.00"
 N. Coord. 13439326.33' E. Coord. 2137285.33' Surface Elevation 315.86' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 2.00'
 Top of Casing Elevation 318.92' Stickup 3.06'
 Depth to Water: 1. Ft. btoc 31.16 (2015-11-21) 2.Ft. btoc 31.47 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Jesse Houghton

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
255	60			>4.5	PZ-2_75-76.5 USCS: Fat Clay (CH) AL: 86 / 28 / 58 - #200: 96.1 Permeability: 1.01x10 ⁻⁸	61-65.5	CLAYEY SAND: Dark greenish grey (Gley-2 4/1) and greenish grey (Gley-2 5/1); damp to moist; very fine to fine grained; sub-rounded; poorly sorted; loose to medium dense; slight plasticity; homogeneous.
250	65					65.5-68.5	SILTY SANDY CLAY: Dark greenish grey (Gley-2 3/1); damp; hard; medium plasticity; sand content is very fine to fine grained and well sorted; clay content and plasticity increase with depth. Top of Basal Clay Unit.
245	70					68.5-76.5	SILTY CLAY: Dark greenish grey (Gley-1 3/1); very stiff to hard; high toughness; massive/structure less. At 71' bgs: Pelecypod or gastropod fossils (brecciated) to 75' bgs.
240	75						At 75' bgs: Cohesive sample (split spoon) collected from 75'-76.5' bgs.
80							T.D. = 76.50'



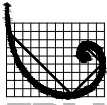
ERM Environmental Resources Management

**PZ-3
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-3 Date Drilled 2015-11-18
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 60.00' Boring Diam. 6.00"
 N. Coord. 13439296.00' E. Coord. 2135976.24' Surface Elevation 320.89' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 323.19' Stickup 2.30'
 Depth to Water: 1. Ft. btoc 30.68 (2015-11-21) 2.Ft. btoc 31.00 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
321.02	0			0.5		0-3.5	NO RECOVERY: Soil hydroexcavated.
320						3.5-5	CLAYEY SAND: Light yellowish brown (10 YR 6/4) with some strong brown (7.5 YR 5/8) coloration; moist; fine grained; sub-angular; well sorted.
	5					5-7.5	SANDY SILTY CLAY: Pale brown (10 YR 6/3); damp to moist; soft; low plasticity; trace iron oxide staining; yellowish brown (10 YR 5/4) clayey sand lens from 5 - 5.5' bgs. At 6.5' bgs: 3" Silty clay layer, dense.
315				<0.25		7.5-10	CLAYEY SAND: Very pale brown (10 YR 7/3); damp; very fine to fine grained; sub-angular; poorly sorted; loose; slight plasticity; silt content throughout; some silty clay pieces within, hard, friable; Yellow (2.5 Y 8/6) silt stringers present.
	10			0.5	PZ-3_10-12 USCS: Sandy Fat Clay (CH) AL: 67 / 21 / 46 - #200: 51.0	10-23.5	SILTY CLAY: Pale brown (10 YR 6/3); damp; soft; slight to low plasticity; some very fine grained sand content; iron oxide staining; trace gypsum crystals. Non-cohesive grab sample collected from 10'-12' bgs. At 11' bgs: Yellow silt stringers present. At 12' bgs: Decreasing silt content. At 13' bgs: Soft, moist, reddish brown (2.5 YR 5/3) layer. At 13.5' bgs: Increasing sand content. At 14' bgs: Slight iron oxide staining.
310				0.75			
	15			3.5			At 16' bgs: Dense; no iron oxide staining.
305				<0.25			At 17' bgs: Increasing sand content; friable.
				1.0-3.0			At 18' bgs: Medium dense; slight iron oxide staining and yellow silt stringers present. At 18.5' bgs: Decreasing sand content; 6" Soft, reddish brown, silty clay layer.
	20			3.0-3.25			



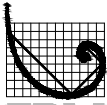
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**PZ-3
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-3 Date Drilled 2015-11-18
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 60.00' Boring Diam. 6.00"
 N. Coord. 13439296.00' E. Coord. 2135976.24' Surface Elevation 320.89' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 323.19' Stickup 2.30'
 Depth to Water: 1. Ft. btoc 30.68 (2015-11-21) 2.Ft. btoc 31.00 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
300	20	[Hatched pattern]	[Well casing]	4	PZ-3_28-30 USCS: Fat Clay with Sand (CH) AL: 79 / 23 / 56 - #200: 71.1	23.5-33	At 20' bgs: Dense; decreasing silt content; dark reddish brown (2.5 YR 3/4) mottling from 20.5' - 21' bgs. CLAY: Brown (10 YR 5/3); damp; medium stiff; low to high plasticity with depth; slight to trace silt content with depth; slight iron oxide staining and yellow silt stringers present. At 26' bgs: No iron oxide staining. At 27' bgs: Iron oxide staining; thin gypsum seams (2-3 mm) present; At 27.5' bgs: Color change to pale brown (10 YR 6/3); high plasticity. At 28' bgs: Medium dense; medium plasticity; slight very fine grained sand content (increases with depth); abundant gypsum seams to 29' bgs: Non-cohesive grab sample collected from 28'-30' bgs.
295	25	[Hatched pattern]	[Well casing]	2.5		31.5'	31.5' bgs: Color change to brown (10 YR 5/3); dense; trace iron oxide staining and gypsum.
290	295	[Hatched pattern]	[Well casing]	2.75		33-36.5	CLAYEY SILTY SAND: Brown (10 YR 5/3); damp; very fine grained; sub-angular; poorly sorted (sorting increases with depth); medium dense to loose; slight plasticity; intermixed dense pieces of very fine grained sandy clay; slight gypsum seams and yellow silt stringers present. Top of Transmissive Sand Unit.
285	30	[Hatched pattern]	[Well casing]	4		36.5-45.5	At 34' bgs: Reddish brown to 35' bgs; no gypsum. At 35' bgs: Decreasing silt and clay content; color change to dark reddish brown (5 YR 3/4) at 35.75' bgs. SAND: Light olive brown (2.5 Y 5/3); moist; very fine to fine grained; sub-angular to sub-rounded; well sorted; loose; non-plastic; slight clay content (decreases with depth); iron oxide staining.
285	35	[Dotted pattern]	[Well casing]	<0.25-2.0		At 37.5' bgs: Color change to pale olive (5 Y 6/3); very moist; no iron oxide staining. At 38' bgs: Wet; slight yellow silt stringers present.	
40	40	[Dotted pattern]	[Well casing]	<0.25			



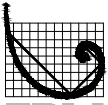
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**PZ-3
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-3 Date Drilled 2015-11-18
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 60.00' Boring Diam. 6.00"
 N. Coord. 13439296.00' E. Coord. 2135976.24' Surface Elevation 320.89' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 323.19' Stickup 2.30'
 Depth to Water: 1. Ft. btoc 30.68 (2015-11-21) 2.Ft. btoc 31.00 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
280	40			1.25	PZ-3_40-42 USCS: Silty Sand (SM) AL: Non-plastic -#200: 16.6	40-42	At 40' bgs: Non-cohesive grab sample collected from 40'-42' bgs.
	45					45-48	At 44' bgs: Iron oxide staining; no silt stringers. SILTY SAND: Pale olive (5 Y 6/7); very moist to wet; very fine grained; loose; slight plasticity; intermixed silty sand and sandy silt content; trace clay content; iron oxide staining and trace yellow silt stringers present.
275						48-55	At 47.5' bgs: Increasing clay content with depth. SAND: Pale olive (5 Y 6/7); very moist to wet; very fine to fine grained; sub-rounded; well sorted; loose to medium dense; non-plastic; slight yellow silt stringers present; 2" layer of very dark brown (7.5 YR 2.5/2) clayey silt at 48' bgs. At 48.5' bgs: Reddish brown silt lamina present to 49.5' bgs. At 51' bgs: 1" layer of reddish brown silt. At 52' bgs: Loose; some silt content (increases with depth). At 54' bgs: Increasing yellow silt stringer content.
270	50						CLAYEY SAND: Pale olive (5 Y 4/4) intermixed with reddish brown (5 YR 4/3); moist; very fine grained; medium dense; slight plasticity; some silt content; abundant yellow silt stringers; At 54.75' bgs: Increasing silt and clay content; gypsum crystals (2 mm) present.
	55					55-56	CLAYEY SILT: Olive (5 Y 5/3); damp; medium density; slight to low plasticity; some reddish brown silty clay content; abundant yellow silt stringers and grey (5 Y 7/1), very fine grained sand stringers present. CLAY: Dark reddish brown (5 YR 3/1); damp to dry; very stiff; medium plasticity; slight fine grained sand and silt content; abundant yellow silt stringers to 57.5' bgs. Top of Basal Clay Unit.
265	55					56-56.5	At 57' bgs: Olive mottling; light gray very fine grained sand to silt lamina to 57.5' bgs;
	60					56.5-58	At 58' bgs: 3" Layer of very dark greenish grey (Gley-1 5 GY 3/1) clayey sand.
						58-60	CLAY: Very dark greenish grey (Gley-1 5 GY 7/1); damp to dry; very dense; medium plasticity; some silt and slight very fine grained sand content; abundant light grey silt to very fine grained sand stringers. Non-cohesive grab sample collected from 58'-60' bgs. At 59' bgs: Gypsum seams present.
							T.D. = 60.00'
							PZ-3_58-60 USCS: Sandy Fat Clay (CH) AL: 52 / 19 / 33 -#200: 56.9



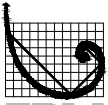
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PZ-4 DRILLING LOG

Proj. No. 0322807 Boring/Well ID PZ-4 Date Drilled 2015-11-14
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 42.00' Boring Diam. 6.00"
 N. Coord. 3438674.49' E. Coord. 2135383.07' Surface Elevation 300.63' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Sump Length 2.00'
 Top of Casing Elevation 303.21' Stickup 2.58'
 Depth to Water: 1. Ft. btoc 13.80 (2015-11-21) 2.Ft. btoc 12.50 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Jesse Houghton

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204; ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
300.73	0			0.5		0-3.5	CLAY: Brown (7.5 YR 5/2); moist; very soft; medium to high plasticity; At 1.5' bgs: Calcareous nodules present (5 - 30 mm).
300				1.75		3.5-4.5	SILTY CLAY: Light brown (7.5 YR 6/3) with black (7.5 YR 2.5/1) and strong brown (7.5 YR 5/8) mottling; moist; medium stiff; slightly plastic.
	5			0.25		4.5-7.8	At 4.5' bgs: Soft; low plasticity; silt content decreases. SILTY CLAY: Dark greyish brown (2.5 Y 4/2) with some mottling; damp; soft; high plasticity; organic material present; occasional small dark concretions and iron oxide staining.
295				0.5		7.8-8.3	CLAY: Reddish black (2.5 YR 2.5/1); damp; medium stiffness; high plasticity; some silt and very fine sand (sub-angular, poorly sorted) content; trace small chert pebbles (sub-angular); trace organic matter and iron oxide staining. Non-cohesive grab sample collected from 8'-10' bgs.
	10			1.5	PZ-4_8-10 USCS: Sandy Fat Clay (CH) AL: 52 / 22 / 30 - #200: 61.6	8.3-9	CLAY: Very dark grey (10 YR 3/1); highly mottled with iron oxide staining and very dark brown (10 YR 2/2) clay; damp; medium stiff to stiff; high plasticity; some silt content. Top of Transmissive Sand Unit.
290				1.5		9-10.3	CLAY: Very dark grey (7.5 YR 3/1); damp; medium stiff to stiff; high plasticity; 10 YR 2/2; slightly silt and minor sand (very fine grained, poorly sorted, firm) content; trace iron oxide staining.
	15			2.0		10.3-11.2	CLAYEY SAND: Light olive brown (2.5 Y 5/3); moist to wet; very fine grained; sub-angular to sub-rounded; poorly sorted; very soft; very high plasticity; some sandy clay content. Top of Transmissive Sand Unit.
285				<0.25	PZ-4_18-20 USCS: Clayey Sand (SC) AL: 27 / 19 / 8 - #200: 23.0	11.2-20	SAND: Greyish brown (2.5 Y 5/2); damp; very well sorted; sub-rounded to round; loose to medium dense; slight plasticity; minor fine content; abundant iron oxide staining to 12.7' bgs. At 16.6' bgs: Moderately cemented sandy, sub-angular cobbles with black and reddish staining; abundant iron oxide staining to 17.3' bgs. At 18' bgs: Non-cohesive grab sample collected from 18'-20' bgs.
20	20						



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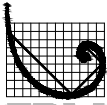
**PZ-4
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-4 Date Drilled 2015-11-14
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 42.00' Boring Diam. 6.00"
 N. Coord. 3438674.49' E. Coord. 2135383.07' Surface Elevation 300.63' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Sump Length 2.00'
 Top of Casing Elevation 303.21' Stickup 2.58'
 Depth to Water: 1. Ft. btoc 13.80 (2015-11-21) 2.Ft. btoc 12.50 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Jesse Houghton



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204; ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
280	20	[Diagonal hatching]	[Well casing]	0.75		20-30	CLAYEY SAND: Olive (5 Y 4/4) with some yellow (5 Y 7/6) mottling; moist; very fine to fine grained; sub-rounded to rounded; weakly cemented; loose to medium dense; low to slight plasticity; iron oxide staining.
275	25	[Diagonal hatching]	[Well casing]	0.5			
270	30	[Diagonal hatching]	[Well casing]	4.0		30-31.6	SANDY CLAY: Pinkish grey (7.5 YR 6/2); damp; hard; high plasticity; sand content is very fine to fine grained, poorly sorted, moderately cemented; occasional iron oxide staining.
		[Diagonal hatching]	[Well casing]	4.0		31.6-34.5	SILTY CLAY: Light yellowish brown (2.5 Y 6/4) with occasional mottling; damp; firm to hard; high plasticity; At 33' bgs: Very fine sand content to 34' bgs.
265	35	[Diagonal hatching]	[Well casing]			34.5-36	CLAY: Brown (7.5 YR 4/3) with occasional mottling; dry to damp; hard; high plasticity; sandy in some places.
		[Diagonal hatching]	[Well casing]	4.5		36-42	CLAY: Dark greenish grey (Gley-1 3/1); dry; very hard; blocky structure; slight silt and very fine sand content. Top of Basal Clay Unit.
40	40	[Diagonal hatching]	[Well casing]	>4.5			At 39' bgs: Non-cohesive grab sample collected from 39'-41' bgs.



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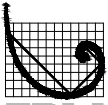
**PZ-4
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-4 Date Drilled 2015-11-14
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 42.00' Boring Diam. 6.00"
 N. Coord. 3438674.49' E. Coord. 2135383.07' Surface Elevation 300.63' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Sump Length 2.00'
 Top of Casing Elevation 303.21' Stickup 2.58'
 Depth to Water: 1. Ft. btoc 13.80 (2015-11-21) 2.Ft. btoc 12.50 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Jesse Houghton



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
260	40				PZ-4_39-41 USCS: Fat Clay (CH) AL: 96 / 31 / 65 - #200: 93.4		T.D. = 42.00'
255	45						
250	50						
245	55						
240	60						



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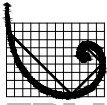
**PZ-5
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-5 Date Drilled 2015-11-16
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13438473.93' E. Coord. 2136974.86' Surface Elevation 299.29' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 2.00'
 Top of Casing Elevation 302.77' Stickup 3.47'
 Depth to Water: 1. Ft. btoc 20.00 (2015-11-21) 2.Ft. btoc 20.15 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
299.52	0			0.75		0-3	SILTY CLAY: Black (10 YR 2/1); moist; soft to medium stiff; low to medium plasticity; calcareous material.
295	5			<0.25		3-5 5-11	SAND: Pale brown (10 YR 6/3) with some strong brown (7.5 YR 5/8) coloration; damp; medium to fine grained; sub-angular to sub-rounded; poorly sorted; medium dense; non-plastic: some silt content. CLAYEY SILTY SAND: Light yellowish brown (10 YR 6/4); dry; very fine grained; sub-angular; well sorted; loose; non-plastic to slightly plastic; partially cemented sand pieces throughout; 2" layer of yellow silt (5 Y 8/6) at 5' bgs.
290	10			3.5	PZ-5_9-11 USCS: Sandy Fat Clay (CH) AL: 73 / 22 / 51 - #200: 67.2	11-13.5	SILTY CLAY: Brown (7.5 YR 5/4); damp; medium stiff; low plasticity (increases with depth); some very fine grained sand content; iron oxide staining.
285	15			2.75		13.5-22	At 8' bgs: Color changes to brown (7.5 YR 5/4); increasing clay and silt content; some iron oxide staining; some dense silty clay pieces. At 9' bgs: Non-cohesive grab sample collected from 9'-11' bgs. At 13' bgs: Color change to light brown (7.5 YR 6/3). CLAY: Brown (7.5 YR 5/4); damp; dense to very dense; low to medium plasticity; some silt content; iron oxide staining; trace gypsum seams present. At 15' bgs: Medium plasticity; increasing silt content; trace sand content. At 16' bgs: Some gypsum seams present; slight very fine grained sand content.
280	20			4.0			At 18' bgs: Damp to moist.



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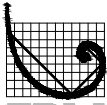
**PZ-5
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-5 Date Drilled 2015-11-16
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13438473.93' E. Coord. 2136974.86' Surface Elevation 299.29' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 2.00'
 Top of Casing Elevation 302.77' Stickup 3.47'
 Depth to Water: 1. Ft. btoc 20.00 (2015-11-21) 2.Ft. btoc 20.15 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204; ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
275	20			0.5	PZ-5_20-22 USCS: Sandy Fat Clay (CH) AL: 67 / 21 / 46 - #200: 58.2	22-25	At 20' bgs: Very dense to hard; some very fine grained sand content. Non-cohesive grab sample collected from 20'-22' bgs. CLAYEY SAND: Light yellowish brown (2.5 Y 6/3); moist; loose; slightly plastic; some silt content; iron oxide staining. Top of Transmissive Sand Unit.
270	25			2.5		25-26	At 24' bgs: Intermixed reddish brown (2.5 YR 4/3) coloration; yellow silt stringers present. SAND: Brown (7.5 YR 5/4) with reddish brown (2.5 YR 4/3); damp to moist; very fine grained; sub-angular; well sorted; medium dense; non-plastic; slight clay content.
265	30			1.25 <0.25		26-26.5 26.5-46.5	SANDY SILTY CLAY: Dark reddish brown (5 YR 3/2); moist; loose to medium stiff; low plasticity; sand content is very fine grained. SAND: Dark reddish brown (5 YR 3/2); moist; loose; non-plastic; very fine grained; sub-angular; well sorted; little silt and trace clay content. At 27' bgs: Color change to olive grey (5 Y 5/2); very moist with increasing moisture at depth; no clay content.
260	35				PZ-5_34-36 USCS: Silty Sand (SM) AL: Non-plastic - #200: 16.5		At 32' bgs: Wet; trace to slight yellow silt stringers present. At 34' bgs: Non-cohesive grab sample collected from 34'-36' bgs.
	40						At 37' bgs: Abundant iron oxide staining. At 38' bgs: Slight iron oxide staining.



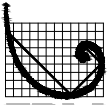
ERM Environmental Resources Management

**PZ-5
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-5 Date Drilled 2015-11-16
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13438473.93' E. Coord. 2136974.86' Surface Elevation 299.29' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 2.00'
 Top of Casing Elevation 302.77' Stickup 3.47'
 Depth to Water: 1. Ft. btoc 20.00 (2015-11-21) 2.Ft. btoc 20.15 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
255	45			0.75 <0.25	PZ-5_50-52 USCS: Clayey Sand (SC) AL: 42/18/24 - #200: 41.0	46.5-47.5	At 40' bgs: Abundant iron oxide staining. At 42' bgs: Slight clay content and iron oxide staining. At 45.75' bgs: Color change to dark greenish grey (Gley-1 5GY 5/1); increasing silt content. SILTY SAND: Dark greenish grey (Gley-1 5GY 5/1); moist; medium dense to dense; non-plastic to slight plasticity; slight clay content (increases with depth). SILTY CLAY: Dark reddish grey (2.5 YR 3/1) with dark greenish grey (Gley 1 5GY 5/1) mottling; damp; medium stiff to stiff; medium to high plasticity; some dark greenish grey, very fine grained sand to silt stringers. Top of Basal Clay Unit.
250	50			3.25 3.0 2.0 >4.5		47.5-52	At 48.5' bgs: Dark greenish grey sandy clay lens to 49.5' bgs. At 50' bgs: Very stiff. Non-cohesive grab sample collected from 50'-52' bgs. At 51' bgs: Light grey (Gley-1 N 7), very fine grained sand stringers. T.D. = 52.00'
245	55						
240	60						



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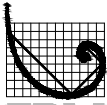
**PZ-6
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-6 Date Drilled 2015-11-20
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 13438736.08' E. Coord. 2138097.96' Surface Elevation 292.79' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 33.00' Sump Length 2.00'
 Top of Casing Elevation 297.42' Stickup 4.63'
 Depth to Water: 1. Ft. btoc 15.84 (2015-11-21) 2.Ft. btoc 15.83 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
292.98	0			0.75		0-2.5	CLAY: Black (10 YR 2/1); moist; soft; low to medium plasticity.
290				0.5		2.5-4.5	SILTY CLAY: Dark greyish brown (10 YR 4/2); moist; soft; slight plasticity. At 3.5' bgs: Strong brown (7.5 YR 5/8) coloration; silt content increases with depth; calcareous material present.
	5			0.25		4.5-5 5-13	CLAYEY SILT: Yellowish brown (10 YR 5/4) with brownish yellow (10 YR 6/8); moist; soft; some brown (10 YR 5/3), dry, blocky, stiff clay pieces and slight gravel (5-10 mm) present. CLAYEY SAND: Light yellowish brown (2.5 Y 6/3); damp to moist; very fine grained; loose, slight plasticity; some silt content; slight iron oxide staining and yellow (2.5 Y 8/6) silt stringers present. At 7' bgs: Medium dense to dense; intermixed reddish brown (5 YR 5/3) lamina; increasing silt content; abundant iron oxide staining. Non-cohesive grab sample collected from 7'-9' bgs. At 9.5' bgs: Loose; friable; decreasing clay content.
285				2.0-3.75 <0.25	PZ-6_7-9 USCS: Sandy Fat Clay (CH) AL: 60 / 20 / 40 - #200: 55.7		At 12' bgs: Medium dense; clay content increases; decreasing very fine grained sand content.
280	10			0.75		13-14	SILTY CLAY: Brown (10 YR 5/3); damp; soft; slight to low plasticity; some very fine grained sand content; iron oxide staining; slight yellow silt stringers present.
	15			4.25	PZ-6_14-16 USCS: Fat Clay with Sand (CH) AL: 71 / 22 / 49 - #200: 72.0	14-16	CLAYEY SAND: Brown (10 YR 5/3); damp; very dense; slight plasticity; iron oxide staining; some silt content. Non-cohesive grab sample collected from 14'-16' bgs. CLAYEY SILT: Brown (10 YR 5/3); damp; medium dense; low plasticity; slight sand content; iron oxide staining.
275				3.5 1.0		16-16.5 16.5-18.25	SILTY CLAY: Light yellowish brown (10 YR 6/4); damp; loose to medium stiff, low plasticity; iron oxide staining throughout; gypsum seam (5 mm) at 16.75' bgs.
	20			2.5-3.5	PZ-6_18.5-20 USCS: Fat Clay (CH) AL: 104 / 27 / 77 - #200: 92.4 k: 9.91x10 ⁻⁹	18.25-21.5	At 17' bgs: Thin gypsum seams present; trace very fine grained sand. CLAY: Pale brown (10 YR 6/3); damp; stiff; high to very high plasticity (fat); iron oxide staining and gypsum seams present. Cohesive sample (split spoon) collected from 18.5'-20' bgs.



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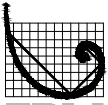
**PZ-6
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-6 Date Drilled 2015-11-20
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 13438736.08' E. Coord. 2138097.96' Surface Elevation 292.79' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 33.00' Sump Length 2.00'
 Top of Casing Elevation 297.42' Stickup 4.63'
 Depth to Water: 1. Ft. btoc 15.84 (2015-11-21) 2.Ft. btoc 15.83 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204; ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
20				3.25-3.5		21.5-26	<p>At 19' bgs: Mottled with brown (10 YR 4/7). At 20' bgs: No mottling; trace silt content (increases with depth). SILTY CLAY: Yellowish brown (10 YR 5/4); damp; stiff to very stiff; high to medium plasticity (decreases with depth); silt content increases with depth; iron oxide staining; gypsum seams present.</p>
270				3.75		26-27.5	<p>At 24' bgs: Trace very fine grained sand content (increases with depth); trace gypsum seams. CLAYEY SAND: Dark greenish grey (Gley-1 5 GY 4/1); damp to moist; very fine grained; stiff; slight plasticity; some silt content; clay content decreases with depth; Light grey (Gley-1 7/1) silt stringers present. Top of Transmissive Sand Unit.</p>
265				<0.25		27.5-43.5	<p>SAND: Dark greenish grey (Gley-1 5 GY 4/1); moist to very moist; very fine grained to fine grained; sub-rounded; well sorted; loose; non-plastic; trace clay and silt content. At 29' bgs: Intermixed with dark brown (2.5 YR 3/2) to 29.5' bgs; wet. At 30' bgs: Color changes to dark greenish grey (Gley-1 10 GY 4/1). Non-cohesive grab sample collected from 30'-32' bgs.</p>
30					<p>PZ-6_30-32 USCS: Poorly Graded Sand with Silt (SP-SM) AL: Non-plastic - #200: 11.7</p>		<p>At 32.5' bgs: Trace black silty stringers to 33.25' bgs.</p>
260							<p>At 36' bgs: Very wet to saturated.</p>
35							
255							
40							



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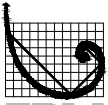
**PZ-6
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-6 Date Drilled 2015-11-20
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 13438736.08' E. Coord. 2138097.96' Surface Elevation 292.79' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 33.00' Sump Length 2.00'
 Top of Casing Elevation 297.42' Stickup 4.63'
 Depth to Water: 1. Ft. btoc 15.84 (2015-11-21) 2.Ft. btoc 15.83 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
40							
250				0.5			At 41.5' bgs: Very fine grained, slight silt content.
45				1.5		43.5-46	At 43' bgs: Decreasing moisture content (wet). SILTY SAND: Dark greenish grey (Gley-1 5 GY 4/1); very moist; very fine grained; medium dense; non-plastic; trace clay content. At 44' bgs: Intermixed clayey silt lenses.
245				2.0		46-50	SAND: Dark greenish gray (Gley-1 5 GY 4/1); moist to wet; very fine to fine grained; sub-angular; well sorted; medium dense; non-plastic. At 46.5' bgs: Loose. At 48' bgs: Medium dense to 48.5' bgs. At 49' bgs: Increasing silt content; slight clay content.
50				<0.25			T.D. = 50.00'
240				2.0			
55				<0.25			
235							
60							



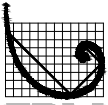
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**PZ-7
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-7 Date Drilled 2015-11-19
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13438533.37' E. Coord. 2138619.06' Surface Elevation 279.54' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 27.00' Sump Length 2.00'
 Top of Casing Elevation 281.99' Stickup 2.45'
 Depth to Water: 1. Ft. btoc 3.98 (2015-11-21) 2.Ft. btoc 3.86 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens

NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
279.72	0			<0.25		0-4	CLAY: Dark grey (10 YR 4/1); very moist; soft; low plasticity; sticky texture. At 1' bgs: Slight yellowish brown silty clay content. At 2.5' bgs: Black (10 YR 2/1); increasing silt content with depth. At 3.5' bgs: Medium stiffness and plasticity.
275	5			0.5		4-5 5-18	SILTY CLAY: Black (10 YR 2/1); very moist; soft; slight plasticity; friable. At 4.75' bgs: Saturated; very soft; low to medium plasticity; very sticky. CLAY: Very dark greyish brown (10 YR 3/2); moist to wet; high plasticity; soft to medium stiff; slight silt content (increases with depth); sticky texture. At 7.5' bgs: Yellow (2.5 Y 8/6) silt stringers present. Non-cohesive grab sampled collected from 7.5'-10' bgs. At 10' bgs: Color change to dark greyish brown (10 YR 4/3) with light yellowish brown (2.5 Y 6/3) heavy mottling. At 11' bgs: Trace greenish grey (Gley-1 5 G 6/1) coloration; medium plasticity; increase in density; silty clay layer present. At 13' bgs: Color change to dark grey (10 YR 4/1) with greenish grey mottling; moist; root content present. At 13.5' bgs: White (5Y 3/1) silt stringers present. At 14' bgs: Color change to light olive brown (2.5 Y 5/3) with very dark brown (10 YR 2/2) mottling; slight iron oxide staining; some white silt stringers present. At 15' bgs: Color change to light yellowish brown (2.5 Y 6/4); moist; medium plasticity; slight iron oxide staining; At 15.5' bgs: Gypsum seams present to 16' bgs. At 16' bgs: Moist to damp; stiff; silt content increases with depth; iron oxide staining; yellow silt stringers present; trace gypsum seams. Non-cohesive grab sample collected from 16'-18' bgs
270	10			1.25-1.5	PZ-7_7.5-10 USCS: Sandy Lean Clay (CL) AL: 40 / 17 / 23 -#200: 54.7		
265	15			1.0			
260	20			2.5-3.25	PZ-7_16-18 USCS: Sandy Fat Clay (CH) AL: 58 / 20 / 38 -#200: 62.3	18-19	SILTY CLAY: Light yellowish brown (2.5 Y 6/4) with very dark brown (10 YR 2/2) mottling; moist; soft; slight to low plasticity; some very fine grained sand content; iron oxide staining; trace gypsum crystals.
				<0.25		19-21	SANDY CLAY: Light yellowish brown (2.5 Y 6/4); moist; soft; slight plasticity; intermixed with clayey sand; sand content is very fine grained, sub-angular, well sorted; some silt content (decreases with depth).
				0.25			



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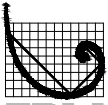
**PZ-7
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-7 Date Drilled 2015-11-19
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13438533.37' E. Coord. 2138619.06' Surface Elevation 279.54' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 27.00' Sump Length 2.00'
 Top of Casing Elevation 281.99' Stickup 2.45'
 Depth to Water: 1. Ft. btoc 3.98 (2015-11-21) 2.Ft. btoc 3.86 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
20						21-29	NO RECOVERY: No recovery. 21'-22' bgs logged from Shelby tube: Silt; very dark greenish grey (Gley-1 10 Y 3/1); very moist; loose; non-plastic; slight very fine grained sand and clay content. Approximate Top of Transmissive Sand Unit.
255	25					29-45	SAND: Dark greenish grey (Gley-1 10 GY 4/1); saturated; very fine to fine grained; sub-angular; well sorted; loose; non-plastic. At 33' bgs: Non-cohesive grab sample collected from 33'-35' bgs. At 36.5' bgs: 3" clayey sand to sandy clay lens. At 39' bgs: Trace to slight clay content.
250	30			<0.25	PZ-7_33-35 USCS: Silty Sand (SM) AL: Non-plastic - #200: 21.2		
245	35			0.5-2.0			
240	40			<0.25-0.5			



ERM Environmental Resources Management

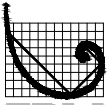
**PZ-7
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID PZ-7 Date Drilled 2015-11-19
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13438533.37' E. Coord. 2138619.06' Surface Elevation 279.54' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 27.00' Sump Length 2.00'
 Top of Casing Elevation 281.99' Stickup 2.45'
 Depth to Water: 1. Ft. btoc 3.98 (2015-11-21) 2.Ft. btoc 3.86 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
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NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

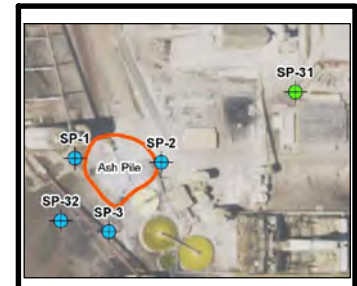
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
40				1.5			At 40' bgs: Color change to very dark greenish grey (Gley-1 10 GY 3/1).
				<0.25			At 42.5' bgs: Medium dense; some clay content.
				3.5			At 43.5' bgs: Dense, clayey sand lens to 44.5 ft.
235	45			<0.25		45-46	CLAYEY SAND: Greenish black (Gley-1 10 GY 2.5/1); very moist; very fine grained; dense; slight plasticity; gradual transition to very fine grained sandy clay; slight silt content (increases with depth); light grey (Gley-1 N 7/1) silt stringers present.
				3.25		46-47	
				4.25		47-48.5	SILTY CLAY: Greenish black (Gley-1 10 GY 2.5/1); moist; very stiff; low plasticity; slight to some very fine grained sand content; light grey silt stringers present. Top of Basal Clay Unit.
				>4.5		48.5-52	CLAY: Greenish black (Gley-1 10 GY 2.5/1); damp to moist; very stiff; high plasticity; little silt and trace very fine grained sand content; light grey silt stringers present. CLAY: Greenish black (Gley-1 10 GY 2.5/1); damp; very stiff; very high plasticity (fat); slight silt content.
230	50			>4.5			At 51' bgs: Cohesive sample (split spoon) collected from 51'-52' bgs. T.D. = 52.00'
					PZ-7 51-52 USCS: Fat Clay with Sand (CH) AL: 80 / 23 / 57 - #200: 71.7 k: 1.92x10⁻⁸		
225	55						
220	60						



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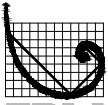
**SP-1
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-1 Date Drilled 2015-11-12
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13440721.47' E. Coord. 2135348.03' Surface Elevation 326.31' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 325.97' Stickup -0.34'
 Depth to Water: 1. Ft. btoc 25.82 (2015-11-21) 2.Ft. btoc 26.18 (2015-12-03)
 Drilling Company Cascade Drilling, LLC. Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

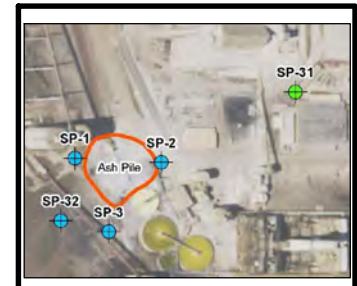
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
326.07	0					0-1.5	COAL: Dark brown (7.5 YR 3/2); dry; cemented.
325				3.0		1.5-3	CLAY: Black (7.5 YR 2.5/1); damp; very stiff; medium plasticity; aggregate/caliche material present.
						3-5	CLAYEY SILT TO SILTY CLAY: Pale brown (10 YR 6/3); damp; compact; friable.
	5			2.0-4.0		5-8.5	CLAYEY SAND: Brown (10 YR 5/3) with yellow (10 YR 7/3) coloration; damp to moist; very fine grained; medium dense to dense; slightly plastic; slight silt content; iron oxide staining.
320				3.0		8.5-15	SILTY CLAY: Brown (7.5 Y 5/3); damp to moist; medium stiff; low plasticity; some sand content; abundant iron oxide staining from 9.5' - 10' bgs. At 10.5' bgs: Reddish brown (5 YR 4/3) and light grey (5 YR 7/1) mottling; very dense; slight iron oxide staining. At 12.5' bgs: Damp to dry. At 14' bgs: Color change to pale brown (10 YR 6/3).
315	10			4.25			
				4.5			
310	15			2.5	SP-1_15-17.5 USCS: Fat Clay (CH) AL: 102 / 32 / 70 - #200: 98.7	15-20	CLAY: Brown (7.5 Y 5/3); damp; medium stiff; medium plasticity; some silt content. Non-cohesive grab sample collected from 15'-17.5' bgs. At 17' bgs: Iron oxide staining. At 17.5' bgs: Damp to dry; friable.
	20						



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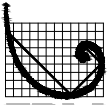
**SP-1
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-1 Date Drilled 2015-11-12
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13440721.47' E. Coord. 2135348.03' Surface Elevation 326.31' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 325.97' Stickup -0.34'
 Depth to Water: 1. Ft. btoc 25.82 (2015-11-21) 2.Ft. btoc 26.18 (2015-12-03)
 Drilling Company Cascade Drilling, LLC. Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

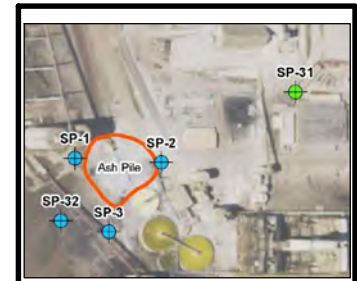
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
305	20	[Hatched pattern]	[Well casing]	>4.5		20-24	SILTY SANDY CLAY: Brown (7.5 Y 5/3); dry to damp; very stiff; low plasticity; sand content is very fine grained, sub-angular, and well sorted; iron oxide staining and gypsum seams present; increasing clay content with depth. At 22.5' bgs: Very fine grained sandy clay; damp to moist; low to medium plasticity; increasing sand content with depth.
300	25	[Hatched pattern]	[Well casing]	1.5 3.0 <0.25		24-30	CLAYEY SILTY SAND: Pale brown (10 YR 6/3); damp; very fine grained, sub-angular, well sorted; medium dense to loose; slight to low plasticity; iron oxide staining; slight gypsum crystal content. At 25' bgs: Color change to light yellowish brown (2.5 Y 6/4); increase sand content; dense to soft with depth. At 27.5' bgs: Moist; very dense; low plasticity; reddish brown lamina (5 YR 4/3) and gypsum seams present.
295	30	[Hatched pattern]	[Well casing]	>4.5	SP-1_30-32.5 USCS: Fat Clay (CH) k: 2.66x10 ⁻⁸	30-37	SILTY CLAY: Pale brown (10 YR 6/3) with reddish brown mottling (5 YR 4/3); damp; stiff to very stiff; low plasticity; some very fine grained sand content; iron oxide staining and gypsum seams present. At 33' bgs: Color change to brown (7.5 YR 4/3); very stiff to medium stiff with depth; low to medium plasticity; decreased sand and silt content; yellow (5 Y 8/6) silt lenses present. Cohesive sample (shelby tube) collected from 33'-35' bgs.
290	35	[Hatched pattern]	[Well casing]	>4.5	SP-1_33-35 USCS: Fat Clay with Sand (CH) AL: 52 / 22 / 30 - #200: 72.1		At 36' bgs: Color change to dark yellowish brown (10 YR 4/4); moist; increased silt content; slight silt lens content; no iron oxide staining or gypsum seams.
40	40	[Dotted pattern]	[Well casing]	3.0 <0.25	SP-1_38-40 USCS: Clayey Sand (SC) AL: 31 / 16 / 15 - #200: 29.1	37-38 38-42	CLAYEY SAND: Brown (7.5 YR 4/3); moist to very moist; soft; slight to non-plastic; some silt content; sand content is very fine grained, sub-angular, and well sorted. Top of Transmissive Sand Unit. SAND: Light olive brown (2.5 YR 5/3); moist with increasing moisture with depth; very fine grained; sub-angular, well sorted; loose; non-plastic; some clay and silt content.



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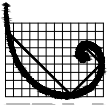
**SP-1
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-1 Date Drilled 2015-11-12
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 52.00' Boring Diam. 6.00"
 N. Coord. 13440721.47' E. Coord. 2135348.03' Surface Elevation 326.31' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 325.97' Stickup -0.34'
 Depth to Water: 1. Ft. btoc 25.82 (2015-11-21) 2.Ft. btoc 26.18 (2015-12-03)
 Drilling Company Cascade Drilling, LLC. Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

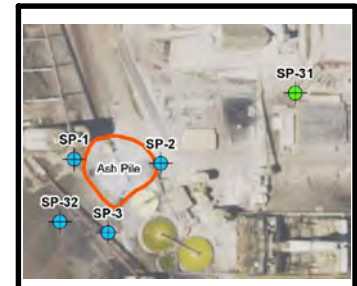
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
285	40			1.5			At 39.5' bgs: Decreasing clay content. At 40' bgs: Increasing clay content.
				2.0		42-44	CLAYEY SAND: Light olive brown (2.5 YR 5/3); moist; very fine grained; sub-angular; well sorted; loose to medium dense; slight to low plasticity; some silt content.
				2.5-3.0		44-45	At 42.5' bgs: Increased clay and silt content. SILTY CLAY: Dark reddish brown (5 YR 3/2); damp; stiff; medium to high plasticity; decreasing silt content with depth; light grey (5 YR 7/1) silt stringers; yellow silt stringers from 44.75' - 45' bgs.
280	45			2.75		45-50	SILTY SANDY CLAY: Very dark greenish gray (Gley 1 - 5 GY 3/1); damp; stiff; medium plasticity; gypsum seams present (up to 2-3 mm thick); 3" light grey (Gley 1 - 10Y 7/1) sandy clay lens at top of 45' bgs. At 46' bgs: Trace sand; slight silt content.
				4.0			At 48' bgs: Damp to dry; decreased sand and silt content with depth.
275	50			>4.5	SP-1_50-51.5 USCS: Fat Clay (CH) AL: 86 / 28 / 58 - #200: 96.0 k: 6.50x10 ⁻⁹	50-52	CLAY: Very dark greenish gray (Gley 1 - 5 GY 3/1); damp; stiff; high plasticity. Cohesive sample (split spoon) collected from 50'-51.5' bgs. Top of Basal Clay Unit. T.D. = 52.00'
	55						
270							
	60						



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**SP-2
DRILLING LOG**

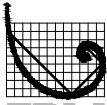
Proj. No. 0322807 Boring/Well ID SP-2 Date Drilled 2015-11-13
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 13440707.13' E. Coord. 2135634.20' Surface Elevation 330.20' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 2.00'
 Top of Casing Elevation 329.80' Stickup -0.4'
 Depth to Water: 1. Ft. btoc 27.78 (2015-11-21) 2.Ft. btoc 28.06 (2015-12-03)
 Drilling Company Cascade Drilling, LLC. Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204; ELEVATIONS IN NAVD88, COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
329.75	0	[Hatched pattern]	[Well casing symbol]			0-3	CALICHE: Road base material (hard caliche/gravel).
		[Hatched pattern]	[Well casing symbol]	2.25		3-4.5	SILTY CLAY: Brown (10 YR 5/3); damp; medium stiff; low plasticity; slight sand content; top 3" very fine grained sand with some clay; yellow (10 YR 8/8) silt stringers present; large aggregate (road base >110 mm). At 3.5' bgs: Iron oxide staining.
325	5	[Dotted pattern]	[Well casing symbol]	0.5 2.5		4.5-5 5-16.5	At 4' bgs: Fly ash (possibly slough material). CLAYEY SAND: Yellowish brown (10 YR 5/4); damp; loose; non-plastic to slightly plastic; some silty clay nodules present; iron oxide staining.
		[Dotted pattern]	[Well casing symbol]	>4.5			SILTY SANDY CLAY: Brown (10 YR 5/3); damp to moist with increasing moisture with depth; medium stiff; low to medium plasticity; some sand content; trace iron oxide staining; yellow silt stringers present. At 7.5' bgs: 3" Yellowish red (2.5 YR 3/6) interval; wet; very stiff; trace sand; some light grey silt stringers.
320	10	[Dotted pattern]	[Well casing symbol]	<0.25 2.5 3.25			At 10' bgs: Loose; some sandy clay content. At 10.5' bgs: Color alternates with dark red (10 R 3/6); damp; medium stiff; low plasticity; slight iron oxide staining; yellow silt stringers present. At 11' bgs: Non-cohesive grab sample collected from 11'-13' bgs.
		[Dotted pattern]	[Well casing symbol]	>4.5			At 13' bgs: Damp to dry; very stiff; decreasing sand content.
315	15	[Dotted pattern]	[Well casing symbol]				At 15' bgs: Color change to reddish brown (5 YR 4/3).
		[Dotted pattern]	[Well casing symbol]	2.25		16.5-25	CLAY: Yellowish brown (10 YR 5/4); damp; medium stiff; medium plasticity; friable; trace sand and slight silt content; abundant gypsum seams (2-3 mm). At 18' bgs: Iron oxide staining and slight yellow silt stringers to 20' bgs.
310	20	[Dotted pattern]	[Well casing symbol]	2.75			

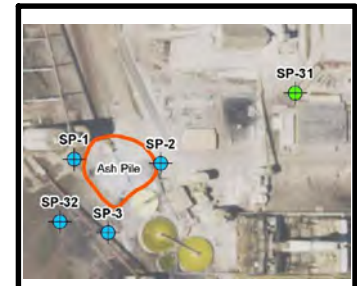
SP-2_11-13
 USCS: Fat Clay with Sand (CH)
 AL: 79 / 27 / 52
 - #200: 71.8



ERM Environmental Resources Management

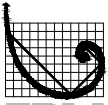
**SP-2
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-2 Date Drilled 2015-11-13
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 13440707.13' E. Coord. 2135634.20' Surface Elevation 330.20' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 2.00'
 Top of Casing Elevation 329.80' Stickup -0.4'
 Depth to Water: 1. Ft. btoc 27.78 (2015-11-21) 2.Ft. btoc 28.06 (2015-12-03)
 Drilling Company Cascade Drilling, LLC. Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

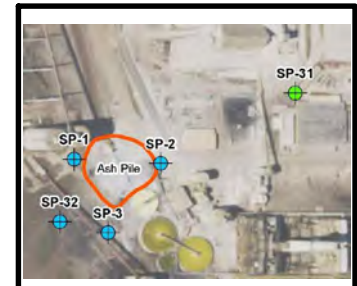
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
305	20	[Hatched pattern]	[Dotted pattern]	3.0		25-29	At 20.5' bgs: Medium to high plasticity; no sand content. At 21' bgs: Iron oxide staining. At 23' bgs: Color change to pale brown (10 YR 6/3) to brown (10 YR 5/3); no iron oxide staining; abundant light grey (5 Y 7/1) and yellow silt stringers present. SILTY SANDY CLAY: Yellowish brown (10 YR 5/4) to brown (10 YR 5/3); damp; very stiff; low plasticity; slight yellow silt stringers present. At 27' bgs: Iron oxide staining and gypsum seams present. Non-cohesive grab sample collected from 27'-29' bgs. At 28' bgs: Increased sand content.
300	25	[Dotted pattern]	[Dotted pattern]	>4.5	SP-2_27-29 USCS: Clayey Sand (SC) AL: 46 / 19 / 27 -#200: 45.9	29-31.5	CLAYEY SAND: Yellowish brown (10 YR 5/4) intermixed with reddish brown (5 YR 4/3); damp to moist; very dense to medium dense with depth; slightly plastic; abundant yellow silt lenses; trace gypsum crystals. Top of Transmissive Sand Unit.
295	30	[Dotted pattern]	[Dotted pattern]	>4.5-3.0		31.5-45	SAND: Light olive brown (2.5 Y 5/3); very moist to wet; very fine grained; sub-angular; well sorted; loose; non-plastic. At 32' bgs: 2" orange and black medium cemented sand; trace clay content to 34' bgs. At 33' bgs: Wet. At 35' bgs: 6" clayey sand to sandy clay lense; iron oxide staining. At 37' bgs: Slight silt content. At 37.5' bgs: 2-3" Alternating strong brown (7.5 YR 5/8) to very dark brown (7.5 YR 2.5/2); gypsum seams and aggregate (10-50 mm) present. At 38' bgs: Trace clay content. At 39.5' bgs: 3" layer of alternating strong brown very fine grained sand to very dark brown silt; Some clay content.
290	35	[Dotted pattern]	[Dotted pattern]	<0.25			



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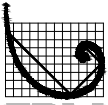
**SP-2
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-2 Date Drilled 2015-11-13
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 13440707.13' E. Coord. 2135634.20' Surface Elevation 330.20' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 2.00'
 Top of Casing Elevation 329.80' Stickup -0.4'
 Depth to Water: 1. Ft. btoc 27.78 (2015-11-21) 2.Ft. btoc 28.06 (2015-12-03)
 Drilling Company Cascade Drilling, LLC. Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

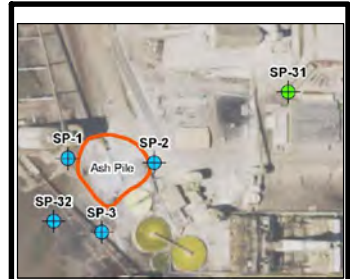
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
285	40	[Graphic Log: Dotted pattern from 40' to 45']	[Well Construction: Casing from 0' to 31', Screen from 31' to 46.5']	0.25-0.75	SP-2_40-42.5 USCS: Silty Sand (SM) AL: Non-plastic - #200: 27.7		At 40' bgs: Non-cohesive grab sample collected from 40'- 42.5' bgs.
				<0.25-0.50			At 42.5' bgs: Color change to olive brown (2.5 Y 4/3).
285	45	[Graphic Log: Diagonal hatching from 45' to 50']	[Well Construction: Casing from 0' to 31', Screen from 31' to 46.5']	1.5	SP-2_48.5-50 USCS: Sandy Fat Clay (CH) AL: 51 / 20 / 31 - #200: 51.8	45-47	CLAYEY SAND: Pale olive (5 Y 6/4); moist; loose to medium dense; slightly plastic; trace iron oxide staining.
				0.5		47-48.5	At 47' bgs: Increased clay content, abundant iron oxide staining, yellow silt stringers present.
280	50			4.0		48.5-50	CLAY: Brown (7.5 YR 5/2); damp to moist; stiff; medium to high plasticity; slight silt content; abundant iron oxide staining. At 47.5' bgs: 1" thick pink (7.5 yr 7/4) silt lens with gypsum seams; pale olive very fine grained sand to silt stringers. SILTY CLAY: Greenish black (Gley-1 5 GY 2.5/1); damp; very stiff; medium plasticity; slight light grey (Gley-1 N 7/1), very fine grained sand stringers. Non-cohesive grab sample collected from 48.5'-50' bgs. Top of Basal Clay Unit. T.D. = 50.00'
275	55						
270	60						



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**SP-3
DRILLING LOG**

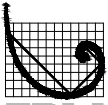
Proj. No. 0322807 Boring/Well ID SP-3 Date Drilled 2015-11-11
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440478.09' E. Coord. 2135459.99' Surface Elevation 328.60' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 328.34' Stickup -0.26'
 Depth to Water: 1. Ft. btoc 28.11 (2015-11-21) 2.Ft. btoc 28.18 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES

COORDINATES IN TEXAS SOUTH
CENTRAL STATE PLANE 4204;
ELEVATIONS IN NAVD88, COMPUTED
USING GEOID12B

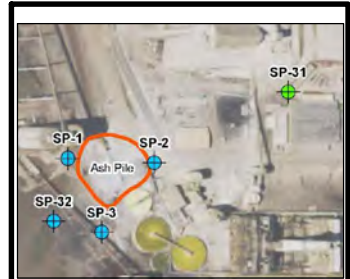
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)		
328.55	0			0.75		0-0.5	OTHER: Fly ash fill; dark bluish grey (Gley-2 10B 3/1); dry; loose; some clay content with increasing clay content with depth.		
				>4.5		0.5-1	CLAY: Very dark greyish brown (2.5 Y 3/2); damp; soft; slight to low plasticity.		
								1-3.5	SILTY CLAY: Brown (7.5 YR 3/2); dry; hard; compact; some gravel present.
325	5					<0.25		3.5-5	SILTY SANDY CLAY: Light yellowish brown (2.5 Y 10/3) with olive yellow (2.5 Y 6/8); dry; medium stiff; friable; sand content is very fine grained.
								5-12.5	CLAYEY SILT: Dark greyish brown (10 YR 4/2); damp to moist; soft to medium dense with depth; slight to low plasticity; yellow (10 YR 7/6) silt laminations present; some gravel present (up to 40 mm) from 5'-10' bgs.
320	10					2.5			At 10' bgs: Silt laminations become brown (10 YR 5/3) to 12.5' bgs.
								12.5-33.5	SILTY CLAY: Brown (10 YR 5/3); moist; stiff; low plasticity; iron oxide staining; yellowish brown (10 YR 5/3) silt laminations present.
315	15					>4.5			At 15' bgs: Very stiff; medium plasticity.
310	20								



ERM Environmental Resources Management

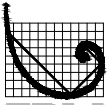
**SP-3
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-3 Date Drilled 2015-11-11
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440478.09' E. Coord. 2135459.99' Surface Elevation 328.60' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 328.34' Stickup -0.26'
 Depth to Water: 1. Ft. btoc 28.11 (2015-11-21) 2.Ft. btoc 28.18 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

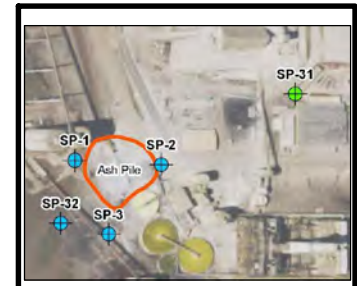
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
305	20	[Hatched pattern]	[Casing]	3.0	SP-3_23-25 USCS: Fat Clay with Sand (CH) AL: 51 / 19 / 32 - #200: 78.8		At 20' bgs: Color change to light brown (7.5 YR 6/3); damp to dry; low to medium plasticity; decreasing silt content with depth; gypsum seams present. At 22.5' bgs: Increasing silt content, no gypsum. At 25' bgs: Color change to brown (10 YR 5/3); damp to moist; medium plasticity; no iron oxide staining; gypsum seams present to 26' bgs. At 27.5' bgs: Increasing silt content, gypsum seams present to 28.5' bgs. At 29.5' bgs: Yellow silt laminations present to 30' bgs. At 30' bgs: Iron oxide staining; gypsum seams present at top of 31' bgs.
295	25	[Hatched pattern]	[Casing]	>4.5		33.5-35	SANDY CLAY: Pale brown (10 YR 6/3); moist; stiff to loose with depth; low plasticity; sand content is very fine grained, sub-angular, and well sorted. At 34' bgs: Iron oxide staining present.
35	35	[Dotted pattern]	[Casing]	<0.25	SP-3_35-37 USCS: Clayey Sand (SC) AL: 40 / 18 / 22 - #200: 48.5	35-36	CLAYEY SILTY SAND: Pale brown (10 YR 6/3); moist; loose; low plasticity; sand content is very fine grained; iron oxide staining. Non-cohesive grab sample collected from 35'-37' bgs.
290	30	[Dotted pattern]	[Casing]	3.3		36-37	SILTY CLAY: Pale brown (10 YR 6/3); moist; medium stiff; slight plasticity; some sand content; slight iron oxide staining.
40	38	[Dotted pattern]	[Casing]	<0.25	SP-3_38-40 USCS: Clayey Sand (SC) AL: 31 / 16 / 15 - #200: 31.6	37-41	SAND: Pale brown (10 YR 6/3); very moist to wet; very fine grained; sub-angular; well sorted; slight clay content; slight iron oxide staining. At 38' bgs: Color change to pale olive (5 Y 6/4). Non-cohesive grab sample collected from 38'-40' bgs. Top of Transmissive Sand Unit.



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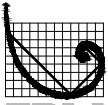
**SP-3
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-3 Date Drilled 2015-11-11
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440478.09' E. Coord. 2135459.99' Surface Elevation 328.60' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 328.34' Stickup -0.26'
 Depth to Water: 1. Ft. btoc 28.11 (2015-11-21) 2.Ft. btoc 28.18 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

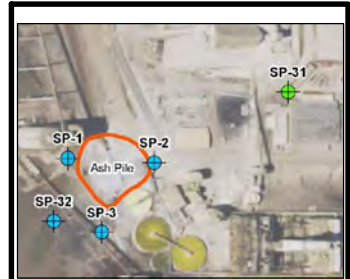
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
40						41-47	At 40.5' bgs: Increased clay content. CLAYEY SILTY SAND: Light yellowish brown (2.5 Y 6/4); wet to very moist; very fine grained; sub-angular; well sorted; medium density; slight to low plasticity.
285				2.25			
45				3.25			At 45' bgs: Gypsum lens present. At 45.5' bgs: 4" Dark reddish grey (5 YR 4/2) silty clay lens, stiff, medium plasticity.
				4.0		47-48.5	At 46' bgs: Color change to light olive brown (2.5 Y 5/3). CLAY: Dark reddish grey (5 YR 4/2); moist to damp; stiff; medium plasticity; some silt content; grey (5 YR 5/1) silt stringers present.
280				>4.5	SP-3_48-50 USCS: Sandy Fat Clay (CH) AL: 81 / 26 / 55 - #200: 69.0	48.5-50	At 47.5' bgs: Gypsum seams present. At 48' bgs: Non-cohesive grab sample collected from 48'-50' bgs. CLAY: Greenish black (Gley-1 10 Y 2.5/1); damp; very stiff; medium plasticity; blocky with some silt content; thin gypsum seams to 50' bgs.
50				4.0-4.5		50-61.5	Top of Basal Clay Unit. SILTY CLAY: Very dark greenish grey (Gley-1 5 GY 3/1); damp; very stiff; medium plasticity; trace very fine grained sand; trace gypsum crystals.
275				>4.5			At 52' bgs: Damp to dry; no gypsum crystals. At 54' bgs: Damp.
55				2.5			At 56' bgs: Very moist; stiff; slight sand content that increases with depth.
				3.0			At 57' bgs: Very fine grained sandy clay lens to 58' bgs.
270				1.5-2.0			At 58' bgs: Moist to damp; medium stiff to stiff.
60				>4.5			



ERM Environmental Resources Management

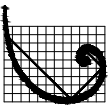
**SP-3
DRILLING LOG**

Proj. No. 0322807 Boring/Well ID SP-3 Date Drilled 2015-11-11
 Project Phase II - Hydrogeologic Characterization Owner San Miguel Electric Cooperative, Inc.
 Location Christine, Texas Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440478.09' E. Coord. 2135459.99' Surface Elevation 328.60' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 38.00' Sump Length 2.00'
 Top of Casing Elevation 328.34' Stickup -0.26'
 Depth to Water: 1. Ft. btoc 28.11 (2015-11-21) 2.Ft. btoc 28.18 (2015-12-03)
 Drilling Company Cascade Drilling, LLC Driller Gerald Cain
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204;
 ELEVATIONS IN NAVD88, COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Field Description/Soil Classification (Color, Texture, Structure)
60				>4.5		61.5-65	At 60' bgs: Damp; very stiff.
265	CLAY: Very dark greenish grey (Gley-1 5 GY 3/1); damp; very stiff; medium to high plasticity; some silt to very fine grained sand content; grey silt stringers present.						
65	T.D. = 65.00'						
260							
70							
255							
75							
250							
80							



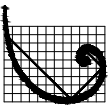
AP-31
DRILLING LOG

Proj. No. 0346369 Boring/Well ID AP-31 Date Drilled 2016-04-30
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 24.00' Boring Diam. 6.00"
 N. Coord. 13438468.61' E. Coord. 2135635.13' Surface Elevation 290.59' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 9.00' Sump Length 0'
 Top of Casing Elevation 292.80' Stickup 2.22'
 Depth to Water: 1.Ft. btoc 6.94 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
290.59	0			> 4.5	AP-31_0-1.5 USCS: Sandy Lean Clay (CL) AL: 47 / 18 / 29 -200 Sieve: 51.1	0-3	SILTY CLAY: Black (Gley-1 2.5/N); dry to damp; very stiff; high plasticity; occasional white calcareous concretions; minor organics (roots). Non-cohesive grab sample collected from 0'-1.5' bgs. At 1.5' bgs: Tan silty sand stringers present (occurrence increases with depth). Non-cohesive grab sample collected from 1.5'-3' bgs. At 2' bgs: Moist.
290				2.5	AP-31_1.5-3 USCS: Sandy Lean Clay (CL) AL: 37 / 17 / 20 -200 Sieve: 57.7	3-8	SAND: Brownish yellow (10 YR 6/6); very moist to wet; very fine grained; sub-round; well sorted; loose; non-plastic; occasional iron oxide staining. Top of Transmissive Sand Unit. At 5' bgs: Poor recovery from 5'-8' bgs (soil saturated). Color change to light yellowish brown (2.5 Y 6/3); moderately sorted; minor silt content.
285	5			<0.25		8-9.5	CLAYEY SILTY SAND: Light yellowish brown (2.5 Y 6/3); wet; very fine grained; loose to medium dense; slight to low plasticity; occasional yellow and dark reddish brown silt stringers; occasional iron oxide staining (occurrence decreases with depth).
				10		9.5-10	SILTY SAND: Light yellowish brown (2.5 Y 6/3); wet; very fine grained; sub-round; loose; non-plastic; trace clay; friable; abundant iron oxide staining.
280	10			<0.25		10-14	SAND: Light yellowish brown (2.5 Y 6/4); saturated; fine grained; sub-round; well sorted; loose; non-plastic; iron oxide staining. At 12' bgs: Color change to pale olive (5 Y 6/3). At 12.6' bgs: Clayey silty sand lens to 12.8' bgs; iron oxide stained lamina (1-10 mm); occasional yellow silt stringers. At 13.5' bgs: Very fine grained; minor silt content.
				0.75		14-24	SILTY SAND: Light olive grey (5 Y 6/2); wet; very fine grained; sub-round; loose; slight plasticity; abundant iron oxide staining; occasional yellow silt stringers (2 mm) to 14.25' bgs. At 15' bgs: Occasional iron oxide stained lamina. At 16.5' bgs: Sandy clay lens (20 mm); iron oxide staining; yellow silt stringers. At 17' bgs: Medium dense; increased silt content. At 17.5' bgs: Intermixed pinkish brown, high plasticity clay lens; iron oxide stained lamina. At 18' bgs: Minor clay content; abundant iron oxide staining; occasional yellow silt stringers. At 18.5' bgs: Dense. At 19' bgs: Color change to light yellowish brown (2.5 Y 6/4); trace clay (occurrence decreases with depth).
				<0.25			
275	15			0.25-0.5			
				1.25			
				3.0			
20	20						



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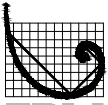
**AP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-31 Date Drilled 2016-04-30
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 24.00' Boring Diam. 6.00"
 N. Coord. 13438468.61' E. Coord. 2135635.13' Surface Elevation 290.59' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 9.00' Sump Length 0'
 Top of Casing Elevation 292.80' Stickup 2.22'
 Depth to Water: 1.Ft. btoc 6.94 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
270	20			>0.25			At 21' bgs: Loose. At 22' bgs: Minor clay content to 22.5' bgs; occasional iron oxide staining. At 23' bgs: No recovery. T.D. = 24.00'
265	25						
260	30						
255	35						
40							



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AP-32 DRILLING LOG

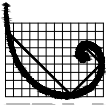
Proj. No. 0346369 Boring/Well ID AP-32 Date Drilled 2016-04-29
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 35.00' Boring Diam. 6.00"
 N. Coord. 13438474.96' E. Coord. 2136306.27' Surface Elevation 295.84' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 19.50' Sump Length 0'
 Top of Casing Elevation 297.94' Stickup 2.10'
 Depth to Water: 1.Ft. btoc 14.27 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
295.84	0					0-8	SILTY CLAY: Black (Gley-1 N 2.5); damp to dry; medium stiff; medium to high plasticity; some white calcareous concretions; minor organics (roots).
295							
	5			4.5			At 5' bgs: Color change to very dark greyish brown (10 YR 3/2); very stiff; high plasticity; abundant white calcareous concretions.
290				4.0			At 6' bgs: Stiff; friable.
				2.5			At 7' bgs: Mottled with light yellowish brown; medium stiff to stiff.
				2.25		8-10.5	SILTY SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp; very fine grained; medium stiff; medium to high plasticity; sand content increases with depth; occasional iron oxide staining.
	10						
285				2.75		10.5-15	SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp; medium stiff to stiff; high plasticity (fat); sand content very fine grained; minor silt content. At 11' bgs: Non-cohesive grab sample collected from 11'-13' bgs. At 12' bgs: Iron oxide staining to 12.25' bgs. At 13.5' bgs: 1" iron oxide stained layer. At 14' bgs: Light grey silt stringers to 14.5' bgs. At 14.5' bgs: Occasional gypsum crystals.
	15			<0.25		15-16	SILTY SAND: Yellowish brown (10 YR 5/4); moist; very fine grained; sub-round; loose with some intermixed hard compacted pieces; non-plastic to slightly plastic; trace clay content; iron oxide staining; minor yellow silt stringers. Top of Transmissive Sand Unit.
280				<0.25		16-25	At 15.4' bgs: 1" dark reddish brown, very moist layer. SAND: Pale brown (10 YR 6/3); very moist to wet; very fine grained; sub-round; well sorted; loose with some hard compacted pieces; non-plastic; trace silt content; abundant iron oxide staining. At 17' bgs: Wet; occasional iron oxide staining. At 18' bgs: Color change to light olive brown (2.5 Y 5/4); decreasing silt content. At 19' bgs: Fine to very fine grained.
	20						

AP-32_11-13
 USCS: Sandy Fat Clay (CH)
 AL: 61 / 21 / 40
 -200 Sieve: 51.9



ERM Environmental Resources Management

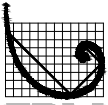
**AP-32
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-32 Date Drilled 2016-04-29
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 35.00' Boring Diam. 6.00"
 N. Coord. 13438474.96' E. Coord. 2136306.27' Surface Elevation 295.84' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 19.50' Sump Length 0'
 Top of Casing Elevation 297.94' Stickup 2.10'
 Depth to Water: 1.Ft. btoc 14.27 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
275	20	[Patterned]	[Patterned]				
				<0.25		25-35	At 22' bgs: Abundant iron oxide staining. At 23' bgs: Trace iron oxide staining; At 24' bgs: Minor silt content; abundant iron oxide staining. SILTY SAND to SANDY SILT: Light olive brown (2.5 Y 5/4); very moist; very fine grained; sub-round; loose; slight plasticity; trace clay. At 26' bgs: Density increases with depth; abundant iron oxide staining. At 27' bgs: Occasional iron oxide staining.
270	25	[Patterned]	[Patterned]	0.75			
265	30	[Patterned]	[Patterned]				At 28.75' bgs: Trace yellow silt stringers; dark reddish brown silt lamina (5-8 mm). At 29.5' bgs: Abundant iron oxide staining to 30.5' bgs. At 30.5' bgs: Occasional yellow and dark reddish brown silt stringers. At 31' bgs: Medium dense; minor clay content (slight to low plasticity); abundant iron oxide staining.
				<0.25			At 33' bgs: Loose, trace clay content. At 34' bgs: Occasional iron oxide staining.
260	35	[Patterned]	[Patterned]				T.D. = 35.00'
40							



ERM Environmental Resources Management

**AP-33
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-33 Date Drilled 2016-04-29
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 42.00' Boring Diam. 6.00"
 N. Coord. 13438474.79' E. Coord. 2136615.43' Surface Elevation 301.62' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 27.00' Sump Length 0'
 Top of Casing Elevation 304.67' Stickup 3.05'
 Depth to Water: 1.Ft. btoc 20.47 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

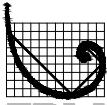
SKETCH MAP



NOTES

COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
301.62	0			2.75		0-1	SILTY CLAY: Black (Gley-1 N 2.5); damp; medium dense; medium to high plasticity; calcareous white stringers; minor organics (roots).
300				<0.25		1-10	CLAYEY SAND: Light yellowish brown (2.5 Y 6/3); damp; very fine grained; loose; slight to low plasticity; minor silt content; iron oxide staining; white silt stringers (abundant to 2' bgs); trace gypsum crystals. At 4' bgs: Increasing density and clay content; abundant iron oxide staining. At 6' bgs: Color change to pale brown (10 YR 6/3); medium dense; decreasing clay content; minor iron oxide staining; occasional white silt stringers; trace gypsum crystals. At 7' bgs: Slight plasticity; friable; abundant yellow silt stringers. At 8.5' bgs: Hard compacted pieces present. At 9.75' bgs: Abundant iron oxide staining.
295				1.5		10-12	CLAYEY SILT to SILTY CLAY: Brown (7.5 YR 5/4); damp; medium dense; low plasticity; some very fine grained sand content; occasional iron oxide staining.
290	10			2.0		12-16	At 11.25' bgs: Light yellowish brown silty clay lens (30 mm). CLAY: Pale brown (10 YR 6/3); damp to moist; medium stiff; very high plasticity (fat); some silt content; occasional iron oxide stained lamina (1-2 mm); trace gypsum inclusions.
				1.75			At 13' bgs: medium stiff to stiff; decreasing silt content; blocky; trace yellow silt stringers; trace gypsum seams.
	15			2.5			
285				2.25		16-20	SILTY SANDY CLAY: Pale brown (10 YR 6/3); damp; medium stiff; high plasticity (fat); sand content very fine grained; iron oxide staining; occasional gypsum stringers (up to 3 mm). Clayey very fine grained sand lens from 16'-16.25' bgs. At 19' bgs: Decreasing plasticity; yellow silt lens present (40 mm).
	20			2.0			



ERM Environmental Resources Management

**AP-33
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-33 Date Drilled 2016-04-29
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 42.00' Boring Diam. 6.00"
 N. Coord. 13438474.79' E. Coord. 2136615.43' Surface Elevation 301.62' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 27.00' Sump Length 0'
 Top of Casing Elevation 304.67' Stickup 3.05'
 Depth to Water: 1.Ft. btoc 20.47 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

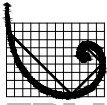
SKETCH MAP



NOTES

COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
280	20	[Hatched pattern]	[Solid black]	>4.5		20-22	SANDY CLAY: Brown (7.5 YR 5/4); damp; medium stiff to stiff; medium plasticity; sand content very fine grained; occasional iron oxide staining and yellow silt stringers. At 20.5' bgs: Hard.
280	22	[Hatched pattern]	[Solid black]	1.25		22-24	CLAYEY SAND: Brown (7.5 YR 5/4); damp; very fine grained; loose to medium dense; slight plasticity; trace iron oxide staining; occasional yellow silt stringers; reddish brown silt clay lamina to 22.5' bgs. Top of Transmissive Sand Unit.
275	24	[Dotted pattern]	[Dotted pattern]	<0.25		24-35.5	SAND: Light yellowish brown (2.5 Y 6/4) intermixed with dark reddish brown (to 24.25' bgs); moist; very fine grained; sub-round; well sorted; loose; non-plastic to slightly plastic; minor silt and trace clay content; occasion iron oxide staining. At 23' bgs: Decreasing clay content. At 26' bgs: Increase occurrence of iron oxide staining; occasional yellow silt stringers. At 26.5' bgs: Non-plastic; no silt or clay content. At 27' bgs: Very moist. At 28' bgs: Color change to light olive brown (2.5 Y 5/3). Non-cohesive grab sample collected from 28'-30' bgs. At 29' bgs: Wet; abundant iron oxide staining.
270	26	[Dotted pattern]	[Dotted pattern]	0.75	AP-33_28-30 USCS: Silty Sand (SM) AL: Non-plastic -200 Sieve: 21.1		At 31' bgs: Very moist; medium dense; slight plasticity; slight silt and clay content to 31.5' bgs; occasional yellow silt lamina; trace dark reddish brown silt lamina. At 31.5' bgs: No silt or clay content; no iron oxide staining.
265	28	[Dotted pattern]	[Dotted pattern]	<0.25			
265	30	[Dotted pattern]	[Dotted pattern]	2.0			
265	31	[Dotted pattern]	[Dotted pattern]	<0.25			
265	35	[Dotted pattern]	[Dotted pattern]	<0.25		35.5-42	SILTY SAND: Olive (5 Y 5/4); very moist; very fine grained; sub-round; loose; slight plasticity; minor clay content (decreases with depth); abundant iron oxide staining (to 36' bgs); occasional yellow and dark reddish brown silt stringers. At 36' bgs: Color change to pale olive (5 Y 6/4). At 37' bgs: Trace iron oxide staining. At 38' bgs: Occasional iron oxide staining. At 39.5' bgs: Abundant yellow and dark reddish brown silt stringers to 39.75' bgs.
40	42	[Dotted pattern]	[Dotted pattern]	<0.25			



ERM Environmental Resources Management

**AP-33
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-33 Date Drilled 2016-04-29
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 42.00' Boring Diam. 6.00"
 N. Coord. 13438474.79' E. Coord. 2136615.43' Surface Elevation 301.62' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 27.00' Sump Length 0'
 Top of Casing Elevation 304.67' Stickup 3.05'
 Depth to Water: 1.Ft. btoc 20.47 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

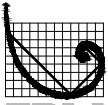
SKETCH MAP



NOTES

COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40							At 40' bgs: Decreasing silt content; no clay content; trace iron oxide staining; occasional yellow silt stringers.
260							T.D. = 42.00'
45							
255							
50							
250							
55							
245							
60							



ERM Environmental Resources Management

**AP-34
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-34 Date Drilled 2016-04-28
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 40.00' Boring Diam. 6.00"
 N. Coord. 13438471.69' E. Coord. 2137302.1' Surface Elevation 293.91' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 24.00' Sump Length 0'
 Top of Casing Elevation 296.32' Stickup 2.41'
 Depth to Water: 1.Ft. btoc 13.61 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

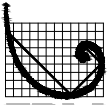
SKETCH MAP



NOTES

COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
293.91	0			2.5		0-3.5	SILTY CLAY: Black (Gley-1 2.5 N); wet; medium stiff to stiff; medium to high plasticity; calcareous white stringers; minor organics (roots).
290	5			0.5		3.5-12	CLAYEY SAND: Pale brown (2.5 Y 7/3); moist; very fine grained; loose; slight to low plasticity; minor silt content; occasional iron oxide staining and yellow silt stringers; trace gypsum crystals. At 6' bgs: Color change to light yellowish brown (10 YR 6/4); damp. At 7.5' bgs: Dark red silt clay layer (1"); abundant iron oxide staining. At 8' bgs: Color change to pale brown (10 YR 6/3); occasional iron oxide staining (occurrence decreases with depth). At 10.5' bgs: Increasing clay content; abundant iron oxide staining. At 11' bgs: Occasional yellow silt stringers.
285	10			0.5		12-12.75	SILTY SANDY CLAY: Pale brown (2.5 Y 6/3); damp; soft with increasing density at depth; low to medium plasticity; decreasing sand and silt content at depth; iron oxide staining; yellow silt stringers.
280	15			3.0-3.25	AP-34_13-14.5 USCS: Fat Clay (CH) AL: 96 / 26 / 70 -200 Sieve: 99.0 Permeability: 5.51x10 ⁻⁹	12.75-16.5	CLAY: Light yellowish brown (10 YR 6/4); damp; stiff; high to very high plasticity (fat); some silt content; iron oxide staining. At 13' bgs: Trace silt content. Cohesive sample (California modified split spoon) collected from 13'-14.5' bgs. At 14' bgs: Abundant iron oxide staining. At 14.5' bgs: Gypsum seams (1-2 mm).
275				2.5 0.5		16.5-18.5	SANDY CLAY: Light yellowish brown (10 YR 6/4); damp; medium stiff to stiff; medium to high plasticity; sand content very fine grained; increasing sand content at depth; occasional iron oxide staining. At 17' bgs: Loose.
275	20			<0.25		18.5-24	CLAYEY SAND: Light yellowish brown (2.5 Y 6/4); damp; very fine grained; loose; slight to low plasticity; occasional iron oxide staining; occasional gypsum seams (1-2 mm) and minor gypsum crystals. Top of Transmissive Sand Unit.



ERM Environmental Resources Management

**AP-34
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-34 Date Drilled 2016-04-28
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 40.00' Boring Diam. 6.00"
 N. Coord. 13438471.69' E. Coord. 2137302.1' Surface Elevation 293.91' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 24.00' Sump Length 0'
 Top of Casing Elevation 296.32' Stickup 2.41'
 Depth to Water: 1.Ft. btoc 13.61 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

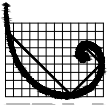
SKETCH MAP



NOTES

COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
20				2.0		24-32	At 20' bgs: Abundant iron oxide staining. At 21' bgs: Medium dense. At 21.5' bgs: Yellow silt lens (2"). *22.5' bgs: Minor iron oxide staining; abundant yellow silt stringers. At 23' bgs: Loose; decreasing clay content. SAND: Yellowish brown (10 YR 5/4); dry to damp; very fine grained; sub-round; well sorted; loose; non-plastic; trace silt and clay content; occasional yellow silt stringers. At 25.25' bgs: Dark brown to black silt lamina (1-4 mm). At 26' bgs: Color change to light olive brown (2.5 Y 5/3); no silt or clay content; minor yellow silt stringers (occurrence decreases with depth). At 26.5' bgs: Wet. At 28' bgs: Occasional yellow silt stringers to 29' bgs. At 30' bgs: Abundant yellow silt stringers to 31' bgs. At 31' bgs: Color change to pale olive (5 Y 6/3); occasional yellow silt stringers. SILTY SAND: Pale olive (5 Y 6/3); very moist to wet; very fine grained; sub-round; loose; non-plastic to slightly plastic; trace clay content; occasional yellow silt stringers. At 36.75' bgs: Very fine grained sand lens to 37.25' bgs; abundant iron oxide staining. At 37.25' bgs: Trace yellow silt stringers. At 38' bgs: Increased clay content to 38.5' bgs. At 38.5' bgs: Iron oxide stained silt lens (30 mm). SILTY SAND: Dark greenish grey (Gley-1 5GY 4/1); moist; very fine grained; sub-round; medium dense to loose; low plasticity to non-plastic; intermixed greyish brown silty clay to 39' bgs. *39' bgs: Dark brown to black silt lamina (1-3 mm) to 39.25' bgs. *39.25' bgs: Trace clay content. T.D. = 40.00'
270				<0.25		32-38.6	
265				<0.25		38.6-40	
255				1 <0.25			
40							



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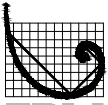
**AP-35
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-35 Date Drilled 2016-04-28
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 43.00' Boring Diam. 6.00"
 N. Coord. 13438475.13' E. Coord. 2137627.82' Surface Elevation 293.85' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 28.00' Sump Length 0'
 Top of Casing Elevation 298.36' Stickup 4.51'
 Depth to Water: 1.Ft. btoc 14.67 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
293.85	0			2.25		0-3	SILTY CLAY: Black (Gley-1 N 2.5); dry to damp; stiff; medium plasticity; calcareous white stringers; minor organics (roots).
290	5			0.75		3-7	CLAYEY SAND: Light yellowish brown (2.5 Y 6/3); damp; fine grained; loose; slight plasticity; minor silt content; minor hard compacted tan silty clay pieces; trace gypsum crystals. At 5' bgs: Occasional iron oxide staining, yellow silt stringers, and gypsum crystals. At 6' bgs: Reddish brown clayey silt lens (2"). At 6.25' bgs: Color change to brown (10 YR 5/3); increasing clay content.
285	10			3.5		7-8	CLAYEY SAND to SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp to moist; very fine to fine grained; dense; low plasticity.
280	15			3.0		8-14	CLAYEY SAND: Light brownish grey (10 YR 6/2); dry; very fine grained; dense; slight plasticity; trace silt content; iron oxide staining; occasional yellow silt stringers; trace gypsum crystal inclusions. At 7.5' bgs: Dark red silty clay layer (1"). At 7.75' bgs: Iron oxide staining; occasional yellow silt stringers. At 8.75' bgs: Dark red silty clay lens (2"). At 10.75' bgs: Abundant iron oxide staining. At 11.5' bgs: Color change to brown (10 YR 5/3); medium dense to loose.
275	20			2.75-3.5	AP-35_15-17 USCS: Fat Clay (CH) AL: 100 / 27 / 73 -200 Sieve: 97.5	14-18	CLAY: Light yellowish brown (2.5 Y 6/3); damp; medium stiff; very high plasticity (fat); abundant iron oxide staining; trace yellow silt stringers; trace gypsum seams. At 14.5' bgs: Trace silt content to 15' bgs. At 15' bgs: Non-cohesive grab sample collected from 15'-17' bgs. At 17' bgs: Increasing silt content.
				3.0-3.5		18-22	SILTY SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp; stiff; high to very high plasticity (fat); sand content very fine grained; occasional iron oxide staining; trace gypsum seams.



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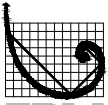
**AP-35
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-35 Date Drilled 2016-04-28
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 43.00' Boring Diam. 6.00"
 N. Coord. 13438475.13' E. Coord. 2137627.82' Surface Elevation 293.85' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 28.00' Sump Length 0'
 Top of Casing Elevation 298.36' Stickup 4.51'
 Depth to Water: 1.Ft. btoc 14.67 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
20							At 20' bgs: Pale brown clayey sand lens to 20.5' bgs.
				2.0		22-26.25	At 21' bgs: Trace iron oxide staining to 21.75' bgs. At 21.5' bgs: Minor gypsum crystals. At 21.75' bgs: Increasing sand content. CLAYEY SAND: Light yellowish brown (2.5 Y 6/4); damp to moist; fine grained; sub-angular; medium dense to dense; slight to low plasticity; minor silt content; abundant iron oxide staining. Top of Transmissive Sand Unit.
270				3.0			At 23.5' bgs: Color change to dark greenish grey (Gley-1 5GY 4/1); damp; dense; abundant light grey silt stringers; occasional gypsum seams.
25				<0.25		26.25-43	At 25.25' bgs: Black, hard organic lens (10 mm). At 25.5' bgs: Moist; loose; minor clay content (decreases with depth). SAND: Dark greenish grey (Gley-1 5GY 4/1); moist; fine grained; sub-round; well sorted; loose; slight plasticity to non-plastic; trace clay content (decreases with depth). At 28' bgs: Wet; no clay content.
265				<0.25			
30							At 37' bgs: Saturated.
260							
35							
255							At 38' bgs: Medium dense to dense; silty clay to clay laminae (1 mm) to 41' bgs. At 39' bgs: Very moist.
40							



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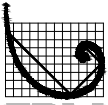
**AP-35
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-35 Date Drilled 2016-04-28
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 43.00' Boring Diam. 6.00"
 N. Coord. 13438475.13' E. Coord. 2137627.82' Surface Elevation 293.85' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 28.00' Sump Length 0'
 Top of Casing Elevation 298.36' Stickup 4.51'
 Depth to Water: 1.Ft. btoc 14.67 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40							At 41' bgs: Dark greyish brown clay striations.
250							T.D. = 43.00'
45							
245							
50							
240							
55							
235							
60							



ERM Environmental Resources Management

**AP-36
DRILLING LOG**

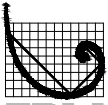
Proj. No. 0346369 Boring/Well ID AP-36 Date Drilled 2016-04-27
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 41.00' Boring Diam. 6.00"
 N. Coord. 13438468.90' E. Coord. 2138091.77' Surface Elevation 284.05' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 25.50' Sump Length 0'
 Top of Casing Elevation 288.75' Stickup 4.70'
 Depth to Water: 1.Ft. btoc 6.75 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
284.05	0					0-4.5	CLAY: Black (Gley-1 N 2.5); damp; stiff; high plasticity; white calcareous nodules; minor organics (roots).
	5			0.5		4.5-6	CLAYEY SANDY SILT: Light grey (10 YR 7/2) heavily mottled with brown and dark red; wet; medium dense to dense; low plasticity; sand content very fine grained; iron oxide staining. At 5.5' bgs: Intermixed silty sandy clay content.
				0.5		6-7	CLAYEY SAND: Brown (10 YR 5/3) with dark red; damp; fine grained; sub-round; medium dense; slight plasticity; minor silt content; iron oxide staining; minor yellow silt stringers; trace gypsum crystals near 7' bgs.
				3.5		7-7.5	SILTY CLAY: Weak red (10 R 5/3); dry; stiff to very stiff; low plasticity; some very fine grained sand content; grey silt laminae throughout.
				<0.25		7.5-10	CLAYEY SAND: Brown (10 YR 5/3) with dark red; damp; very fine grained; sub-round; loose; slight plasticity; minor silt content; iron oxide staining.
	10			3.75		10-14.5	At 8' bgs: Medium dense to dense; increasing silt content; trace yellow silt stringers (to 9' bgs); trace gypsum crystals. At 9.75' bgs: Increasing clay content. At 9.9' bgs: Abundant gypsum crystals (up to 4 mm). CLAY: Pale brown (10 YR 6/3); damp; very stiff; high to very high plasticity (fat); trace very fine grained sand and silt content; occasional iron oxide staining; trace yellow silt stringers; occasional gypsum seams.
				3.0			At 12' bgs: Non-cohesive grab sample collected from 12'-14' bgs. At 14.25' bgs: Large gypsum crystal nodule (40-50 mm).
	15			3.75		14.5-19	SANDY CLAY: Pale brown (10 YR 6/3); damp; very stiff; high to very high plasticity (fat); sand content very fine grained; occasional iron oxide staining; trace yellow silt stringers. At 17' bgs: Abundant iron oxide staining and gypsum crystals to 18' bgs. At 18' bgs: Increasing density.
				>4.5			SANDY CLAY to CLAYEY SAND: Brown (10 YR 5/3); damp; stiff; low to slight plasticity; sand content fine grained; decreased sand content at depth; occasional gypsum crystals. Dark greenish grey lens at 19' bgs (1").
	20			4.0		19-21	

AP-36_12-14
 USCS: Fat Clay (CH)
 AL: 94 / 26 / 68
 -200 Sieve: 92.4



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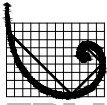
**AP-36
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-36 Date Drilled 2016-04-27
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 41.00' Boring Diam. 6.00"
 N. Coord. 13438468.90' E. Coord. 2138091.77' Surface Elevation 284.05' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 25.50' Sump Length 0'
 Top of Casing Elevation 288.75' Stickup 4.70'
 Depth to Water: 1.Ft. btoc 6.75 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
260	20	[Hatched pattern]	[Solid black]	1.5		21-22	At 20' bgs: Abundant iron oxide staining. CLAYEY SAND: Very dark greenish grey (Gley-1 10GY 3/1); damp; very fine grained; sub-round; medium dense; slight plasticity; occasional light grey silt stringers; trace black organic inclusions. Top of Transmissive Sand Unit.
260	22-41	[Dotted pattern]	[Dotted pattern]	<0.25		22-41	SAND: Very dark greenish grey (Gley-1 10GY 3/1); moist; very fine grained; sub-round; well sorted; very loose; non-plastic; trace silt content.
255	25	[Dotted pattern]	[Dotted pattern]	<0.25			At 24' bgs: Color change to yellowish brown (10 YR 5/6); very moist; abundant iron oxide staining. At 25' bgs: Color change to greyish brown (2.5 Y 5/2); saturated. At 26' bgs: Occasional iron oxide staining.
255	28	[Dotted pattern]	[Dotted pattern]				At 28' bgs: Iron oxide stained lens (20 mm).
250	30.5	[Dotted pattern]	[Dotted pattern]				At 30.5' bgs: Color change to dark greenish grey (Gley-1 5GY 4/1). At 31' bgs: Minor yellowish orange silt stringers to 33' bgs.
245	36	[Dotted pattern]	[Dotted pattern]	>4.5			At 36' bgs: Very dense clayey sand lens to 37' bgs.
245	39	[Dotted pattern]	[Dotted pattern]	>4.5			At 39' bgs: Very dense clayey sand lens to 40' bgs.
40	40	[Dotted pattern]	[Dotted pattern]	<0.25			



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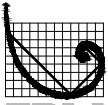
**AP-36
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID AP-36 Date Drilled 2016-04-27
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 41.00' Boring Diam. 6.00"
 N. Coord. 13438468.90' E. Coord. 2138091.77' Surface Elevation 284.05' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 25.50' Sump Length 0'
 Top of Casing Elevation 288.75' Stickup 4.70'
 Depth to Water: 1.Ft. btoc 6.75 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40							T.D. = 41.00'
240	45						
235	50						
230	55						
225							
60							



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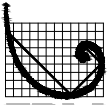
**EP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-31 Date Drilled 2016-05-04
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440278.04' E. Coord. 2137553.92' Surface Elevation 313.23' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 0'
 Top of Casing Elevation 316.70' Stickup 3.47'
 Depth to Water: 1.Ft. btoc 24.81 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
313.23	0					0-5	SILTY CLAY: Black (Gley-1 N 2.5); minor organics (roots).
310	5			0.5		5-8.5	CLAYEY SANDY SILT: Light yellowish brown (2.5 Y 5/3); dry to damp; loose; slight plasticity; abundant hard compacted pieces of brown silty clay; minor iron oxide staining; occasional gypsum crystals and trace gypsum seams.
305	10			1.5		8.5-11	CLAYEY SILT: Brown (7.5 YR 5/4); dry to damp; medium dense; slight to low plasticity; trace sand content; occasional yellow silt stringers. At 9' bgs: Color change to reddish brown (5 YR 4/4); occasional iron oxide staining. At 10' bgs: No iron oxide staining or yellow silt stringers; occasional light grey silt stringers and gypsum crystals.
300	15			<0.25		11-15.5	INTERBEDDED CLAYEY SILT AND SAND: Reddish brown (5 YR 5/3) clayey silt with light brown (7.5 YR 6/3) sand; damp; clayey silt content is very dense, low plasticity, and fractures along planar surfaces; sand content is very fine grained, loose, and non-plastic; increased clay content at depth; abundant iron oxide staining; occasional yellow silt stringers. At 13' bgs: Clayey silt partially compacted. At 14' bgs: Sand color changes to white (White 7.5 YR 6/3).
295	20			<0.25		15.5-32	CLAYEY SANDY SILT: Reddish brown (5 YR 5/3); damp; loose; low to slight plasticity; intermixed with hard silty clay; abundant iron oxide staining. At 15.75' bgs: Decreased hard silty clay content to 16.25' bgs. At 16' bgs: Minor iron oxide staining. At 17' bgs: Decreased hard silty clay content. At 17.75' bgs: Abundant iron oxide staining to 18.25' bgs. At 18' bgs: Occasional tan silty sand stringers. At 19' bgs: Abundant iron oxide staining.



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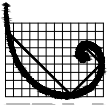
**EP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-31 Date Drilled 2016-05-04
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440278.04' E. Coord. 2137553.92' Surface Elevation 313.23' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 0'
 Top of Casing Elevation 316.70' Stickup 3.47'
 Depth to Water: 1.Ft. btoc 24.81 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
20							
290							
25							
285							
30							
280				>4.5		32-38	<p>At 21' bgs: Minor to trace iron oxide staining; occasional yellow silt stringers.</p> <p>At 23' bgs: Trace hard silty clay content; occasional tan clayey sand stringers.</p> <p>At 24' bgs: Moist; increasing clay content.</p> <p>At 25' bgs: Color change to brown (7.5 YR 5/3); minor hard silty clay content; abundant sand lenses (to 26' bgs); minor iron oxide staining; occasional yellow silt stringers.</p> <p>At 26.5' bgs: Reddish brown clayey silt lens; occasional iron oxide staining; minor yellow silt stringers.</p> <p>At 27' bgs: Damp; trace iron oxide staining and yellow silt stringers.</p> <p>At 28' bgs: Non-cohesive grab sample collected from 28'-30' bgs.</p> <p>At 29' bgs: Occasional hard silty clay content and iron oxide staining.</p> <p>At 30' bgs: Very dense, reddish brown fat clay lens to 30.25' bgs, from 30.75'-31' bgs, and from 31.5'-31.75' bgs. Minor iron oxide staining to 32' bgs.</p> <p>CLAY: Reddish brown (5 YR 4/3); damp; very stiff; very high plasticity (fat); trace silt content (decreases with depth); occasional iron oxide staining and tan silt stringers.</p>
35							
275				<0.25	EP-31_36-38 USCS: Fat Clay (CH) AL: 109 / 28 / 81 -200 Sieve: 99.7	38-41	<p>At 35' bgs: Color change to brown (10 YR 5/3).</p> <p>At 36' bgs: Non-cohesive grab sample collected from 36'-38' bgs.</p> <p>At 37' bgs: Gypsum seam (20 mm).</p> <p>At 37.5' bgs: very dark greenish grey layer (2").</p> <p>CLAY: Dark greenish grey (Gley-1 10GY 4/1); moist; soft; medium plasticity; occasional hard compacted clay pieces.</p>
40							



ERM Environmental Resources Management

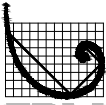
**EP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-31 Date Drilled 2016-05-04
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440278.04' E. Coord. 2137553.92' Surface Elevation 313.23' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 0'
 Top of Casing Elevation 316.70' Stickup 3.47'
 Depth to Water: 1.Ft. btoc 24.81 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40				0.25-0.5		42.5-50	<p>At 40.5' bgs: light yellowish brown layer (1"); silt stringers.</p> <p>SILTY SANDY CLAY: Dark greenish grey (Gley-1 10GY 4/1); moist; soft; low plasticity; sand content very fine grained; occasional hard compacted clay pieces; occasional light grey silt stringers.</p> <p>CLAYEY SAND: Dark greenish grey (Gley-1 10GY 4/1); damp to moist; very fine grained; loose; slight to low plasticity; minor to trace silt; occasional hard compacted pieces; minor light grey silt stringers. Top of Transmissive Sand Unit.</p> <p>At 45.5' bgs: Increasing clay content.</p> <p>At 45.75' bgs: Color change to brown (7.5 YR 4/4); decreasing clay content.</p> <p>At 47' bgs: Decreasing clay content.</p> <p>At 48' bgs: Occasional sand lenses to 50' bgs.</p> <p>At 48.25' bgs: Dark reddish brown layer to 48.5' bgs.</p> <p>At 49' bgs: Occasional yellow silt lamina.</p>
270				<0.25		50-57	<p>SAND: Olive grey (5 Y 5/2); wet; fine grained; sub-round; well sorted; loose; non-plastic.</p> <p>At 52' bgs: Saturated.</p>
45				<0.25		57-59	<p>At 55' bgs: Very fine grained.</p> <p>At 56.25' bgs: Color change to dark greenish grey (Gley-1 10GY 4/1).</p> <p>SILTY SAND: Dark greenish grey (Gley-1 10GY 4/1); very moist; very fine grained; sub-round; loose to medium dense; non-plastic to slightly plastic.</p> <p>At 58.75' bgs: Trace clay.</p>
265				0.25		59-60.75	<p>SANDY CLAY: Dark greenish grey (Gley-1 10GY 4/1); very moist; medium stiff; low to medium plasticity; sand content very fine grained; trace silt content.</p>
50				1.0-1.25			
260				2.0			
55							
255							
60							



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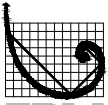
**EP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-31 Date Drilled 2016-05-04
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 65.00' Boring Diam. 6.00"
 N. Coord. 13440278.04' E. Coord. 2137553.92' Surface Elevation 313.23' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 48.00' Sump Length 0'
 Top of Casing Elevation 316.70' Stickup 3.47'
 Depth to Water: 1.Ft. btoc 24.81 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
60				0.25		60.75-63	SILTY SAND: Dark greenish grey (Gley-1 10GY 4/1); very moist; very fine grained; sub-round; loose; slight plasticity. At 61.5' bgs: Medium dense.
				0.5			At 62' bgs: Dense, high plasticity sandy clay layer laminated with grey silt to 62.75' bgs.
250				<0.25		63-65	SAND: Dark greenish grey (Gley-1 10GY 4/1); very moist; fine grained; sub-round; well sorted; loose; non-plastic. At 64.5' bgs: Medium dense.
65				2.5			T.D. = 65.00'
245							
70							
240							
75							
235							
80							



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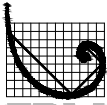
**EP-32
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-32 Date Drilled 2016-05-04
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 52.50' Boring Diam. 6.00"
 N. Coord. 13440120.60' E. Coord. 2139563.40' Surface Elevation 273.26' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 26.00' Sump Length 0'
 Top of Casing Elevation 277.44' Stickup 4.18'
 Depth to Water: 1.Ft. btoc 1.57 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
273.26	0					0-5	SILTY CLAY: Very dark greyish brown (10 YR 3/2); stiff; high plasticity; occasional white calcareous concretions; minor organics (roots).
270	5			1.5-2.0		5-17	SILTY CLAY: Very dark grey (10 YR 3/1); damp to moist; medium stiff; very high plasticity (fat); trace white calcareous concretions to 7' bgs; trace organics (roots) -to 7.5' bgs. At 7' bgs: Trace to minor light yellowish brown mottling. At 7.5' bgs: Trace gypsum nodules. At 8' bgs: Color change to dark greyish brown (10 YR 4/2) with trace mottling; occasional black nodules. At 9' bgs: Color change to greyish brown (10 YR 5/2).
265	10			1.25 1.0 2.0 2.5	EP-32_14-16 USCS: Fat Clay with Sand (CH) AL: 62 / 21 / 41 -200 Sieve: 71.4 Permeability: 8.48x10 ⁻⁹	17-20	At 13.75' bgs: Increased yellowish brown mottling; occasional gypsum nodules. At 14' bgs: Cohesive sample (Shelby tube) collected from 14'-16' bgs. At 14.5' bgs: Color change to light yellowish brown (2.5 Y 6/3) with abundant greyish brown mottling; occasional gypsum crystal lenses. At 15.5' bgs: Trace very fine grained sand content. At 16' bgs: Occasional dark brown mottling; abundant gypsum crystal nodules. At 16.5' bgs: Increasing sand content. SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp; medium stiff to stiff; very high plasticity (fat); sand content very fine grained; trace iron oxide staining; occasional black nodules; abundant gypsum crystals.
260	15			1.25 1.75 2.25 2.75			
255	20						



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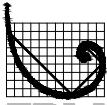
EP-32 DRILLING LOG

Proj. No. 0346369 Boring/Well ID EP-32 Date Drilled 2016-05-04
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 52.50' Boring Diam. 6.00"
 N. Coord. 13440120.60' E. Coord. 2139563.40' Surface Elevation 273.26' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 26.00' Sump Length 0'
 Top of Casing Elevation 277.44' Stickup 4.18'
 Depth to Water: 1.Ft. btoc 1.57 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
20	20	[Pattern]	[Pattern]	1.5		20-20.75	SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp to moist; medium stiff; medium to high plasticity; sand content very fine grained, occurrence increases with depth; occasional iron oxide staining; minor black nodules; abundant gypsum crystals.
	20.75	[Pattern]	[Pattern]	2.0		20.75-21.25	CLAYEY SAND: Light brownish grey (2.5 Y 6/2); moist; very fine grained; sub-round; medium dense; low to slight plasticity; trace silt; abundant iron oxide staining; minor black nodules; trace gypsum crystals. Top of Transmissive Sand Unit.
	21.25	[Pattern]	[Pattern]	2.0		21.25-24	At 21' bgs: Color change to greenish grey (Gley-1 10GY 6/1); occasional black nodules.
	25	[Pattern]	[Pattern]	2.5-3.0		24-32	SILTY SAND: Very dark greenish grey (Gley-1 10GY 6/1); very moist; very fine grained; sub-round; medium dense; slight plasticity; trace clay; minor light grey silt stringers; trace black nodules; occasional black staining. At 22' bgs: Dense; abundant black nodules and staining. At 22.75' bgs: Decreasing silt content. At 23' bgs: Medium dense; no black nodules and staining. At 23.5' bgs: Wet.
	25	[Pattern]	[Pattern]	1.5-1.75	EP-32_25-26 USCS: Silty Sand (SM) AL: Non-Plastic -200 Sieve: 14.5		SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine to fine grained; sub-round; well sorted; loose; non-plastic; trace silt to 24.25' bgs. At 25' bgs: Non-cohesive grab sampled collected from 25'-26' bgs. At 27' bgs: Sand content fine grained.
	25	[Pattern]	[Pattern]	0.75		32-34	At 31.5' bgs: Minor silt content; black silt laminae to 31.6' bgs.
	25	[Pattern]	[Pattern]	<0.25		34-36.25	SILTY SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine grained; sub-round; loose; non-plastic to slightly plastic. At 32.5' bgs: Trace clay content to 32.75' bgs. At 33.5' bgs: Stiff, high plasticity sandy clay layer (1"); thin light grey silt laminae.
	30	[Pattern]	[Pattern]			36.25-42	CLAYEY SAND to SANDY CLAY: Very dark greenish grey (Gley-1 10GY 3/1); moist; very fine grained; sub-round; dense; low plasticity; minor silt content. At 34.5' bgs: Occasional light grey to grey silt laminae (<1 mm). At 35' bgs: Dense. At 35.5' bgs: Abundant light grey silt laminae.
	35	[Pattern]	[Pattern]				SAND: Very dark greenish grey (Gley-1 10GY 3/1); very moist to wet; fine grained; sub-round; well sorted; medium dense; slight plasticity; intermixed with dense, medium to high plasticity, brown silty clay; minor light grey silt stringers to 36.4' bgs. At 38' bgs: Light grey silt stringers to 38.25' bgs.
	40	[Pattern]	[Pattern]				



ERM Environmental Resources Management

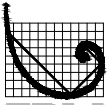
**EP-32
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-32 Date Drilled 2016-05-04
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 52.50' Boring Diam. 6.00"
 N. Coord. 13440120.60' E. Coord. 2139563.40' Surface Elevation 273.26' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 26.00' Sump Length 0'
 Top of Casing Elevation 277.44' Stickup 4.18'
 Depth to Water: 1.Ft. btoc 1.57 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

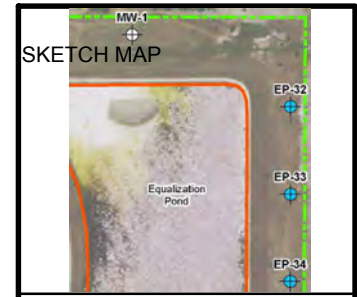
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40				2.0-2.5			At 39' bgs: Trace black nodules and staining. At 39.5' bgs: Dense. At 40' bgs: Medium dense. At 41.5' bgs: Increasing clay content. At 41.75' bgs: Occasional gypsum crystal nodules.
230				1.5-2.0		42-43.5	CLAYEY SAND: Very dark greenish grey (Gley-1 5GY 3/1); moist; very fine grained; sub-round; medium dense, low plasticity; intermixed with dense, medium to high plasticity, brown silty clay; abundant light grey to grey silt stringers; occasional tan silt stringers; trace black nodules.
45				> 4.5		43.5-46	At 43' bgs: Very dense.
				4.0		46-52.5	SANDY SILTY CLAY: Very dark greenish grey (Gley-1 5GY 3/1); damp; very stiff; medium plasticity (increases with depth); sand content very fine grained; abundant grey silt to very fine grained silt stringers; trace black nodules. At 45' bgs: Dense.
225				4.5	EP-32_51-52.5 USCS: Fat Clay (CH) AL: 100 / 27 / 73 -200 Sieve: 94.4 Permeability: 6.76x10 ⁻⁹		CLAY: Greenish black (Gley-1 5GY 2.5/1); damp; very stiff; very high plasticity (fat); thin grey silty to very fine grained sand laminae to 47' bgs. Top of Basal Clay Unit. At 47.5' bgs: Abundant tan silt stringers. At 50' bgs: Occasional tan silt stringers. At 51' bgs: Cohesive sample (California modified split spoon) collected from 51'-52.5' bgs.
50				> 4.5			T.D. = 52.50'
220				4.5			
55							
215							
60							



ERM Environmental Resources Management

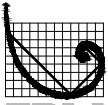
**EP-33
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-33 Date Drilled 2016-05-03
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 41.00' Boring Diam. 6.00"
 N. Coord. 13439793.23' E. Coord. 2139563.41' Surface Elevation 273.66' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 26.00' Sump Length 0'
 Top of Casing Elevation 278.00' Stickup 4.34'
 Depth to Water: 1.Ft. btoc 0.90 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
273.66	0					0-6	SILTY CLAY: Very dark greyish brown (10 YR 3/2); damp; stiff; high plasticity; minor white calcareous concretions and organics (roots).
270	5			0.5-0.75		6-9	At 5' bgs: Color change to dark greyish brown (10 YR 4/2) with minor black mottling; moist to very moist; soft; medium plasticity; occasional white calcareous concretions. No Recovery
265	10			2.0		9-16	SILTY CLAY: Dark greyish brown (10 YR 4/2) with minor light yellowish brown mottling; moist; medium stiff; very high plasticity (fat); minor white calcareous concretions. At 11' bgs: Occasional gypsum seams.
260	15			2.0	EP-33_16-18 USCS: Sandy Lean Clay (CL) AL: 42 / 18 / 24 -200 Sieve: 60.0	16-19.5	At 13' bgs: Increasing yellowish brown mottling; trace grey mottling. At 14.5' bgs: Abundant mottling. At 15' bgs: Gradual color change to light olive brown (2.5 Y 5/3). At 15.5' bgs: Trace very fine grained sand content; increasing silt content; occasional white silt stringers. SANDY CLAY: Light olive brown (2.5 Y 5/3) with trace greenish grey mottling; damp; medium stiff; very high plasticity (fat); sand content very fine grained; minor iron oxide staining (to 18' bgs). Occasional black nodules and abundant gypsum seams at 16.25' bgs. Non-cohesive grab sample collected from 16'-18' bgs.
255	20			3.0-3.5		19.5-21	At 19' bgs: Increasing sand content; occasional iron oxide staining. SANDY CLAY: Pale olive (5 Y 6/3); damp to moist; stiff; medium to low plasticity; sand content very fine grained and occurrence increases with depth; occasional iron oxide staining; minor gypsum inclusions.



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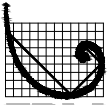
**EP-33
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-33 Date Drilled 2016-05-03
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 41.00' Boring Diam. 6.00"
 N. Coord. 13439793.23' E. Coord. 2139563.41' Surface Elevation 273.66' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 26.00' Sump Length 0'
 Top of Casing Elevation 278.00' Stickup 4.34'
 Depth to Water: 1.Ft. btoc 0.90 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

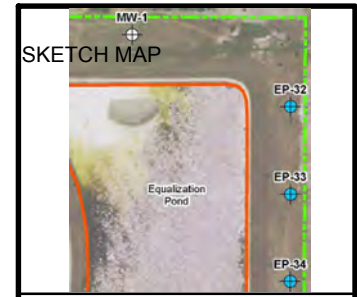
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
20				<0.25		21-23.5	CLAYEY SAND: Pale olive (5 Y 6/3); damp to moist; very fine grained; sub-round; loose to medium dense; slight plasticity; trace silt content; increased clay content from 21.25'-21.75' bgs. Top of Transmissive Sand Unit.
				2.25			
				>4.5		23.5-25	At 21.5' bgs: Abundant iron oxide staining. At 22.25' bgs: Color change to dark greenish grey (Gley-1 5GY 4/1), very dense.
250				1.5-2.0			
25				<0.25		25-32	SILTY SAND: Dark greenish grey (Gley-1 5GY 4/1); very moist; very fine grained; sub-round; medium dense; slight plasticity; dark brown and black staining to 24' bgs. At 24' bgs: Wet.
							SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine grained; sub-round; well sorted; loose; non-plastic. At 26' bgs: Saturated; At 28' bgs: Wet.
245							
30				<0.25		32-33.5	At 31.5' bgs: Minor silt content. SILTY SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine grained; sub-round; loose; non-plastic to slightly plastic.
240				2.0		33.5-38	CLAYEY SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine grained; sub-round; medium dense; low plasticity. At 34.75' bgs: Light grey silt lamina. Very dense, high plasticity silt clay lens from 34.8'-35' bgs.
35				4.25			
				2.0			
				1.5		38-41	At 36.75' bgs: very fine grained, sub-round, well sorted sand lens to 37' bgs. SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine grained; well sorted; medium dense; slight plasticity; intermixed with dark brownish grey silty clay.
235				2.0			
40							



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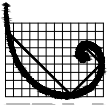
**EP-33
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-33 Date Drilled 2016-05-03
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 41.00' Boring Diam. 6.00"
 N. Coord. 13439793.23' E. Coord. 2139563.41' Surface Elevation 273.66' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 26.00' Sump Length 0'
 Top of Casing Elevation 278.00' Stickup 4.34'
 Depth to Water: 1.Ft. btoc 0.90 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40							T.D. = 41.00'
230							
45							
225							
50							
220							
55							
215							
60							



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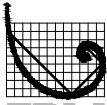
EP-34 DRILLING LOG

Proj. No. 0346369 Boring/Well ID EP-34 Date Drilled 2016-05-03
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 53.50' Boring Diam. 6.00"
 N. Coord. 13439467.18' E. Coord. 2139561.39' Surface Elevation 274.62' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 0'
 Top of Casing Elevation 278.71' Stickup 4.09'
 Depth to Water: 1.Ft. btoc 0.99 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

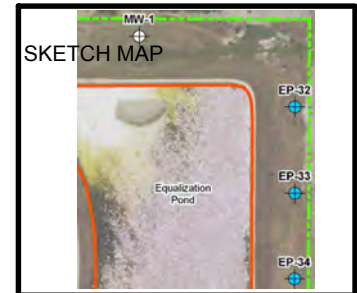
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
274.62	0					0-12	<p>SILTY CLAY: Black (7.5 YR 2.5/1); stiff; high plasticity; minor white calcareous concretions; minor organics (roots).</p> <p>At 5' bgs: Very moist (decreasing moisture with depth); soft to medium stiff; medium to high plasticity; occasional white calcareous concretions.</p> <p>At 9' bgs: No organic content.</p> <p>At 11' bgs: Decreasing silt content; high plasticity.</p> <p>12-13 SANDY SILTY CLAY: Brown (10 YR 5/3); damp; medium stiff; high to very high plasticity (fat); sand content very fine grained; occasional white calcareous nodules and gypsum stringers.</p> <p>13-16 CLAYEY SAND: Light yellowish brown (2.5 Y 6/3); damp; very fine grained; sub-round; loose; slight plasticity; minor silt content; occasional white silt stringers. Sandy clay lens (3") at 13' bgs.</p> <p>At 15.5' bgs: Sandy clay lens (3").</p> <p>16-17 SANDY CLAY to SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp to moist; soft to medium stiff; low plasticity; sand content fine grained; occasional iron oxide staining; occasional white silt stringers; minor gypsum crystal nodules.</p> <p>17-22.5 At 16.8' bgs: Medium to coarse grained, sub-round, well sorted, wet clayey sand lens.</p> <p>SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp; medium stiff; very high plasticity (fat); minor silt content; abundant iron oxide staining; minor organic black staining; abundant gypsum crystal nodules.</p>
270	5			1.0			
265	10			2.0			
260	15			0.5			
255	20			1.5			
				2.25			
				2.5			
				3.0	<p>EP-34_18-20 USCS: Fat Clay with Sand (CH) AL: 91 / 25 / 66 -200 Sieve: 71.4</p>		



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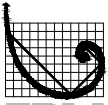
EP-34 DRILLING LOG

Proj. No. 0346369 Boring/Well ID EP-34 Date Drilled 2016-05-03
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 53.50' Boring Diam. 6.00"
 N. Coord. 13439467.18' E. Coord. 2139561.39' Surface Elevation 274.62' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 0'
 Top of Casing Elevation 278.71' Stickup 4.09'
 Depth to Water: 1.Ft. btoc 0.99 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

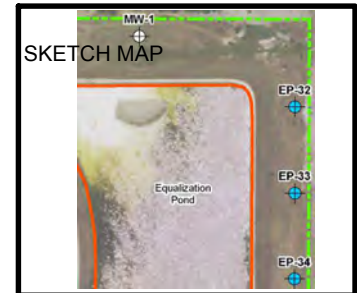
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
20				3.25	EP-34_20-22 USCS: Sandy Fat Clay (CH) AL: 60 / 20 / 40 -200 Sieve: 51.7 Permeability: 1.30x10 ⁻⁸	22.5-24	At 18' bgs: Non-cohesive grab sample collected from 18'-20' bgs. At 19.25' bgs: Gypsum seam (3 mm). At 20' bgs: Cohesive sample (Shelby tube) collected from 20'-22' bgs. At 19.75' bgs: Medium grained, sub-angular, well sorted sand lens (1"). At 21' bgs: Stiff.
25	25			<0.25 3.5 >4.5	EP-34_23-24 USCS: Clayey Sand (SC) AL: 36 / 17 / 19 -200 Sieve: 37.5	24-27	SANDY CLAY: Light olive brown (2.5 Y 5/4); moist; soft to medium stiff with depth; medium plasticity; sand content very fine grained; iron oxide staining; occasional yellow silt stringers. At 23' bgs: Non-cohesive grab sample collected from 23'-24' bgs. At 23.5' bgs: Occasional grey mottling; stiff; increasing sand content; abundant iron oxide staining; abundant silt sand stringers.
				4.0	EP-34_24-25 USCS: Clayey Sand (SC) AL: 38 / 18 / 20 -200 Sieve: 36.3	27-34.5	CLAYEY SAND: Very dark greenish grey (Gley-1 10GY 3/1); damp; very fine grained; sub-round; very dense; slight plasticity; trace silt content. Dense, medium plasticity sandy clay lens (3"); occasional light grey silt stringers. Top of Transmissive Sand Unit. Non-cohesive grab sample collected from 24'-25' bgs. At 24.5' bgs: Occasional black organic nodules. At 26.5' bgs: Dark brown to black staining (1"); decreasing clay content.
245	30			1.25-1.5	EP-34_27-29 USCS: Silty Sand (SM) AL: Non-plastic -200 Sieve: 13.9		SAND: Very dark greenish grey (Gley-1 10GY 3/1); wet; fine grained; sub-round; well sorted; medium dense to loose; non-plastic. Non-cohesive grab sample collected from 27'-29' bgs. At 32.5' bgs: Minor silt content.
240	35			1.0 1.5		34.5-37	SILTY SAND: Very dark greenish grey (Gley-1 10GY 3/1); wet; very fine grained; sub-round; loose to medium dense; slight plasticity; minor to trace clay content.
				4.0-4.5		37-39	CLAYEY SILTY SAND: Very dark greenish grey (Gley-1 10GY 3/1); very moist; very fine grained; sub-round; dense; low plasticity; increasing clay content at depth.
235	40			0.75 2.5		39-39.5 39.5-47	SAND: Very dark greenish grey (Gley-1 10GY 3/1); very moist; fine-grained; sub-round; well sorted; loose; non-plastic. (For description see next page)



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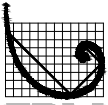
EP-34 DRILLING LOG

Proj. No. 0346369 Boring/Well ID EP-34 Date Drilled 2016-05-03
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 53.50' Boring Diam. 6.00"
 N. Coord. 13439467.18' E. Coord. 2139561.39' Surface Elevation 274.62' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 31.00' Sump Length 0'
 Top of Casing Elevation 278.71' Stickup 4.09'
 Depth to Water: 1.Ft. btoc 0.99 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
230	40			4.25		39.5-47	CLAYEY SAND to SANDY CLAY: Very dark greenish grey (Gley-1 10GY 3/1); very moist; very fine grained; sub-round; trace silt content; intermixed with dense, medium plasticity, dark brown silty clay. At 43' bgs: Very dense; increasing clay content. At 46' bgs: Hard, high plasticity (fat), silty clay lens (2"). At 46.5' bgs: Dense.
	45			>4.5		47-49	SILTY SANDY CLAY: Greenish black (Gley-1 10Y 2.5/1); damp to dry; very stiff; high plasticity; sand content very fine grained; abundant light grey silt stringers; occasional black nodules (<1 mm); rare mollusk shells.
225	50			>4.5		49-53.5	CLAY: Greenish black (Gley-1 10Y 2.5/1); damp; very stiff; very high plasticity (fat); some silt content; occasional light grey silt to very fine grained sand stringers. Top of Basal Clay Unit. At 50' bgs: Non-cohesive grab sample collected from 50'-52' bgs. At 52' bgs: Cohesive sample (California modified split spoon) collected from 52'-53.5' bgs.
220	55				EP-34_50-52 USCS: Fat Clay with Sand (CH) AL: 67 / 21 / 46 -200 Sieve: 76.8 EP-34_52-53.5 USCS: Sandy Fat Clay (CH) AL: 71 / 22 / 49 -200 Sieve: 58.3 Permeability: 7.18x10 ⁻⁹		T.D. = 53.50'
215	60						



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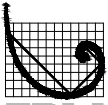
**EP-35
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-35 Date Drilled 2016-05-02
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 45.00' Boring Diam. 6.00"
 N. Coord. 13439140.06' E. Coord. 2139546.31' Surface Elevation 275.71' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 29.00' Sump Length 0'
 Top of Casing Elevation 279.86' Stickup 4.15'
 Depth to Water: 1.Ft. btoc 2.24 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
275.71	0					0-5	SILTY CLAY: Black (2.5 Y 2.5/1); stiff; high plasticity; occasional iron oxide staining; white calcareous nodules; minor organics (roots).
275							
	5			0.5		5-6.75	SILTY SANDY CLAY: Very dark grey (10 YR 3/1); moist to damp; soft; low plasticity; sand content very fine grained; trace iron oxide staining. At 6' bgs: Medium stiff.
270				2.0			
				<0.25		6.75-8.5	CLAYEY SANDY SILT: Very dark grey (10 YR 3/1); moist; loose; slight plasticity; sand content very fine grained.
				1.0			
				2.5-3.0		8.5-11	At 8.25' bgs: Increasing clay content with depth; occasional very fine grained, brown sand stringers. SANDY CLAY: Very dark greyish brown (10 YR 3/2) with light brown mottling (occurrence increases with depth); damp; medium stiff; medium to plasticity; sand content very fine grained; occasional very fine grained, light brown sand stringers.
265	10			3.25			
				3.5		11-15	At 10' bgs: Dark greyish brown (10 YR 4/2); stiff; very high plasticity; abundant white silt stringers. SILTY CLAY: Light yellowish brown (2.5 Y 6/3); damp; stiff; very high plasticity (fat); minor fine grained sand content; occasional white silt to very fine grained sand stringers; trace white calcareous nodules; occasional gypsum crystals.
	15			4.0			
260				3.5		15-22.5	At 13' bgs: Abundant gypsum stringers (to 14' bgs); trace grey mottling, iron oxide staining, and black organic nodules (to 15' bgs). At 14' bgs: Increasing sand content, trace silt and gypsum stringers. SANDY CLAY: Light olive brown (2.5 Y 5/3) with minor grey mottling (to 19' bgs); damp; stiff to very stiff; very high plasticity (fat); sand content very fine grained; trace silt; gypsum nodules throughout. At 17' bgs: Minor iron oxide staining to 18' bgs. At 18' bgs: Minor to occasional iron oxide staining. At 19' bgs: Increasing sand content; abundant iron oxide staining, white silt stringers, and gypsum nodules.
	20						



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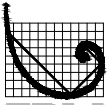
**EP-35
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-35 Date Drilled 2016-05-02
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 45.00' Boring Diam. 6.00"
 N. Coord. 13439140.06' E. Coord. 2139546.31' Surface Elevation 275.71' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 29.00' Sump Length 0'
 Top of Casing Elevation 279.86' Stickup 4.15'
 Depth to Water: 1.Ft. btoc 2.24 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
255	20	[Hatched pattern]	[Solid black]			22.5-24	At 20.5' bgs: Abundant very fine grained, light brown sand stringers to 21' bgs. At 21.5' bgs: Abundant very fine grained, light brown sand stringers to 22.5' bgs. At 22.4' bgs: Greenish grey mottling; gypsum seam (10 mm). SANDY CLAY: Light olive brown (2.5 Y 5/3); damp; medium stiff; medium plasticity; sand content very fine grained; minor silt content (occurrence decreases with depth); iron oxide staining; occasional gypsum crystals to 23' bgs.
250	25	[Hatched pattern]	[Solid black]			24-25	At 23' bgs: Dense; increasing sand content.
250	25	[Hatched pattern]	[Solid black]			25-33	At 23.5' bgs: Medium to low plasticity. CLAYEY SAND: Dark greenish grey (Gley-1 10Y 4/1); damp; very fine grained; sub-round; very dense; low to slight plasticity; abundant light grey silt stringers; occasional intermixed dark grey sandy clay lenses. Top of Transmissive Sand Unit. NO RECOVERY: Soil falls out of casing (saturated).
245	30	[Diagonal lines]	[Dotted pattern]			33-37.5	SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine to fine grained; sub-round; well sorted; loose; non-plastic. At 35.5' bgs: Medium dense; trace silt content (increases with depth).
240	35	[Diagonal lines]	[Dotted pattern]	<0.25		37.5-40	SILTY SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine grained; sub-round; loose; non-plastic to slightly plastic; increasing silt content at depth. At 38.75' bgs: Intermixed medium dense, high plasticity (fat), dark brown clay lenses.
40	40	[Diagonal lines]	[Dotted pattern]	1.5			



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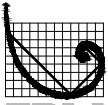
**EP-35
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-35 Date Drilled 2016-05-02
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 45.00' Boring Diam. 6.00"
 N. Coord. 13439140.06' E. Coord. 2139546.31' Surface Elevation 275.71' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 29.00' Sump Length 0'
 Top of Casing Elevation 279.86' Stickup 4.15'
 Depth to Water: 1.Ft. btoc 2.24 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
235	40			1.5		40-41	SAND: Dark greenish grey (Gley-1 10GY 4/1); wet; very fine grained; sub-round; well sorted; medium dense; slightly plastic; intermixed with low to medium plasticity, brown silty clay.
				1.5		41-45	CLAYEY SAND: Dark greenish grey (Gley-1 10GY 4/1); very moist; very fine grained; sub-round; loose to medium dense; slight to low plasticity; intermixed with medium plasticity, brown silt clay; trace silt content. At 43' bgs: Dense. At 44' bgs: Loose to medium dense.
230	45			3.0			
				1.0			
	50						
225							
	55						
220							
	60						



ERM Environmental Resources Management

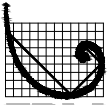
**EP-36
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-36 Date Drilled 2016-05-02
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 47.00' Boring Diam. 6.00"
 N. Coord. 13438803.92' E. Coord. 2139546.80' Surface Elevation 275.58' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 278.50' Stickup 2.92'
 Depth to Water: 1.Ft. btoc 2.98 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
275.58 275	0			>4.5		0-10	SILTY CLAY: Black (10 YR 2/1); very stiff; high plasticity; white calcareous concretions; minor organics (roots). At 5' bgs: Color change to very dark grey (10 YR 3/1); moist; soft to medium stiff (increasing stiffness at depth). At 8' bgs: Abundant light brown mottling; medium dense; minor very fine grained sand content; increasing silt content; trace white calcareous concretions.
270	5			0.5		10-17	SILTY SANDY CLAY: Light yellowish brown (2.5 Y 6/3) with some brown mottling; moist; soft; high plasticity; sand content very fine grained; occasional white calcareous nodules to 10.5' bgs. At 11' bgs: Damp to moist; medium stiff; occasional white silt to very fine grained sand stringers. At 14.5' bgs: Clayey sand lens (0.25").
265	10			0.5-1.0		17-21	At 16' bgs: Minor greyish green mottling; stiff; increasing plasticity with depth; trace iron oxide staining and gypsum crystals. CLAY: Light yellowish brown (2.5 Y 6/3) with greenish grey mottling; damp; medium stiff; very high plasticity (fat); minor to trace silt (decreases with depth); iron oxide staining; white silt to very fine grained sand stringers; occasional gypsum crystals. At 17.8' bgs: Black organic laminae to 18' bgs. At 18' bgs: Minor iron oxide staining to 20' bgs.
260	15			1.5-2.0			
				3.75			
				2.5			
				3.0			
	20						



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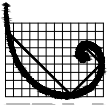
**EP-36
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-36 Date Drilled 2016-05-02
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 47.00' Boring Diam. 6.00"
 N. Coord. 13438803.92' E. Coord. 2139546.80' Surface Elevation 275.58' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 278.50' Stickup 2.92'
 Depth to Water: 1.Ft. btoc 2.98 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
255	20	[Hatched pattern]	[Solid black]	3.5	EP-36_22-23.5 USCS: Sandy Fat Clay (CH) AL: 64 / 21 / 43 -200 Sieve: 1.07x10 ⁻⁸	21-25	At 18.5' bgs: Abundant silt stringers to 18.75' bgs. At 19' bgs: Medium stiff to stiff. At 19.5' bgs: Color change to light olive brown (2.5 Y 5/3); abundant white medium to coarse grained sand stringers; some gypsum crystals. SILTY SANDY CLAY: Light olive brown (2.5 Y 5/3); damp; stiff; very high plasticity (fat); sand content very fine grained; iron oxide staining (to 21.75' bgs); abundant white silt and medium grained sand stringer; minor gypsum crystals. At 22' bgs: Iron oxide staining; minor white silt and medium grained sand stringers; trace yellow silt stringers. Cohesive sample (California modified split spoon) collected from 22'-23.5' bgs. At 24' bgs: Medium dense, increasing sand content.
250	25	[Dotted pattern]	[Dotted pattern]	4.0		25-27	SANDY CLAY to CLAYEY SAND: Very dark greenish grey (Gley-1 10Y 3/1); damp; very stiff; medium to low plasticity; sand content very fine grained, sub-round; decreasing clay content with depth; occasional light grey silt stringers. Top of Transmissive Sand Unit. At 24' bgs: Medium dense, increasing sand content.
245	30	[Dotted pattern]	[Dotted pattern]	4.0	EP-36_29.5-30 USCS: Silty Sand (SM) AL: Non-plastic -200 Sieve: 16.8	27-29	CLAYEY SAND: Very dark greenish grey (Gley-1 10Y 3/1); damp to moist; very fine to fine grained; sub-round; very dense; low to slight plasticity; trace silt; decreasing silt content with depth; occasional light grey silt stringers. At 28' bgs: Very dense; occasional dark brown to black organic silt lenses. SILTY SAND: Very dark greenish grey (Gley-1 10Y 3/1); wet; very fine grained; sub-round; loose; slight plasticity; trace clay content (occurrence decreases with depth); occasional dark brown to black silt stringers. SAND: Dark greenish grey (Gley-1 5GY 4/1); wet; fine grained; sub-round to sub-angular; well sorted; loose; non-plastic. Non-cohesive grab sample collected from 29.5'-30' bgs.
240	35	[Dotted pattern]	[Dotted pattern]	>4.5		29-29.5 29.5-37	
240	40	[Dotted pattern]	[Dotted pattern]	<0.25		37-43	SILTY SAND: Dark greenish grey (Gley-1 5GY 4/1); saturated; very fine grained; sub-round; loose; slight plasticity; trace clay content; minor clayey sand lenses.



ERM Environmental Resources Management

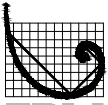
**EP-36
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-36 Date Drilled 2016-05-02
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 47.00' Boring Diam. 6.00"
 N. Coord. 13438803.92' E. Coord. 2139546.80' Surface Elevation 275.58' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 278.50' Stickup 2.92'
 Depth to Water: 1.Ft. btoc 2.98 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
235	40			1.5-1.75		43-47	CLAYEY SAND: Dark greenish grey (Gley-1 5GY 4/1); very moist; very fine grained; sub-round; medium dense; low plasticity; occasional dark greenish grey silty clay lenses. At 45' bgs: Silty clay lenses change color to brown. T.D. = 47.00'
230	45						
225	50						
220	55						
60							



ERM Environmental Resources Management

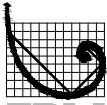
**EP-37
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-37 Date Drilled 2016-04-26
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 56.00' Boring Diam. 6.00"
 N. Coord. 13438531.26' E. Coord. 2139444.56' Surface Elevation 275.02' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 277.80' Stickup 2.78'
 Depth to Water: 1.Ft. btoc 2.31 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Jesse Houghton
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)		
275.02	0			1.0		0-6.5	CLAY to SILTY CLAY: Dark reddish grey (2.5 YR 3/1) to very dark grey (2.5 Y 3/1); wet; stiff; high plasticity; wet from 0-6' bgs; damp to moist from 6.0-6-5' bgs.		
270	5			0.75		6.5-7.5	SILTY CLAY to CLAY: Dark greyish brown (2.5 Y 4/2); damp to moist; stiff; high plasticity; minor sand stringers; white calcareous lenses (<1 mm).		
					1.0		7.5-8	CLAYEY SAND to SANDY CLAY: Olive grey (5 Y 5/2); moist; very fine grained; loose to medium dense; high plasticity.	
					2.5		8-14.5	CLAY: Olive brown (2.5 Y 4/3) with minor green and black mottling; dry; very stiff; high plasticity; minor thin very fine grained sand lenses; black lenses (possibly organic); common white calcareous nodules (<1 mm) and crystals.	
265	10								
								14.5-16	CLAYEY SILTY SAND: Light olive brown (2.5 Y 5/3); damp; loose; slight plasticity.
260	15					0.75		16-21.8	CLAY: Brown (7.5 YR 4/3) with green and orange mottling; dry to damp; very stiff; very high plasticity; occasional fine to very fine grained calcareous concretions and crystals. At 18' bgs: Non-cohesive grab sample collected from 18'-20' bgs. At 18.5' bgs: Very fine grained, orange sand and calcite crystals present along parting planes or fissures to 21.8' bgs; orange and white mottling increase with depth.
						2.5			
	20					4.5			



ERM Environmental Resources Management

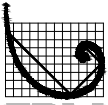
**EP-37
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-37 Date Drilled 2016-04-26
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 56.00' Boring Diam. 6.00"
 N. Coord. 13438531.26' E. Coord. 2139444.56' Surface Elevation 275.02' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 277.80' Stickup 2.78'
 Depth to Water: 1.Ft. btoc 2.31 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Jesse Houghton
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
255	20			4.5	EP-37_18-20 USCS: Fat Clay with Sand (CH) AL: 73 / 22/ 51 -200 Sieve: 84.3	21.8-23	At 19.7' bgs: Silty clay lens to 20.2' bgs. CLAY: Yellowish brown (10 YR 5/4) with orange and cream mottling; dry; very stiff; medium to high plasticity; interbedded with wavy lenses of silty clay and sandy clay.
				4.5		23-25	At 22.3' bgs: Black band (1"); soft peaty clay.
				3.5		25-27.2	CLAYEY SAND: Very dark greenish grey (Gley-1 10Y 3/1) with orange mottling (to 24' bgs); dry; dense; slight plasticity; heterogeneous. Top of Transmissive Sand Unit. SILTY CLAY with SAND: Very dark greenish grey (Gley-1 10Y 3/1); damp; medium stiff; sand content fine to very fine grained.
250	25			3.5		27.2-39.5	At 26.8' bgs: Dark brown mottling. SAND: Greenish grey (Gley-2 10BG 5/1); moist; fine to very fine grained; sub-round; well sorted; loose; non-plastic; homogeneous.
245	30				EP-37_30-32 USCS: Silty Sand (SM) AL: Non-plastic -200 Sieve: 23.1		At 30' bgs: Non-cohesive grab sample collected from 30'-32' bgs.
240	35						CLAYEY SAND: Greenish grey (Gley-2 10BG 5/1); damp to moist; fine to very fine grained; sub-round; well sorted; loose to medium dense; slight plasticity; homogeneous and featureless; rare grey clay mottling.
40	40			1.5		39.5-50	At 39.5' bgs: Laminated, black silty clay lens (2").



ERM Environmental Resources Management

**EP-37
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-37 Date Drilled 2016-04-26
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 56.00' Boring Diam. 6.00"
 N. Coord. 13438531.26' E. Coord. 2139444.56' Surface Elevation 275.02' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 30.00' Sump Length 0'
 Top of Casing Elevation 277.80' Stickup 2.78'
 Depth to Water: 1.Ft. btoc 2.31 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Jesse Houghton
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

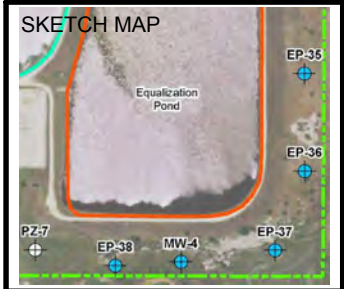
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
235	40						
230	45						
225	50			>4.5		50-53	SANDY SILTY CLAY: Dark bluish grey (Gley-2 5B 4/1); dry to damp; stiff; medium to high plasticity; sand content very fine grained; occasional very small (<1 mm) black nodules and white silt lenses; rare mollusk shells.
220	55			>4.5		53-56	CLAY: Very dark greenish grey (Gley-1 10Y 3/1); dry; very stiff; very high plasticity; blocky; homogeneous and featureless. Top of Basal Clay Unit.
60					EP-37_55-56 USCS: Sandy Fat Clay (CH) AL: 96 / 26 / 70 -200 Sieve: 69.3 Permeability: 9.73x10 ⁻⁹		At 55' bgs: Cohesive sample (California modified split spoon) collected from 55'-56' bgs. T.D. = 56.00'



ERM Environmental Resources Management

EP-38 DRILLING LOG

Proj. No. 0346369 Boring/Well ID EP-38 Date Drilled 2016-04-27
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 40.00' Boring Diam. 6.00"
 N. Coord. 13438478.49' E. Coord. 2138894.74' Surface Elevation 276.97' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 25.00' Sump Length 0'
 Top of Casing Elevation 279.35' Stickup 2.38'
 Depth to Water: 1. Ft. btoc 1.36 (2016-05-24) 2. Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Jesse Houghton
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

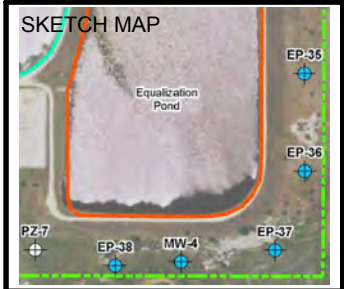
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
276.97	0					0-6.5	SILTY CLAY: Very dark grey (10 YR 3/1); damp to moist; medium stiff; high to very high plasticity; minor very fine grained sand content; homogeneous and featureless; rare organics (peat, roots).
275				0.75			
				0.5		6.5-8	CLAYEY SAND to SANDY CLAY: Very dark grey (10 YR 3/1); damp to moist; very fine grained; loose; rare organics.
270				3.5		8-10	SILTY SANDY CLAY: Very dark grey (10 YR 3/1) with pale brown and occasional green mottling; moist; very stiff; high plasticity.
	10			1.75		10-12.5	CLAY: Brown (10 YR 5/3) with abundant dark grey, green, and tan deformed mottling (wavy); dry; very stiff; very high plasticity; minor silt and very fine grained sand content; abundant calcite and gypsum lenses and occasional lenticular vugs.
265				3.5		12.5-14.5	At 11' bgs: Clayey, very fine grained sand lens (1"). CLAY: Yellowish brown (10 YR 5/4) with dark grey and orange mottling; dry; very dense; very high plasticity; iron oxide staining; abundant calcite and gypsum crystal lenses.
	15			2.5	EP-38_13-15 USCS: Fat Clay (CH) AL: 96 / 26 / 70 -200 Sieve: 93.2	14.5-18	At 13' bgs: Non-cohesive grab sample collected from 13'-15' bgs. CLAY: Yellowish brown (10 YR 5/6); dry to damp; dense; very high plasticity; minor silt and very fine grained sand content; common iron oxide staining; occasional small calcite and gypsum lenses.
260				>4.5		18-20	CLAYEY SAND to SANDY CLAY: Yellowish brown (10 YR 5/4) with occasional grey mottling; damp to moist; very fine grained; dense; high plasticity; common iron oxide staining. At 18.4' bgs: Pink massive gypsum concretion (1").
	20			2.0			



ERM Environmental Resources Management

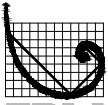
**EP-38
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID EP-38 Date Drilled 2016-04-27
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 40.00' Boring Diam. 6.00"
 N. Coord. 13438478.49' E. Coord. 2138894.74' Surface Elevation 276.97' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 15.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 25.00' Sump Length 0'
 Top of Casing Elevation 279.35' Stickup 2.38'
 Depth to Water: 1 Ft. btoc 1.36 (2016-05-24) 2 Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Jesse Houghton
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
20				2.0		20-22	SANDY CLAY: Very dark grey (Gley-1 N 3); moist; medium stiff; high plasticity; sand content very fine grained. At 20.2' bgs: Increasing sand content with depth; iron oxide stained calcareous concretion (2").
255				2.5		22-23.5	CLAYEY SAND: Dark greenish grey (Gley-1 10Y 4/1); wet; fine to very fine grained; sub-round; medium dense; medium to high plasticity; occasional organic lenses. Top of Transmissive Sand Unit.
25				2.5		23.5-26	SAND: Dark greenish grey (Gley-1 10Y 4/1) with occasional grey mottling; wet; fine to very fine grained; sub-round; loose; non-plastic; some clay content (slightly mottled appearance) from 23.5'-24.5' bgs; occasional black organic seams (>1").
250				2.5		26-40	CLAYEY SAND: Dark greenish grey (Gley-2 5BG 4/1); wet to moist; fine to very fine grained; sub-round; loose to medium dense; slight plasticity; loosely stratified with dark grey clay; generally homogeneous and featureless.
30							At 32' bgs: Saturated.
245							
35							
240							
40							T.D. = 40.00'



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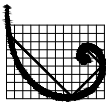
**SP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID SP-31 Date Drilled 2016-05-05
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 62.00' Boring Diam. 6.00"
 N. Coord. 13440939.92' E. Coord. 2136076.16' Surface Elevation 331.89' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 46.50' Sump Length 0'
 Top of Casing Elevation 335.01' Stickup 3.12'
 Depth to Water: 1.Ft. btoc 35.45 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
331.89	0					0-5	NO RECOVERY: Previously excavated for sub-surface clearance activities.
330							
	5			<0.25		5-10	CLAYEY SANDY SILT: Very pale brown (10 YR 7/3); dry to damp; loose; slight plasticity; intermixed with hard, brown silty clay (partially compacted pieces); sand content very fine grained; occasional iron oxide staining (to 6' bgs); abundant yellow silt stringers; occasional gypsum crystals. At 8' bgs: Color change to light reddish brown (5 YR 6/4); silty clay content changes color to reddish brown with some very dark red; occasional iron oxide staining. At 9' bgs: Loose, light grey clayey silt lens to 9.25' bgs.
325							
	10			>4.5		10-16	SILTY CLAY to CLAY: Reddish brown (5 YR 5/3); dry; very stiff; high plasticity; friable; fractures along planar surfaces; occasional iron oxide staining; abundant tan silt to very fine grained sand stringers. At 12' bgs: Decreasing silt to very fine grained sand stringers. At 12.75' bgs: Stiff, high plasticity (fat) clay lens to 13.5' bgs.
320							
	15						At 15' bgs: Color change to dark red (2.5 YR 3/6); soft; medium to low plasticity; increasing silt content with depth; occasional yellow silt laminae.
315				0.5		16-20	CLAYEY SILTY SAND to CLAYEY SANDY SILT: Reddish brown (2.5 YR 4/4); damp; very fine grained; loose; low plasticity; minor iron oxide staining; occasional light grey very fine grained sand stringers; abundant yellow silt stringers. At 17' bgs: Reddish brown intermixed with pale brown (10 YR 7/3). At 18' bgs: Abundant hard silt clay lenses (compact). At 18.3' bgs: Gypsum seam (3 mm); At 19.25' bgs; Gypsum seam (20 mm); abundant iron oxide staining to 19.5' bgs.
	20			<0.25			



ERM Environmental Resources Management

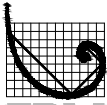
**SP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID SP-31 Date Drilled 2016-05-05
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 62.00' Boring Diam. 6.00"
 N. Coord. 13440939.92' E. Coord. 2136076.16' Surface Elevation 331.89' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 46.50' Sump Length 0'
 Top of Casing Elevation 335.01' Stickup 3.12'
 Depth to Water: 1.Ft. btoc 35.45 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

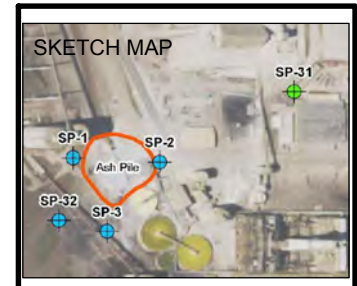
Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
310	20	[Hatched pattern]	[Well casing]	<0.25		20-25.5	SILTY CLAY to CLAY: Dark reddish brown (5 YR 3/3); damp; loose; high plasticity; hard, compact pieces present; soil fractures along planar surfaces. At 20.75' bgs: Minor iron oxide staining and yellow silt stringers, trace gypsum crystals. At 21' bgs: Trace iron oxide staining. At 23' bgs: Damp to dry; minor fine grained sand content; increasing silt content. At 24' bgs; Gypsum crystal seam (5 mm). At 24.5' bgs: Occasional yellow silt stringers and gypsum inclusions. At 25' bgs: Increasing plasticity.
305	25	[Hatched pattern]	[Well casing]	0.5 3.5 4.0		25.5-33	CLAY: Brown (7.5 YR 5/2); damp; stiff to very stiff; very high plasticity (fat); trace silt; minor iron oxide staining and yellow silt stringers. At 27' bgs: Abundant gypsum crystals to 27.5' bgs. At 27.5' bgs: Occasional yellow silt stringers. At 28' bgs: Non-cohesive grab sample collected from 28'-30' bgs. At 29' bgs: Gypsum seam (5 mm). At 29.25' bgs: Color change to dark greenish grey (Gley-1 5GY 4/1); blocky fracturing. At 30.5' bgs: Color change to brown (7.5 YR 4/2); damp to dry; occasional iron oxide staining and yellow silt stringers to 31' bgs.
300	30	[Hatched pattern]	[Well casing]	>4.5 2.5 >4.5	SP-31_28-30 USCS: Fat Clay with Sand (CH) AL: 97 / 26 / 71 -200 Sieve: 75.3	33-35	SANDY CLAY: Brown (7.5 YR 5/2); dry; very stiff; very high plasticity (fat); sand content very fine grained; minor silt content; soil fractures in planar surfaces; abundant yellow silt stringer to 34' bgs. At 34' bgs: Color change to dark greenish grey (Gley-1 5GY 4/1) to 34.5' bgs. At 34.5' bgs: Minor gypsum seams; occasional yellow silt stringers.
295	35	[Dotted pattern]	[Well casing]	1.0-<0.25		35-40	SANDY SILTY CLAY to CLAYEY SILTY SAND: Brown (10 YR 5/3); very moist to wet; soft; low to slight plasticity; sand content very fine grained. At 37.5' bgs: Brown intermixed with reddish brown; decreasing clay content with depth; occasional yellow silt stringers.
40	40	[Dotted pattern]	[Well casing]	<0.25			



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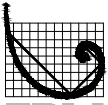
**SP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID SP-31 Date Drilled 2016-05-05
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 62.00' Boring Diam. 6.00"
 N. Coord. 13440939.92' E. Coord. 2136076.16' Surface Elevation 331.89' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 46.50' Sump Length 0'
 Top of Casing Elevation 335.01' Stickup 3.12'
 Depth to Water: 1.Ft. btoc 35.45 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens



NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40				<0.25		40-41	SAND: Greyish brown (2.5 Y 5/2); saturated; very fine grained; sub-round; well sorted; loose; non-plastic.
290				>4.5		41-41.5	At 40.5' bgs: Trace silt and clay content.
				<0.25		41.5-46	At 40.75' bgs: Color change to light grey (2.5 Y 7/2). SANDSTONE: Very dark greenish grey (Gley-1 10 Y 3/1); dry; hard; very fine grained. SAND: Pale olive (5 Y 6/3); wet; very fine grained; sub-round; well sorted; loose; non-plastic. Top of Transmissive Sand Unit.
45				<0.25		46-47.25	At 45' bgs: Occasional yellow silt stringers. SILTY SAND: Pale olive (5 Y 6/3); very moist to wet; very fine grained; loose; slight plasticity; occasional yellow silt stringers.
285				1.0		47.25-57.5	At 47' bgs: Minor clay content. CLAYEY SILTY SAND: Pale olive (5 Y 6/3); very moist; very fine grained; sub-round; loose; slight to low plasticity; occasional iron oxide staining and yellow silt stringers.
50				<0.25			At 49.75' bgs: Increasing clay content; abundant iron oxide staining and yellow silt stringers to 50.25' bgs.
280				0.5			At 50.5' bgs: Color change to olive (5 Y 5/3); medium dense; no iron oxide staining or yellow silt stringers.
				2.0			At 51.5' bgs: Dark reddish brown silty clay lens with clayey silty sand laminae.
55				1.0			At 52' bgs: Color change to dark greyish brown (2.5 Y 4/2); loose.
275				1.5			At 53.5' bgs: Medium stiff, medium plasticity, dark brown silty clay content (intermixed).
				2.0			At 54' bgs: Medium dense; trace to minor silt content.
60				2.5			At 56.5' bgs: Increasing clay content.
				>4.5		57.5-62	CLAY: Dark reddish grey (10 R 4/1); damp to dry; very stiff; very high plasticity (fat); trace silt content (occurrence decreases with depth); top 2" of section dark reddish brown with gypsum crystal inclusions. Top of Basal Clay Unit.



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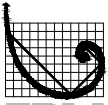
**SP-31
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID SP-31 Date Drilled 2016-05-05
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 62.00' Boring Diam. 6.00"
 N. Coord. 13440939.92' E. Coord. 2136076.16' Surface Elevation 331.89' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 46.50' Sump Length 0'
 Top of Casing Elevation 335.01' Stickup 3.12'
 Depth to Water: 1.Ft. btoc 35.45 (2015-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
60							At 60' bgs: Abundant dark greenish grey very fine grained sand lenses and light grey silt lenses. At 61' bgs: Color change to very dark grey (10 YR 3/1).
270							T.D. = 62.00'
65							
265							
70							
260							
75							
255							
80							



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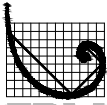
**SP-32
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID SP-32 Date Drilled 2016-05-05
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 2135302.00' E. Coord. 13440520.00' Surface Elevation 325.21' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 37.00' Sump Length 0'
 Top of Casing Elevation 327.89' Stickup 2.68'
 Depth to Water: 1.Ft. btoc 27.42 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
325.21	0					0-5	NO RECOVERY: Previously excavated for sub-surface clearance.
320	5			0.25		5-8.5	CLAYEY SILTY SAND: Light brownish grey (10 YR 6/2); dry; very fine grained; loose; low to slight plasticity; some hard, compact silt clay pieces; occasional iron oxide staining and tan silt stringers.
315	10			2.0		8.5-13	CLAY: Reddish brown (5 YR 4/4); damp; medium stiff; medium plasticity; trace silt content; friable, fractured minor to trace iron oxide staining; occasional tan very fine grained sand stringers. At 10.5' bgs: High plasticity; increasing silt content. At 12' bgs: Dry.
310	15			1.5-2.0		13-20	CLAY: Pale brown (10 YR 6/3); damp; medium stiff; very high plasticity (fat); trace silt content; friable; blocky; fractures along planar surfaces; occasional iron oxide staining; minor yellow silt stringers. At 16' bgs: No yellow silt stringers.
				2.50			
				2.0			
				1.0	SP-32_18-20 USCS: Fat Clay (CH) AL: 101 / 27 / 74 -200 Sieve: 99.7 Permeability: 7.23x10 ⁻⁹		At 18' bgs: Soil no longer blocky and does not fracture. Cohesive sample (Shelby tube) collected from 18'-20' bgs. At 18.5' bgs: Abundant iron oxide staining to 18.75' bgs.
	20			2.5			



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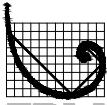
**SP-32
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID SP-32 Date Drilled 2016-05-05
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 2135302.00' E. Coord. 13440520.00' Surface Elevation 325.21' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 37.00' Sump Length 0'
 Top of Casing Elevation 327.89' Stickup 2.68'
 Depth to Water: 1.Ft. btoc 27.42 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)		
305	20	[Graphic Log showing soil layers with various patterns and colors]	[Well Construction diagram showing casing and screen]	2.5		20-24	SILTY SANDY CLAY: Light yellowish brown (2.5 Y 6/3); damp; medium stiff; very high plasticity (fat); sand content very fine grained; trace yellow silt stringers. At 20.75' bgs: Abundant iron oxide staining to 21' bgs. At 22' bgs: Increasing sand and silt content; occasional iron oxide staining and gypsum crystals. At 23' bgs: Soft; occasional yellow silt stringers. At 23.5' bgs: Decreasing plasticity.		
				2.0		24-27	SANDY CLAY: Pale brown (10 YR 6/3); damp; soft; low plasticity; sand content very fine grained; decreasing sand content at depth; trace iron oxide staining; occasional grey very fine grained sand stringers; abundant yellow silt stringers. At 26' bgs: Medium dense; medium plasticity (increases with depth).		
				<0.25		27-30	SANDY CLAY: Pale brown (10 YR 6/3); damp; stiff to very stiff; high to very high plasticity (fat); sand content very fine grained; occasional yellow silt stringers; minor dark reddish brown silt stringers. At 27' bgs: Gypsum seam (2 mm). At 29' bgs: Occasional gypsum crystal inclusions.		
				<0.25		30-37.5	SANDY SILTY CLAY: Brown (7.5 YR 4/1), heavily mottled with light brown; damp; stiff; very high plasticity (fat); sand content very fine grained; abundant light grey very fine grained sand stringers and yellow silt stringers. At 31.5' bgs: No mottling; occasional iron oxide staining.		
				2.0					At 36.5' bgs: Abundant yellow silt stringers to 37.5' bgs.
				4.0					
				3.0-3.5					
				2.5				37.5-38	CLAYEY SAND: Brown (10 YR 5/3); very moist; very fine grained; sub-round; loose; slight plasticity; occasional medium to high plasticity, silty clay lamina. Top of Transmissive Sand Unit.
				1.0				38-39	SAND: Light brownish grey (2.5 Y 6/2); wet; very fine to fine grained; sub-round, well sorted; loose; non-plastic.
				<0.25				39-42	(See next page for description)
		<0.25							
		0.25							



ERM Environmental Resources Management

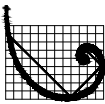
**SP-32
DRILLING LOG**

Proj. No. 0346369 Boring/Well ID SP-32 Date Drilled 2016-05-05
 Phase III - Hydrogeologic Characterization
 Project & Groundwater Monitoring System Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 50.00' Boring Diam. 6.00"
 N. Coord. 2135302.00' E. Coord. 13440520.00' Surface Elevation 325.21' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 37.00' Sump Length 0'
 Top of Casing Elevation 327.89' Stickup 2.68'
 Depth to Water: 1.Ft. btoc 27.42 (2016-05-24) 2.Ft. btoc _____ (_____)
 Drilling Company Cascade Drilling, LLC Driller Brigham Bradford
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204 ORTHO
 HGT NAVD88 COMPUTED USING
 GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
285	40			0.25	SP-32_40-42 USCS: Clayey Sand (SC) AL: 34 / 16 / 18 -200 Sieve: 40.4	39-42	CLAYEY SILTY SAND: Light yellowish brown (2.5 Y 6/3); moist to wet; very fine grained; loose; slight to low plasticity. Non-cohesive grab sampled collected from 40'-42' bgs. At 41' bgs: Medium dense.
				>4.5		42-47.5	SILTY CLAY: Brown (7.5 YR 4/4); damp to dry; very stiff; very high plasticity (fat); abundant light brown very fine grained sand; occasional yellow silt stringers. At 43' bgs: Abundant gypsum crystal inclusions to 43.5' bgs.
280	45			>4.5	SP-32_48-50 USCS: Fat Clay with Sand (CH) AL: 79 / 23 / 56 -200 Sieve: 75.2	47.5-50	At 46.5' bgs: Occasional light brown sand lenses; some gypsum crystal inclusions to 47.5' bgs. CLAY: Very dark greenish grey (Gley-1 10Y 3/1); damp to dry; very stiff; very high plasticity (fat); occasional grey to dark grey silt stringers; occasional thin lamina of gypsum crystals. Top of Basal Clay Unit. At 48' bgs: Non-cohesive grab sample collected from 48'-50' bgs.
275	50						T.D. = 50.00'
270	55						
	60						



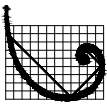
SP-33
DRILLING LOG

Proj. No. 0322807 Boring/Well ID SP-33 Date Drilled 2016-10-18
 Project Additional Ash Pile Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 39.00' Boring Diam. 6.00"
 N. Coord. 13441030.47' E. Coord. 2135343.93' Surface Elevation 327.36' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 24.00' Sump Length 0'
 Top of Casing Elevation 329.96' Stickup 2.60'
 Depth to Water: 1. Ft. btoc 22.55 (2016-10-26) 2. Ft. btoc 0.00 (_____)
 Drilling Company Cascade Drilling, LLC Driller Jagaedy Maples
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
327.36	0				No laboratory samples collected.	0-5	NO RECOVERY: Previously excavated for sub-surface clearance activities. CLAYEY SILTY SAND: Brown (7.5 YR 5/3); dry to damp; very fine grained; medium dense; slight plasticity; minor iron oxide staining; occasional yellow silt stringers.
325	5			2.0-2.5		5-7	CLAYEY SILT: Reddish brown (5 YR 5/3) with brown; dry to damp; medium dense to dense; slight plasticity; occasional very fine grained sand content; minor iron oxide staining; occasional yellow silt stringers. At 8' bgs: Light brownish gray layer (0.5" thick). Loose with occasional partially cemented silt pieces (>4.5 tsf); increasing sand content with depth; occasional iron oxide staining; trace yellow silt stringers.
320	10			3.25 1.5		7-10	CLAYEY SILT TO SILTY CLAY: Pinkish grey (7.5 YR 6/2) with reddish brown; dry to damp; loose with abundant partially cemented silt pieces; slight to low plasticity; occasional very fine grained sand content; minor iron oxide staining; minor yellow and light tannish grey silt stringers. At 11' bgs: Intermixed laminations of loose and hard clayey silt (3" thick). At 11.5' bgs: Color change to dark reddish brown (2.5 YR 3/3) with pinkish grey. At 12' bgs: Decreasing occurrence of partially cemented silt pieces; no yellow silt stringers. At 13' bgs: Increasing occurrence of partially cemented silt pieces; trace yellow silt stringers. At 13.5' bgs: Damp; increasing clay content.
315	15			0.0 3.5 1.5		14-15.5	SILTY CLAY: Brown (7.5 YR 5/3); damp; soft with very stiff partially cemented silty clay; slight to low plasticity; occasional very fine grained sand content; minor iron oxide staining; minor yellow silt stringers. At 15' bgs: Minor gypsum crystals.
310	20			2.5 1.5 4.5		15.5-22.5	CLAY: Pale brown (10 YR 6/3); damp; stiff; high to very high plasticity; occasional silt content; minor iron oxide staining; trace yellow silt stringers; minor gypsum crystals. At 16' bgs: Soft. At 16.5' bgs: Occasional iron oxide staining; minor yellow silt stringers. At 17.5' bgs: Medium stiff. At 18.5' bgs: Soft. At 19' bgs: Color change to brown (10 YR 5/3); Soft with hard (>4.5 tsf) clay pieces; trace iron oxide staining; occasional yellow silt stringers; gypsum seam (0.1" thick).



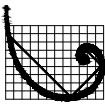
SP-33
DRILLING LOG

Proj. No. 0322807 Boring/Well ID SP-33 Date Drilled 2016-10-18
 Project Additional Ash Pile Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 39.00' Boring Diam. 6.00"
 N. Coord. 13441030.47' E. Coord. 2135343.93' Surface Elevation 327.36' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 5.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 24.00' Sump Length 0'
 Top of Casing Elevation 329.96' Stickup 2.60'
 Depth to Water: 1. Ft. btoc 22.55 (2016-10-26) 2. Ft. btoc 0.00 (_____)
 Drilling Company Cascade Drilling, LLC Driller Jagaedy Maples
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH
 CENTRAL STATE PLANE 4204
 ORTHO HGT NAVD88 COMPUTED
 USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
305	20			1.0		22.5-24	At 20.75' bgs: Increasing silt content; occasional iron oxide staining; minor gypsum crystals. At 21' bgs: Very soft. At 21.5' bgs: Very Stiff; trace iron oxide staining, yellow silt stringers, and gypsum crystals.
275	25			0.5-1.0		24-30	SANDY CLAY TO CLAYEY SAND: Light yellow brown (2.5 Y 6/3); damp; soft; medium to low plasticity; sand content very fine grained; occasional silt with decreasing clay content at depth; occasional iron oxide staining. CLAYEY SAND: Light yellow brown (2.5 Y 6/3); damp to moist; very fine grained; sub-angular; medium dense; slight plasticity; minor iron oxide staining.
300	30			3.5			At 25.5' bgs: Loose. At 26' bgs: Very moist. At 27.5' bgs: Moist. At 28' bgs: Dense; increasing clay content. At 29' bgs: Color change to brown (10 YR 5/3); loose; decreasing clay content.
295	30			>4.5		30-31.5	CLAYEY SILT TO SILTY CLAY: Pale brown (10 YR 6/3) with dark reddish brown (increases with depth); damp; very dense; low plasticity; minor very fine grained sand content; increasing clay content with depth; minor iron oxide staining.
295	31.5			2.5		31.5-33.5	At 31' bgs: Occasional gypsum seams (0.1"-0.2" thick). SILTY CLAY: Reddish brown (5 YR 4/3); damp to dry; very dense; medium to high plasticity; minor to occasional very fine grained sand content (occurrence decreases with depth); occasional iron oxide staining; minor gypsum seams (0.1"-0.2" thick).
295	33.5			>4.5		33.5-39	At 33' bgs: Color change to dark reddish brown (5 YR 3/2). SILTY SANDY CLAY: Very dark grey (Gley-1 N 2.5); damp; medium stiff to stiff; medium to high plasticity; abundant bluish grey silt stringers. Top of Basal Clay Unit. At 34' bgs: Stiff. At 35.5' bgs: Minor iron oxide staining; trace yellow silt stringers. At 36.25' bgs: Medium stiff to 36.5' bgs. At 37.5' bgs: No iron oxide staining or yellow silt stringers. At 38' bgs: Stiff; increasing sand content with depth.
290	35			2.0			T.D. = 39.00'
40	40			3.0-4.0			



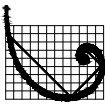
SP-34
DRILLING LOG

Proj. No. 0322807 Boring/Well ID SP-34 Date Drilled 2016-10-19
 Project Additional Ash Pile Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 55.00' Boring Diam. 2.00"
 N. Coord. 13440938.26' E. Coord. 2135661.23' Surface Elevation 332.00' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 39.00' Sump Length 0'
 Top of Casing Elevation 334.62' Stickup 2.62'
 Depth to Water: 1. Ft. btoc 31.00 (2016-10-24) 2. Ft. btoc 0.00 (_____)
 Drilling Company Cascade Drilling, LLC Driller Jagaedy Maples
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
332.00	0				No laboratory samples collected.	0-5	NO RECOVERY: Previously excavated for sub-surface clearance activities.
330	5			0.5-1.5		5-8.5	CLAYEY SILTY SAND: Very pale brown (10 YR 7/3) with light brown (7.5 YR 6/3); damp; very fine grained; loose; slight plasticity; friable; occasional iron oxide staining; trace gypsum crystals. At 7.5' bgs: Partly cemented silty to sandy clay pieces (>4.5 tsf). At 8' bgs: Increasing clay content with depth.
325	10			1.0-1.5 3.0		8.5-12.5	SILTY SANDY CLAY: Brown (7.5 YR 4/3); damp; medium stiff to stiff; medium plasticity; friable; minor iron oxide staining; abundant light brown, very fine grained sand to silt stringers; trace yellow silt stringers. At 10' bgs: Partially cemented silty clay pieces; trace iron oxide staining; occasional yellow silt stringers. At 10.5' bgs: Dark reddish brown color band (0.5' thick); moist; soft. At 11' bgs: Damp, medium stiff; low plasticity; increasing sand content with depth; abundant yellow silt stringers.
320	15			0.5 3.0-3.5		12.5-16	SANDY CLAY: Brown (7.5 YR 4/3); damp; very stiff; medium plasticity; sand content very fine grained; occasional silt content; occasional iron oxide staining; occasional light brown and yellow silt stringers. At 14' bgs: Dark reddish brown silty clay lens (<0.1" thick). At 14.5' bgs: Dark reddish brown silty clay lens (<0.1" thick). At 14.75' bgs: Dark reddish brown mottling. At 15' bgs: Soft; low plasticity; increasing sand and silt content with depth; minor partially cemented sandy clay pieces; abundant iron oxide staining; abundant yellow silt stringers.
315	20			>4.5 0.5 2.0-2.5 4.0->4.5 2.5-3.5		16-21.5	SILTY CLAY: Brown (7.5 YR 4/3) with occasional dark reddish brown and minor light brown mottling; damp; medium stiff; low to medium plasticity; minor iron oxide staining; abundant tan, silt to very fine grained sand stringers. At 16.5' bgs: Minor yellow silt stringers to 17' bgs. At 16.75' bgs: Black vertical and horizontal laminated silt stringers to 17' bgs. At 17' bgs: Soil core breaks along planar surfaces to 18' bgs. At 17.5' bgs: Decreasing sand content with depth; minor dark reddish brown silt stringers. At 18' bgs: Color change to reddish brown (2.5 YR 4/4); medium stiff to stiff; medium plasticity; trace very fine grained sand content; trace iron oxide staining; occasional yellow silt stringers. At 19.5' bgs: Minor gypsum crystals.



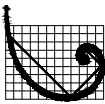
SP-34
DRILLING LOG

Proj. No. 0322807 Boring/Well ID SP-34 Date Drilled 2016-10-19
 Project Additional Ash Pile Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 55.00' Boring Diam. 2.00"
 N. Coord. 13440938.26' E. Coord. 2135661.23' Surface Elevation 332.00' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 39.00' Sump Length 0'
 Top of Casing Elevation 334.62' Stickup 2.62'
 Depth to Water: 1. Ft. btoc 31.00 (2016-10-24) 2. Ft. btoc 0.00 ()
 Drilling Company Cascade Drilling, LLC Driller Jagaedy Maples
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
310	20	[Hatched pattern]	[Well casing]	2.0		21.5-26.5	At 20' bgs: Minor very fine grained sand content; friable; minor iron oxide staining; minor yellow silt stringers. CLAY: Brown (7.5 YR 4/3); damp; very stiff; very high plasticity (fat); trace silt content to 22' bgs; occasional yellow silt stringers. At 21.5' bgs: Abundant iron oxide staining; occasional gypsum crystals. At 22.25' bgs: Diagonally laminated gypsum seam (0.2" thick) to 22.5' bgs. At 22.5' bgs: No iron oxide staining or gypsum crystals. At 22.75' bgs: Gypsum crystals (0.2" thick). At 23.5' bgs: Color change to light brownish grey (10 YR 6/2). At 23.5' bgs: Friable. CLAYEY SILTY SAND TO SANDY SILTY CLAY: Light yellow brown (2.5 Y 6/3); damp; sand content very fine grained; loose; low to slight plasticity; minor iron oxide staining; trace reddish brown silt stringers; minor gypsum crystal seams (<0.1" thick). At 27.5' bgs: Trace to minor yellow silt stringers; occasional partially cemented silty clay pieces to 29.5' bgs. CLAYEY SAND: Yellowish brown (10 YR 5/4); damp; very fine grained; loose; slight plasticity; occasional silt content; occasional partially cemented sandy to silty clay pieces (>4.5 tsf); abundant tan silt stringers; minor brown clay stringers.
305	25	[Hatched pattern]	[Well casing]	3.0-4.5		26.5-29.5	At 30' bgs: Decreasing clay content with depth. At 31' bgs: Minor reddish brown silt stringers; occasional gypsum seams (0.1"-0.2" thick) with loose crystals. At 31.5' bgs: Increasing clay content with depth. SILTY CLAY: Yellowish brown (10 YR 5/4); moist; loose to medium stiff; low to medium plasticity; occasional very fine grained sand content; minor light brown silt stringers; abundant gypsum crystal inclusions. SILTY CLAY: Dark reddish brown (5 YR 3/3); damp; very stiff; medium to high plasticity; trace very fine grained sand content; abundant iron oxide staining; minor light brown and trace yellow silt stringers.
300	30	[Hatched pattern]	[Well casing]	0.0		29.5-32	At 32' bgs: Trace gypsum inclusions (0.2"-0.4" thick). At 32.25' bgs: Black (Gley-1 N 2.5), high plasticity layer to 34.75' bgs; no iron oxide staining; occasional bluish grey silt stringers; trace gypsum crystals. At 35' bgs: Black, medium plasticity layer to 35.75' bgs; occasional bluish grey silt stringers. At 35.75' bgs: Color change to dusky red (2.5 YR 3/2); gypsum seams (0.2" thick). At 36.25' bgs: Color change to Brown (7.5 YR 4/3); moist; medium stiff to stiff; minor very fine grained sand content; abundant iron oxide staining; occasional gypsum crystals.
295	35	[Hatched pattern]	[Well casing]	1.5		32-32.5	CLAYEY SILTY SAND: Light olive brown (2.5 Y 4/3); moist to very moist; very fine grained; sub-angular; loose; slight plasticity; decreasing clay content with depth; occasional iron oxide staining. Top of Transmissive Sand Unit.
295	35	[Hatched pattern]	[Well casing]	>4.5		32.5-37	At 37.5' bgs: Occasional tan silt to very fine grained sand stringers. At 38' bgs: Occasional thin, dark reddish brown silt lenses. SILTY SAND: Olive (5 Y 5/3); wet; very fine grained; sub-angular; loose; slight plasticity to non-plastic; trace clay content (decreases with depth); trace iron oxide staining; trace yellow silt stringers.
40	40	[Hatched pattern]	[Well casing]	3.25		37-38.5	
40	40	[Hatched pattern]	[Well casing]	0.0		38.5-42.5	



SP-34 DRILLING LOG

Proj. No. 0322807 Boring/Well ID SP-34 Date Drilled 2016-10-19
 Project Additional Ash Pile Installation Owner San Miguel Electric Cooperative, Inc.
 Location Christine, TX Boring T.D. 55.00' Boring Diam. 2.00"
 N. Coord. 13440938.26' E. Coord. 2135661.23' Surface Elevation 332.00' Ft. MSL Datum
 Screen: Type Sch. 40 PVC Diam. 2.00" Length 10.00' Slot Size 0.01"
 Casing: Type Sch. 40 PVC Diam. 2.00" Length 39.00' Sump Length 0'
 Top of Casing Elevation 334.62' Stickup 2.62'
 Depth to Water: 1. Ft. btoc 31.00 (2016-10-24) 2. Ft. btoc 0.00 (_____)
 Drilling Company Cascade Drilling, LLC Driller Jagaedy Maples
 Drilling Method Sonic Drilling Log By Nick Houtchens

SKETCH MAP

NOTES
 COORDINATES IN TEXAS SOUTH CENTRAL STATE PLANE 4204 ORTHO HGT NAVD88 COMPUTED USING GEOID12B

Elevation (Feet)	Depth (Feet)	Graphic Log	Well Construction	Penetrometer (TSF)	Lab Sample Data	Description Interval (Feet)	Description/Soil Classification (Color, Texture, Structure)
40				1.0-1.5			At 40' bgs: No yellow silt stringers.
290				0.0		42.5-45.5	At 41' bgs: Medium dense. At 42' bgs: Minor clay content. SAND: Olive (5 Y 5/3); wet; very fine grained; sub-round; well sorted; loose; non-plastic; trace silt content; minor iron oxide staining. At 43.5' bgs: Trace iron oxide staining to 45.5' bgs.
45				0.0-0.5		45.5-47.75	At 44.5' bgs: Increasing silt content with depth. SILTY SAND: Olive (5 Y 5/3); wet; very fine grained; loose; slight plasticity; trace clay content; minor iron oxide staining. At 46.5' bgs: Occasional reddish brown silt stringers.
285				1.5-1.75		47.75-49.5	CLAYEY SILTY SAND: Light olive brown (2.5 Y 5/3); wet; very fine grained; medium dense; low plasticity; increasing clay content with depth; abundant iron oxide staining; trace reddish brown silt stringers.
50				3.25-3.5 4.5		49.5-50 50-51.5	SANDY CLAY: Light olive brown (2.5 Y 5/3) with minor dark red brown mottling; moist to damp; stiff; medium plasticity; sand content very fine grained; occasional silt content; abundant iron oxide staining; abundant light brown silt to very fine grained sand stringers; minor yellow silt stringers; minor gypsum crystals.
280				>4.5		51.5-55	SILTY CLAY: Greenish black (Gley-1 5GY 2.5/1); damp; stiff; high plasticity; intermixed with dark greenish grey (Gley-1 10GY 4/1) silty sand. Top of Basal Clay Unit. At 50.5' bgs: Very stiff; occasional grey silt stringers. At 51' bgs: Occasional thin gypsum seams (0.1" thick). CLAY: Greenish black (Gley-1 5GY 2.5/1); damp; very stiff; very high plasticity (fat); trace silt content; abundant light grey to grey silt stringers; trace gypsum seams (<0.1" thick). T.D. = 55.00'
55							
275							
60							

Appendix B

January 2018 Zephyr Statistical Analysis Report



January 18, 2018

Mr. Ali Abazari

via email: aabazari@jw.com

Partner
Jackson Walker LLP
100 Congress Avenue, Suite 1100
Austin, Texas 78701

Re: Detection Groundwater Monitoring Statistical Comparisons
 Coal Combustion Residual Units
 San Miguel Electric Cooperative, Inc.

Dear Mr. Abazari

Zephyr Environmental Corporation (Zephyr) has prepared this report for San Miguel Electric Cooperative, Inc. (San Miguel) to present the findings of the detection groundwater monitoring results for the following three coal combustion residual (CCR) waste management units:

- Ash Pile;
- Ash Ponds 1A and 1B; and
- Equalization Pond.

San Miguel collected eight sets of groundwater analytical data from each CCR unit background monitoring well and generated statistical background concentrations for the following detection monitoring parameters:

40 CFR 257 A Appendix III Detection Monitoring Parameters
Boron

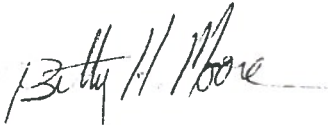
The results of the statistical comparisons for each unit are presented on Tables 1 through 3.

Summary of Detection Monitoring Statistical Comparisons

As can be seen on Tables 1 through 3, statistical exceedances of Appendix III detection monitoring parameters were observed in each downgradient monitoring well at each CCR waste management unit. Based upon these results, within 90 days of the date of this letter and annually thereafter, San Miguel is required to comply with the requirements of 40 CFR 257.95(b) to implement an assessment monitoring program. San Miguel will be required to sample and analyze the groundwater for all constituents listed in Appendix IV of 40 CFR 257. The number of samples collected and analyzed for each well during each sampling event must be consistent with 40 CFR 257.93(e), and must account for any unique characteristics of the site, but must be at least one sample from each well. Sampling will be performed on a semi-annual basis.

If you have any questions regarding these results, please contact me at (512) 879-6622 or at bmoore@zephyrenv.com.

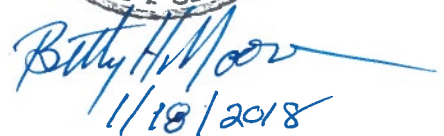
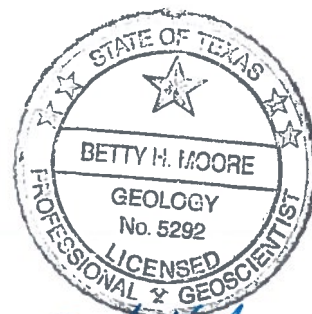
Sincerely,
ZEPHYR ENVIRONMENTAL CORPORATION



Betty H. Moore, P.G., (TXPG-5292)
Senior Consultant

Attachments

cc: Mari Willis – San Miguel Electric Cooperative, Inc.
Mark Shilling – San Miguel Electric Cooperative, Inc.



**TABLE 1
GROUNDWATER ANALYTICAL RESULTS
ASH PILE
DOWNGRADIENT MONITORING WELL DATA
STATISTICAL COMPARISONS**

WELL NO.	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids	Field pH	
STATISTICAL BACKGROUND CONCENTRATION (mg/L)		23.6	823.2	2370	6.205	3900	9451	2.23-3.6	
ANALYTICAL RESULTS (mg/L)									
SP-1	5/26/2016	10.3	577	3330	22	7570	16900	2.86	
	8/17/2016	8.8	509	3270	15.4	7190	15600	3.02	
	10/26/2016	11.3	694	3470	8.14	6530	15100	3.16	
	1/10/2017	8.00	525	3430	9.23	U 6750	14500	3.21	
	2/14/2017	7.64	J 508	3190	16.8	7310	15300	2.07	
	3/21/2017	7.56	J 461	3120	16.1	8200	J- 15600	2.95	
	5/9/2017	7.71	J 537	3120	11.5	7270	16100	3.43	
	6/13/2017	7.64	523	3200	8.53	J- 7060	15500	3.3	
	7/25/2017	11.0	J 640	3550	0.5	U 8530	15700	3.3	
	8/22/2017	7.65	J 529	3310	3.58	7680	15700	3.16	
	SP-2	5/27/2016	8.01	1280	4980	0.5	1660	15000	5.68
		8/7/2016	8.88	1210	5230	0.5	1680	17100	5.88
10/26/2016		10.7	1420	4680	0.513	J 1560	14500	5.63	
1/11/2017		9.33	1240	5320	0.1	U 1660	12800	5.74	
2/14/2017		9.18	J 1190	4850	0.5	U 1610	12500	5.09	
3/22/2017		8.14	1180	4770	ND	U 1610	12800	5.54	
5/10/2017		10.5	J 1240	4720	0.2	U 1570	11500	5.86	
6/13/2017		9.35	1210	4730	0.5	UJ 1720	11000	5.86	
7/25/2017		11.7	J 1310	4950	0.5	U 2580	11800	5.65	
8/22/2017		8.77	J 1190	4770	0.5	U 1700	11700	5.56	
SP-3	5/26/2016	7.66	815	4260	1.09	2870	11500	3.81	
	8/17/2016	7.12	693	4230	0.975	J 3040	13500	5.15	
	10/25/2016	7.54	826	3240	0.552	J 3010	9620	4.65	
	1/11/2017	7.10	751	4230	2.38	U 2750	11500	3.9	
	2/14/2017	6.41	J 732	4050	1.16	J 2610	10800	3.3	
	3/21/2017	6.36	J 694	4110	0.905	J 3200	J- 10600	3.53	
	5/10/2017	6.60	J 781	3980	0.5	U 2420	11500	3.53	
	6/13/2017	6.52	767	4380	0.5	UJ 2830	10800	3.92	
	7/25/2017	8.00	J 846	4100	0.5	U 3600	11200	4.53	
	7/25/2017	9.00	J 829	4360	0.5	U 3730	11400	4.53	
8/22/2017	6.26	J 762	4150	0.5	U 2660	11000	4.27		
SP-32	5/26/2016	11.1	468	1800	17.5	9370	16700	3.45	
	8/17/2016	10.6	420	1700	13	9040	18600	3.45	
	10/25/2016	10.9	510	1780	9.38	9680	16100	3.54	
	1/11/2017	8.89	430	1650	8.9	U 9760	16700	3.61	
	2/14/2017	8.69	J 432	1620	4.08	9710	15900	3.1	
	3/21/2017	8.18	J 393	1630	13.2	10700	J- 15900	3.15	
	5/10/2017	9.00	J 434	1590	9.97	9550	16600	3.55	
	5/10/2017	9.02	J 438	1540	10.3	9360	17000	3.55	
	6/13/2017	9.07	437	1720	6.55	J- 9710	17400	3.49	
	7/25/2017	8.28	J 501	1750	0.5	UJ 11800	16300	3.49	
8/22/2017	7.57	J 429	1640	0.5	U 10100	16500	3.35		

9710 Concentration exceeds statistical background.

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS
ASH PONDS 1A & 1B
DOWNGRAIDENT MONITORING WELL DATA
STATISTICAL COMPARISONS**

WELL NO.	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids	Field pH
STATISTICAL BACKGROUND CONCENTRATION (mg/L)		15.01	908.6	4430	9.837	5630	15819	2.78-6.11
ANALYTICAL RESULTS (mg/L)								
AP-31	5/25/2016	37.6	547	1550	0.5	3310	7990	3.93
	8/17/2016	35.5	505	1760	0.579	J 3590	9580	3.75
	10/27/2016	44.6	602	1550	0.725	J 3300	7820	3.84
	2/16/2017	44.3	592	1560	0.288	J- 3190	7310	3.56
	3/23/2017	40.8	499	1550	ND	U 3310	7010	3.66
	5/15/2017	42.3	J 534	1580	0.1	U 3180	7590	2.96
	7/26/2017	45.1	J 510	1720	0.2	U 3730	7740	3.98
	8/23/2017	41.4	530	1680	0.2	U 3260	7800	3.72
AP-32	5/25/2016	15.4	679	3120	1.42	3570	10200	3.45
	8/17/2016	14	589	3160	20.6	3500	10300	3.49
	10/26/2016	15.8	698	3020	1.62	3360	9780	3.75
	2/17/2017	15.0	726	2880	1.24	J- 3180	10400	3.31
	3/23/2017	19.8	636	2880	1.36	J 3210	8840	3.4
	5/15/2017	15.2	J 658	2910	0.1	U 3230	9600	2.7
	7/26/2017	16.0	J 637	2880	0.5	U 3790	9760	3.75
	8/23/2017	14.8	656	2960	0.5	U 3320	9780	3.48
AP-33	5/25/2016	62.4	752	4390	7.36	3270	13400	2.94
	8/17/2016	56.7	708	4820	7.3	3660	13400	3.31
	10/26/2016	53.5	820	4490	6.15	3380	12900	3.58
	2/17/2017	69.1	857	4170	3.16	J- 3020	13500	3.13
	3/23/2017	64.8	737	4300	5.56	3160	12000	3.24
	5/12/2017	71.4	J 793	4530	0.1	U 3330	10500	3.4
	7/26/2017	65.5	J 736	4310	1.30	J 4150	11900	3.56
	7/26/2017	68.9	J 761	4400	1.26	J 4170	12600	3.58
	8/23/2017	64.9	800	4310	1.12	J 3170	12500	3.28
AP-34	5/25/2016	28.3	634	2700	7.72	3410	10100	3.05
	8/17/2016	27	610	2920	7.26	3790	9860	3.32
	10/25/2016	23	628	2790	5.71	3540	9780	2.99
	2/17/2017	32.4	719	2540	2.81	J- 3170	11000	3.16
	3/23/2017	31.0	727	3340	3.29	2470	10200	3.25
	5/11/2017	32.1	J 649	2780	0.1	U 3430	10100	3.43
	7/26/2017	30.3	J 628	2760	1.21	J 4520	9160	3.6
	8/24/2017	26.6	634	2720	0.789	J 3490	9460	3.56
	8/24/2017	26.7	630	2730	0.880	J 3480	9660	3.56
AP-35	5/26/2016	41.5	628	2050	1.31	2710	8040	3.22
	8/17/2016	37.5	538	2300	2.08	2890	7960	3.61
	10/25/2016	38.1	688	2120	1.85	2740	7680	3.76
	2/17/2017	48.2	677	1880	1.12	J- 2320	7200	3.26
	3/23/2017	45.6	581	2060	1.30	2610	6540	3.42
	5/11/2017	46.5	J 619	2120	0.1	U 2630	6940	3.6
	7/26/2017	44.6	J 589	2070	0.2	U 3590	6830	3.63

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS
ASH PONDS 1A & 1B
DOWNGRAIDENT MONITORING WELL DATA
STATISTICAL COMPARISONS**

WELL NO.	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids	Field pH			
STATISTICAL BACKGROUND CONCENTRATION (mg/L)		15.01	908.6	4430	9.837	5630	15819	2.78-6.11			
ANALYTICAL RESULTS (mg/L)											
AP-36	8/24/2017	41.4	609	2100	0.2	U	2610	7600	3.78		
	5/26/2016	4.38	697	2180	0.55	J	2610	7920	4.32		
	8/17/2016	3.68	U	613	2320	1.13	2770	9200	4.43		
	10/25/2016	2.26	725	2150	1.11	2550	7420	4.22			
	2/17/2017	2.45	734	1970	0.517	J-	2350	6600	3.63		
	3/23/2017	2.25	626	2000	0.658	J	2490	6540	3.63		
	5/11/2017	3.19	J	672	2040	0.1	U	2490	6510	3.97	
	7/27/2017	2.44	J	676	1980	0.2	U	2400	6420	3.95	
	8/24/2017	2.32	647	2020	0.2	U	2530	7010	4.15		
MW-3	5/25/2016	15.6	535	2070	1.05	4260	9810	3.18			
	8/17/2016	13.9	478	2200	1.59	4560	9780	3.56			
	10/27/2016	17.8	563	1990	1.19	4270	9440	3.66			
	2/16/2017	14.9	573	1980	0.540	J-	3990	9780	3.34		
	3/23/2017	15.5	488	1950	0.800	J	4110	9480	3.45		
	5/15/2017	14.2	J	486	1880	0.1	U	3990	9780	2.79	
	7/26/2017	16.0	J	515	1860	0.1	U	4650	9200	3.82	
	8/23/2017	15.2	521	1870	0.2	U	4100	9120	3.59		
	PZ-5	5/25/2016	48.5	663	2900	4.73	2870	9640	3.29		
8/17/2016		42.8	651	3100	4.86	3020	11300	3.51			
10/26/2016		41.2	724	3060	3.66	2950	9160	3.63			
2/17/2017		50.4	752	2770	3.40	J-	2660	9900	3.22		
2/17/2017		51.9	768	2720	1.34	J-	2600	8780	3.22		
3/23/2017		48.8	632	2790	3.24	2760	8600	3.22			
3/23/2017		49.0	637	2840	3.23	2800	9040	3.22			
5/11/2017		50.5	J	699	2950	0.1	U	2860	8220	3.5	
7/26/2017		48.8	J	686	2920	0.2	U	3720	8360	3.71	
PZ-6	8/23/2017	43.3	685	2970	0.2	U	2910	9080	3.42		
	5/25/2016	5.94	598	1600	0.5	3230	7560	5.65			
	8/17/2016	3.86	U	557	1610	0.669	J	3130	9020	5.95	
	10/26/2016	3.13	653	1540	0.726	J	3030	7560	5.98		
	2/17/2017	3.44	674	1420	0.2	UJ	2760	6450	5.36		
	3/21/2017	3.56	J	538	1480	0.316	J	3180	J-	6120	5.45
	5/11/2017	5.50	J	592	1460	0.1	U	2970	6500	5.71	
	5/11/2017	5.17	J	588	1550	0.2	U	3090	6440	5.71	
	7/27/2017	3.34	J	610	1550	0.2	U	3030	7360	5.75	
8/24/2017	2.93	582	1550	0.2	U	3160	6780	5.87			

7560 Concentration exceeds statistical background.

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS
EQUALIZATION POND
DOWNGRAIDENT MONITORING WELL DATA
STATISTICAL COMPARISONS**

WELL NO.	SAMPLE DATE	Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids	Field pH
STATISTICAL BACKGROUND CONCENTRATION (mg/L)		4.829	493.2	282.5	4.839	3982	8114	3.43-4.09
ANALYTICAL RESULTS (mg/L)								
MW-4	5/26/2016	11	314	2050	0.5	2510	7200	6.13
	8/17/2016	11.7	303	2190	0.5	2550	7280	6.29
	10/25/2016	10.8	366	2130	0.541	J 2520	6920	6.32
	2/15/2017	10.6	J 325	1940	0.2	U 2290	6730	5.85
	3/23/2017	9.72	296	1930	ND	U 2460	5850	5.85
	5/10/2017	10.7	J 327	1770	0.1	U 2130	4500	6.1
	7/27/2017	10.7	J 314	1740	0.1	U 2650	4860	6.06
	8/24/2017	9.15	297	1810	0.2	U 2310	6460	6.22
EP-32	5/26/2016	29.1	501	2340	0.5	4840	10600	6.76
	8/17/2016	29.8	431	2290	0.709	J 4840	10200	6.66
	10/25/2016	24.9	557	2280	0.765	J 4390	9960	6.77
	2/15/2017	31.8	J 464	2210	0.2	U 3950	9640	6.46
	3/22/2017	29.8	436	2260	0.372	J 3990	9300	6.45
	5/11/2017	29.2	J 446	2230	0.1	U 4070	9540	6.54
	7/25/2017	30.8	J 509	2170	0.5	U 4360	9800	6.61
	8/22/2017	29.5	J 450	2090	0.5	U 3930	9780	6.42
8/22/2017	30.6	J 447	2200	0.5	U 4120	9800	6.42	
EP-33	5/26/2016	68	598	2830	0.5	3290	10300	6.69
	8/17/2016	68.2	531	2980	0.781	J 3360	9940	6.81
	10/25/2016	57	608	2890	0.916	J 3320	9560	6.88
	2/15/2017	69.9	J 577	2940	0.2	U 2770	9440	6.53
	3/22/2017	69.3	587	3110	0.378	J 2880	9280	6.57
	5/12/2017	78.3	J 618	3370	0.1	U 2900	9960	6.59
	7/25/2017	69.9	J 709	3290	0.5	U 3610	10200	6.66
	8/23/2017	70.2	605	3020	0.5	U 3100	9860	6.47
EP-34	5/26/2016	50.2	517	3640	0.5	2910	10800	6.79
	8/17/2016	74.6	483	3900	0.589	J 3000	10700	6.66
	10/25/2016	61.6	533	3780	0.651	J 3150	10700	6.74
	2/15/2017	51.7	J 448	3660	0.5	U 3100	11300	6.37
	2/15/2017	54.6	J 457	3670	0.5	U 3090	10700	3.37
	3/22/2017	53.5	447	3670	ND	U 3030	10300	6.41
	3/22/2017	50.2	427	3710	ND	U 3110	12300	6.41
	5/11/2017	52.1	J 476	3740	0.1	U 3230	11100	6.49
7/25/2017	55.8	J 510	3860	0.5	U 3500	11400	6.59	
8/23/2017	53.5	489	3700	0.5	U 3210	11300	6.46	
EP-35	5/26/2016	23.4	367	3170	0.5	3450	10700	6.27
	8/17/2016	33.7	276	3410	0.5	3340	10100	6.48
	10/25/2016	25.2	298	3440	0.536	J 3340	9960	6.51
	2/15/2017	35.2	J 283	3130	0.2	U 2870	9800	6.05
	3/22/2017	34.1	269	3230	ND	U 3170	10600	6.22

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS
EQUALIZATION POND
DOWNGRAIDENT MONITORING WELL DATA
STATISTICAL COMPARISONS**

WELL NO.	SAMPLE DATE	Boron		Calcium		Chloride		Fluoride		Sulfate		Total Dissolved Solids		Field pH
STATISTICAL BACKGROUND CONCENTRATION (mg/L)		4.829		493.2		282.5		4.839		3982		8114		3.43-4.09
ANALYTICAL RESULTS (mg/L)														
	5/11/2017	36.7	J	294		3270		0.1	U	3040		9720		6.35
	5/11/2017	36.1	J	283		3320		0.5	U	3010		10200		6.35
	7/25/2017	34.6	J	265		3460		0.5	U	3130		9860		6.4
	8/23/2017	32.8		271		3310		0.5	U	2890		9660		6.27
EP-36	5/26/2016	17.6		439		3350		0.5		2470		10200		6.27
	8/17/2016	22.3		353		3810		0.5		2600		9820		6.22
	10/25/2016	16.2		397		3740		0.5		2580		9720		6.5
	2/16/2017	24.6		434		3600		0.5	UJ	2450		10700		5.88
	3/22/2017	23.4		382		3570		ND	U	2540		11000		6.04
	5/11/2017	25.9	J	418		3650		0.1	U	2530		9800		6.08
	7/25/2017	22.8	J	416		3830		0.5	U	2700		9220		6.2
	8/23/2017	22.4		420		3660		0.5	U	2520		10000		6.09
EP-37	5/26/2016	7.15		534		4270		0.5		3130		11700		6.56
	8/17/2016	9.47		479		4500		0.5		3040		11300		6.3
	10/25/2016	7.48		518		4340		0.528	J	3010		11300		6.47
	2/16/2017	7.52		540		4040		0.5	UJ	2750		11500		6.06
	3/22/2017	7.69		481		4190		ND	U	2850		12500		6.17
	5/10/2017	7.24	J	500		4120		0.1	U	2770		9840		6.34
	7/26/2017	6.72	J	491		4330		0.5	U	2990		9240		6.32
	8/23/2017	6.70		488		4070		0.5	U	2810		11300		6.23
EP-38	5/26/2016	3.82		337		1380		0.5		2140		5800		5.8
	8/17/2016	2.71		307		1380		0.5		2200		5420		5.92
	10/25/2016	2.49		286		1380		0.521	J	2070		5420		5.9
	2/15/2017	3.06	J	291		1070		0.2	U	1780		4690		5.48
	3/22/2017	2.72		289		1180		ND	U	2110		4840		5.58
	5/10/2017	2.74	J	279		1100		0.1	U	1780		7510		5.7
	7/27/2017	2.61	J	292		1140		0.2	U	2240		4400		5.64
	8/24/2017	2.32		287		1130		0.2		1970		4820		5.82
3880	Concentration exceeds statistical background													

Appendix C

Historical Unit 22 Groundwater Monitoring Data

Appendix C

San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
MWA1	9/15/1985	1.60	--	300	--	1,225	2,465	--
	12/15/1985	1.20	--	350	--	850	2,805	--
	3/15/1986	2.40	--	455	--	875	3,230	--
	6/15/1986	2.50	--	850	--	875	3,613	--
	9/15/1986	3.30	--	1,025	--	850	4,760	--
	12/15/1986	3.10	--	1,082	--	750	4,378	--
	3/15/1987	3.90	--	1,037	--	1,052	5,525	--
	6/15/1987	3.40	--	1,300	--	725	8,500	--
	9/15/1987	4.10	--	1,759	--	625	5,814	--
	12/15/1987	3.90	--	1,600	--	1,200	5,525	--
	3/15/1988	2.10	--	1,800	--	850	6,205	--
	6/15/1988	3.30	--	1,524	--	550	5,789	--
	9/15/1988	6.00	--	4,099	--	475	10,787	--
	12/15/1988	4.60	--	2,974	--	825	7,020	--
	3/15/1989	4.90	--	2,600	--	1,075	7,154	--
	6/15/1989	4.50	--	2,590	--	975	7,140	--
	9/15/1989	5.50	--	2,500	--	1,075	5,936	--
	12/15/1989	3.60	--	1,859	--	1,150	5,668	--
	3/15/1990	3.60	--	2,450	--	875	6,300	--
	6/15/1990	4.10	--	2,449	--	1,250	5,486	--
	9/15/1990	5.20	--	2,400	--	2,350	6,271	--
	12/15/1990	4.40	--	2,224	--	850	655	--
	3/15/1991	5.20	--	2,099	--	900	5,818	--
	6/15/1991	5.40	--	2,300	--	1,050	7,034	--
	9/15/1991	5.10	--	100	--	775	5,448	--
	12/15/1991	4.00	--	2,175	--	850	5,926	--
	3/15/1992	9.90	--	7,250	--	2,700	11,887	--
	6/15/1992	8.50	--	8,500	--	2,200	19,080	--
	9/15/1992	9.50	--	8,207	--	2,250	19,800	--
	12/15/1992	7.10	--	5,398	--	1,800	12,427	--
	3/15/1993	2.40	89	5,180	0.45	2,000	1,409	--
	6/15/1993	10.10	1,338	9,000	0.19	2,500	19,584	--
	9/15/1993	9.30	1,322	6,018	0.40	2,700	19,728	--
	12/15/1993	6.40	489	2,250	0.36	1,900	11,066	--
	3/15/1994	5.60	149	3,500	0.40	975	8,554	--
	6/15/1994	6.10	1,142	5,498	0.16	1,575	13,039	--
	9/15/1994	9.60	963	9,147	0.41	2,500	19,008	--
	12/15/1994	8.90	--	8,447	0.49	2,050	18,144	--
	3/15/1995	10.00	1,290	8,492	0.84	2,700	20,016	--
	6/15/1995	8.50	1,477	8,157	0.86	2,000	20,664	--
	9/15/1995	9.70	1,269	8,048	0.89	2,650	20,088	--
	12/15/1995	8.20	1,502	9,597	0.39	3,415	17,712	--
	4/1/1998	5.60	152	2,999	0.39	2,200	6,314	--
	6/15/1998	5.20	165	3,400	0.40	1,930	6,221	7.4
	9/22/1998	6.00	149	2,859	0.34	1,990	5,429	7.2
	12/28/1998	7.00	260	3,499	0.38	2,450	7,906	7.3
	4/2/1999	6.90	462	4,479	0.25	2,510	8,546	7.5
	6/23/1999	5.70	349	4,489	0.34	2,620	10,411	--
	9/21/1999	7.10	362	4,949	0.28	2,800	8,705	7.3
	4/5/2000	6.90	294	3,500	0.12	1,820	8,086	--
	6/14/2000	5.10	322	3,000	0.32	1,475	8,230	7.4
	9/19/2000	6.20	245	3,479	0.35	110	8,813	7.4
	12/28/2000	6.50	207	3,300	0.33	1,443	8,136	7.4
	4/10/2001	9.70	1,203	8,097	0.48	3,660	12,154	6.6
	6/28/2001	10.10	1,065	7,898	0.47	3,690	10,296	6.9
	9/7/2001	10.70	623	6,898	0.44	3,770	12,593	7.5
	12/17/2001	11.20	813	7,648	0.50	3,910	10,512	6.7
	3/13/2002	10.53	892	7,998	0.68	4,280	14,083	6.3
	6/21/2002	8.44	94	7,000	0.43	4,030	12,578	6.7
	9/18/2002	6.45	872	8,397	0.54	4,630	18,432	6.5
	12/11/2002	5.18	817	7,636	0.58	4,420	10,462	6.4
	3/31/2003	6.46	885	6,838	0.66	4,230	12,550	6.2
	6/13/2003	6.31	750	7,120	0.74	4,330	10,721	6.4
	9/12/2003	6.06	791	6,209	0.60	4,470	14,579	6.2
	12/8/2003	10.30	739	6,599	0.66	4,010	15,492	6.2
	2/23/2004	9.76	554	6,209	0.53	2,360	15,468	6.4
	6/14/2004	21.19	680	6,409	0.71	4,100	16,070	6.1
	9/27/2004	4.30	420	6,077	0.60	2,590	15,754	5.9
	12/14/2004	9.17	439	5,942	0.64	3,973	16,092	6.0

Appendix C

San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
	3/10/2005	7.60	969	5,973	0.71	4,085	15,689	--
	6/15/2005	7.64	824	5,774	0.62	4,504	15,977	6.0
	9/20/2005	7.76	788	5,376	0.523	3,807	15,214	6.2
	12/6/2005	8.60	1,083	5,444	0.615	4,504	15,437	6.1
	2/6/2006	8.44	785	5,019	0.641	3,633	15,250	5.98
	6/13/2006	8.63	849	5,574	0.591	3,900	14,875	6.01
	9/19/2006	5.26	774	5,666	0.61	4,121	14,983	5.95
	11/7/2006	7.55	898	5,755	0.587	3,769	15,394	6.29
	2/13/2007	10.49	876	5,311	0.757	4,218	14,933	
	4/18/2007	8.23	684	5,181	0.616	3,080	14,947	5.82
	9/13/2007	8.21	776	5,880	0.803	4,376	15,437	5.69
	12/4/2007		776	5,880	0.803	4,376	15,646	5.99
	2/18/2008	0.08	102	5,275	0.717	3,975	15,617	5.94
	5/14/2008	0.19	838	5,406	0.54	4,612	15,142	6.08
	8/15/2008	0.20	944	6,342	0.486	3,596	15,502	6.11
	10/14/2008	0.16	725	6,219	0.578	3,691	14,868	6.09
	2/16/2009	0.47	725	5,709	0.533	3,760	14,796	6.23
	5/14/2009	0.50	723	5,672	0.843	4,511	14,609	5.31
	9/15/2009	0.55	719	5,891	0.652	4,441	15,250	5.50
	11/19/2009	0.27	792	--	--	--	14,954	5.58
	2/19/2010	0.14	655	5,283	0.794	4,680	14,429	5.27
	6/14/2010	0.18	740	5,327	0.734	4,622	14,414	5.55
	9/23/2010	0.17	752	6,188	0.498	4,012	15,214	5.93
	11/29/2010	0.36	753	5,752	0.41	3,124	15,710	6.35
	6/8/2011	0.07	1,030	5,350	<0.1	3,590	14,900	5.47
	9/21/2011	0.09	1,140	5,150	<0.1	3,920	11,000	4.72
	11/4/2011	0.31	884	5,850	<0.1	3,960	15,000	4.93
	1/17/2012	0.15	874	5,500	<0.1	3,480	13,400	5.41
	4/30/2012	0.09	653	5,140	0.275	3,630	12,400	6.84
	12/3/2012	0.75	774	5,190	0.138	3,800	12,200	4.61
	3/25/2013	0.38	726	4,630	0	3,860	13,200	4.46
	6/17/2013	0.29	782	5,180	0	4,230	12,800	4.33
	9/17/2013	0.24	743	5,210	0	3,520	14,600	--
	11/19/2013	0.14	710	4,750	0.369	3,590	17,700	--
	03/03/2014	0.27	748	4,960	1.23	3,740	15,000	4.63
	06/10/2014	0.23	437	6,040	1.14	3,800	14,400	4.95
	09/08/2014	0.06	766	5,960	0.755	3,860	15,100	--
	12/08/2014	0.20	814	5,460	0.581	3,720	14,600	--
	03/12/2015	0.32	683	5,400	0.1	3,680	14,700	--
	06/01/2015	0.59	293	4,650	1.3	6,380	14,500	--
	09/08/2015	0.43	675	5,190	0.459	3,970	14,500	--
	10/19/2015	2.10	760	5,670	0.371	4,130	14,800	--
	01/19/2016	0.12	634	4,690	0.545	4,570	13,700	--
	04/11/2016	0.35	622	4,450	0.75	5,290	14,100	--
	08/02/2016	0.70	638	5,310	0.1	4,620	13,700	--
	10/10/2016	0.71	236	4,610	0.1	4,340	14,000	--
	01/24/2017	0.70	687	4,840	0.1	4,900	13,400	--
	05/04/2017	0.86	682	4,980	0.1	4,610	14,400	--
min		0.06	89	100	0.00	110	655	4.33
max		21.19	1,502	9,597	1.30	6,380	20,664	7.50
avg		4.71	711	4,876	0.51	2,907	12,004	6.11
n		116	86	116	82	116	117	56

Appendix C

San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
MWA2	9/15/1985	2.70	--	2,050	--	425	5,950	--
	12/15/1985	2.10	--	2,000	--	425	5,610	--
	3/15/1986	2.10	--	2,229	--	425	6,715	--
	6/15/1986	2.60	--	2,250	--	425	6,715	--
	9/15/1986	2.40	--	2,420	--	300	8,500	--
	12/15/1986	2.40	--	2,319	--	425	6,290	--
	3/15/1987	3.40	--	1,929	--	500	6,970	--
	6/15/1987	2.20	--	1,999	--	450	8,160	--
	9/15/1987	3.50	--	2,479	--	450	6,698	--
	12/15/1987	3.40	--	2,600	--	475	6,520	--
	3/15/1988	1.60	--	2,400	--	500	7,055	--
	6/15/1988	4.40	--	2,423	--	475	6,452	--
	9/15/1988	3.20	--	2,099	--	100	6,503	--
	12/15/1988	1.90	--	2,499	--	450	5,774	--
	3/15/1989	2.10	--	2,300	--	625	5,922	--
	6/15/1989	2.10	--	2,460	--	500	6,377	--
	9/15/1989	3.40	--	2,550	--	600	5,831	--
	12/15/1989	2.20	--	2,399	--	525	5,810	--
	3/15/1990	2.40	--	2,583	--	850	6,631	--
	6/15/1990	2.40	--	2,749	--	875	6,516	--
	9/15/1990	2.90	--	2,600	--	1,700	6,782	--
	12/15/1990	2.70	--	2,649	--	750	662	--
	3/15/1991	2.60	--	2,690	--	675	6,502	--
	6/15/1991	2.00	--	2,750	--	850	7,222	--
	9/15/1991	3.40	--	2,700	--	725	6,508	--
	12/15/1991	3.10	--	2,600	--	750	6,826	--
	3/15/1992	2.70	--	2,850	--	813	4,889	--
	6/15/1992	2.20	--	2,700	--	700	6,890	--
	9/15/1992	3.10	--	2,509	--	800	7,330	--
	12/15/1992	3.00	--	2,599	--	775	6,552	--
	3/15/1993	6.60	296	2,760	0.46	1,300	6,725	--
	6/15/1993	2.60	297	2,599	0.28	363	7,063	--
	9/15/1993	--	74	4,419	0.29	140	11,448	--
	12/15/1993	4.00	135	4,750	0.53	100	11,232	--
	3/15/1994	4.40	108	5,000	0.32	125	11,722	--
	6/15/1994	4.50	280	4,898	0.32	350	11,117	--
	9/15/1994	3.60	198	5,398	0.11	25	11,369	--
	12/15/1994	5.60	--	5,348	0.42	100	11,621	--
	3/15/1995	4.20	121	5,618	1.2	100	11,441	--
	6/15/1995	3.80	127	4,958	0.54	135	12,528	--
	9/15/1995	3.90	121	5,248	0.77	56	12,046	--
	12/15/1995	3.00	403	5,498	0.25	155	10,980	--
	4/1/1998	4.40	104	4,898	0.31	60	8,870	--
	6/17/1998	4.00	101	5,500	0.33	189	9,180	--
	9/22/1998	3.90	108	5,358	0.26	50	8,338	7.3
	12/28/1998	5.60	111	4,898	0.38	165	9,511	7.3
	4/1/1999	4.20	97	5,278	0.23	187	8,057	7.4
	6/23/1999	3.90	126	5,088	0.36	154	10,087	--
	9/21/1999	4.50	113	5,448	0.27	198	8,438	7.3
	4/5/2000	5.20	137	5,400	0.14	50	7,646	--
	6/14/2000	4.00	123	4,898	0.27	78	8,849	--
	9/13/2000	4.60	96	5,300	0.30	198	10,159	7.4
	12/29/2000	5.50	106	5,198	0.33	198	10,152	7.3
	4/9/2001	4.50	137	5,598	0.31	210	8,395	7.2
	6/28/2001	4.90	117	5,098	0.25	160	6,588	7.5
	9/11/2001	4.40	129	5,098	0.27	199	8,381	7.5
	12/21/2001	3.50	130	1,100	0.33	203	6,624	6.4
	3/4/2002	2.31	121	5,298	0.40	198	11,578	6.9
	6/21/2002	2.95	103	4,750	0.23	200	9,029	7.0
	9/20/2002	2.99	125	4,599	0.28	30	7,402	7.1
	12/17/2002	3.68	118	5,435	0.34	211	8,582	7.1
	3/31/2003	2.67	158	5,004	0.37	201	8,957	7.1
	6/13/2003	3.46	151	4,971	0.29	201	7,625	6.9
	9/12/2003	1.83	147	5,055	0.30	218	11,716	7.2
	12/8/2003	3.35	121	5,237	0.31	213	11,858	7.3
	2/23/2004	2.02	105	4,785	0.26	118	11,888	7.3
	6/14/2004	3.94	106	5,290	0.27	205	11,844	7.3
	9/27/2004	3.06	116	5,118	0.25	230	11,772	7.3
	12/14/2004	2.38	120	4,925	0.26	256	11,923	5.3

Appendix C

San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
	3/28/2005	2.20	145	5,125	0.30	300	11,887	6.7
	6/15/2005	2.39	115	4,697	0.27	301	11,952	7.3
	9/20/2005	3.42	113	4,458	0.27	184	11,606	7.6
	12/6/2005	5.14	89	3,773	0.29	470	9,821	7.4
	2/7/2006	5.14	122	4,660	0.22	279	11,887	7.3
	6/13/2006	4.93	70	3,160	0.34	361	8,345	7.7
	9/19/2006	2.15	105	5,122	0.25	415	11,664	7.3
	11/7/2006	5.06	111	5,214	0.29	172	11,938	7.4
	2/13/2007	4.64	130	4,989	0.27	438	11,592	--
	4/18/2007	4.47	99	5,195	0.26	50	11,830	7.2
	9/13/2007	4.39	97	5,195	0.28	8	11,872	7.2
	12/4/2007	--	828	5,254	0.616	3,902	15,646	5.99
	2/19/2008	4.81	102	4,551	0.282	42	11,664	7.35
	5/14/2008	5.56	114	4,776	0.256	191	11,700	7.41
	8/18/2008	5.17	117	5,024	0.217	178	11,506	7.43
	10/14/2008	4.54	98	5,048	0.342	158	11,419	7.41
	2/17/2009	4.71	102	4,920	0.36	290	11,563	7.54
	5/14/2009	4.77	102	5,529	0.369	198	11,484	7.42
	9/16/2009	4.70	113	5,435	0.342	220	11,750	7.14
	11/19/2009	5.36	117	--	--	--	11,578	7.07
	2/23/2010	4.24	103	5,378	0.263	204	11,765	7.18
	6/14/2010	4.77	112	5,145	0.296	245	11,556	--
	9/23/2010	4.59	103	5,251	0.284	873	11,671	--
	11/30/2010	4.02	103	4,773	0.261	95	12,413	--
	6/8/2011	7.91	158	4,910	0.1	140	9,640	--
	9/21/2011	5.63	173	5,350	0.1	166	9,010	--
	11/8/2011	4.89	112	5,450	0.1	161	9,520	--
	1/18/2012	5.35	119	5,400	0.1	155	9,930	--
	4/30/2012	5.09	98	4,960	0.137	154	11,000	--
	12/4/2012	5.48	111	4,890	0	148	11,500	--
	3/25/2013	5.38	109	4,790	0	140	8,480	--
	6/17/2013	5.78	123	5,220	0	143	8,480	--
	9/17/2013	4.98	174	4,920	0	142	8,860	--
	11/19/2013	5.43	105	4,780	0.1	143	10,700	--
	03/03/2014	5.52	121	4,810	0.278	149	10,400	7.14
	06/10/2014	5.84	118	5,830	0.25	144	9,150	7.16
	09/08/2014	5.39	118	5,690	0.225	137	10,700	--
	12/08/2014	5.72	126	5,390	--	157	9,500	--
	03/13/2015	4.94	120	5,260	0.1	196	9,580	--
	06/02/2015	5.74	121	5,370	0.1	150	8,940	--
	09/09/2015	5.00	116	6,560	0.1	188	9,340	--
	10/19/2015	5.28	108	5,470	0.1	169	9,380	--
	01/19/2016	4.96	109	5,240	0.1	163	9,020	--
	04/12/2016	5.64	119	5,640	0.1	<250	9,320	--
	08/03/2016	6.46	117	5,380	0.1	<250	10,900	--
	10/12/2016	4.72	101	5,240	0.1	136	8,560	--
	01/24/2017	5.69	121	5,560	0.1	128	8,460	--
	05/04/2017	5.38	113	5,650	0.1	156	8,900	--
min		1.60	70	1,100	0.00	8	662	5.25
max		7.91	828	6,560	1.20	3,902	15,646	7.66
avg		4.01	135	4,353	0.27	340	9,259	7.17
n		115	86	116	85	114	117	44

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Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
MWA3	9/15/1985	2.90	--	550	--	675	6,035	--
	12/15/1985	2.00	--	540	--	338	2,890	--
	1/15/1986	1.80	--	650	--	625	3,230	--
	2/15/1986	0.60	--	610	--	600	3,655	--
	3/15/1986	1.90	--	605	--	700	3,910	--
	4/15/1986	0.80	--	710	--	700	3,995	--
	5/15/1986	1.00	--	720	--	725	4,420	--
	6/15/1986	2.40	--	750	--	700	4,250	--
	7/15/1986	1.25	--	800	--	825	4,675	--
	8/15/1986	2.00	--	775	--	700	4,675	--
	10/15/1986	1.30	--	825	--	750	4,760	--
	9/15/1986	0.60	--	700	--	700	4,335	--
	12/15/1986	1.40	--	820	--	625	4,973	--
	3/15/1987	2.20	--	625	--	1,025	5,015	--
	6/15/1987	0.60	--	999	--	750	9,350	--
	9/15/1987	1.40	--	1,120	--	725	4,998	--
	12/15/1987	2.40	--	1,150	--	1,125	4,905	--
	3/15/1988	1.30	--	1,300	--	725	5,568	--
	6/15/1988	1.90	--	1,084	--	850	5,211	--
	9/15/1988	2.30	--	1,100	--	475	5,245	--
	12/15/1988	1.50	--	1,399	--	850	4,788	--
	3/15/1989	1.60	--	1,300	--	1,300	4,970	--
	6/15/1989	2.10	--	1,390	--	1,100	5,467	--
	9/15/1989	2.70	--	1,550	--	1,550	5,005	--
	12/15/1989	1.90	--	1,460	--	1,400	4,938	--
	3/15/1990	1.60	--	1,544	--	1,450	5,270	--
	6/15/1990	1.70	--	1,699	--	1,800	4,925	--
	9/15/1990	2.40	--	1,700	--	2,600	5,616	--
	12/15/1990	2.90	--	2,549	--	1,050	595	--
	3/15/1991	3.60	--	2,700	--	725	6,682	--
	6/15/1991	4.20	--	2,700	--	925	7,582	--
	9/15/1991	4.50	--	2,739	--	700	6,502	--
	12/15/1991	3.20	--	2,400	--	925	6,696	--
	3/15/1992	3.10	--	2,350	--	975	4,687	--
	6/15/1992	2.80	--	2,500	--	675	7,229	--
	9/15/1992	4.50	--	2,959	--	650	8,232	--
	12/15/1992	4.20	--	2,199	--	825	7,884	--
	3/15/1993	<1	86	2,750	0.45	63	8,323	--
	6/15/1993	0.51	85	3,099	0.20	110	5,940	--
	9/15/1993	3.80	47	3,059	0.32	800	8,208	--
	12/15/1993	4.00	82	3,000	0.53	800	8,309	--
	3/15/1994	4.60	78	2,500	0.47	475	8,158	--
	6/15/1994	4.60	141	3,299	0.35	550	8,489	--
	9/15/1994	3.60	142	3,249	0.17	575	7,870	--
	12/15/1994	3.20	--	3,149	0.31	600	7,992	--
	3/15/1995	3.80	80	3,219	1.00	400	8,064	--
	6/15/1995	3.70	85	2,959	0.65	400	8,784	--
	9/15/1995	4.30	82	2,999	0.76	310	8,424	--
	12/15/1995	3.20	380	3,199	0.24	735	7,790	--
	4/1/1998	3.90	60	2,949	0.33	40	6,048	--
	6/15/1998	5.10	61	3,900	0.42	715	7,394	7.5
	9/22/1998	4.70	65	3,109	0.31	40	9,670	7.1
	12/28/1998	5.80	68	5,098	0.49	70	6,790	7.5
	4/1/1999	4.60	66	3,479	0.24	760	5,602	7.7
	6/23/1999	4.40	64	3,089	0.48	550	7,128	--
	9/21/1999	4.50	65	4,699	0.37	795	6,358	7.5
	4/5/2000	5.30	82	3,200	0.23	1,200	7,704	--
	6/14/2000	4.70	80	2,900	0.37	808	5,940	7.6
	9/12/2000	5.00	42	3,200	0.37	775	5,933	7.6
	12/28/2000	4.30	65	3,099	0.40	778	7,466	7.6
	4/10/2001	4.00	80	3,599	0.34	830	5,818	7.4
	6/28/2001	5.10	63	3,199	0.34	753	5,256	7.6
	9/7/2001	3.60	65	3,099	0.36	815	7,373	7.5

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Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
	12/17/2001	4.90	80	3,199	0.49	798	5,458	7.4
	3/4/2002	4.13	74	3,299	0.47	828	8,057	6.9
	6/21/2002	2.76	74	2,750	0.32	778	6,062	7.3
	9/19/2002	3.37	73	2,599	0.37	855	6,588	7.5
	12/11/2002	2.73	67	3,214	0.39	845	5,119	7.3
	3/31/2003	2.87	102	2,898	0.40	783	6,034	--
	6/13/2003	2.95	97	2,913	0.38	753	5,177	7.3
	9/12/2003	3.22	97	2,991	0.37	828	7,247	7.4
	12/8/2003	2.83	71	3,147	0.38	800	7,716	7.5
	2/23/2004	3.34	67	3,068	0.30	450	8,042	7.5
	6/14/2004	3.55	61	3,162	0.35	910	8,158	7.5
	9/27/2004	3.31	44	3,030	0.32	670	8,258	7.4
	12/14/2004	1.78	68	3,073	0.36	740	8,460	5.2
	3/28/2005	2.07	67	3,099	0.36	715	8,222	6.8
	6/15/2005	2.23	68	2,879	0.33	792	8,345	7.5
	9/20/2005	3.61	64	2,719	0.31	694	8,064	7.6
	12/6/2005	5.15	72	2,861	0.31	806	8,136	7.5
	2/7/2006	2.62	77	2,863	0.28	765	8,345	7.4
	6/13/2006	6.26	66	3,505	0.41	1,246	9,670	7.5
	9/19/2006	3.26	68	3,162	0.30	828	8,258	7.6
	11/7/2006	3.76	71	3,098	0.36	437	7,819	7.5
	2/13/2007	4.47	68	2,959	0.37	689	8,417	--
	4/18/2007	4.30	60	2,998	0.32	3,200	8,302	7.4
	9/13/2007	4.65	67	3,138	0.36	892	8,309	7.5
	12/4/2007	4.27	65	2,707	0.331	589	8,208	7.57
	2/19/2008	4.55	60	2,770	0.312	682	8,186	7.61
	5/14/2008	5.48	68	3,120	0.301	827	8,215	7.70
	8/15/2008	5.21	71	2,947	0.316	586	8,186	7.67
	10/14/2008	4.86	57	3,075	0.382	669	8,042	7.72
	2/16/2009	4.65	60	3,067	0.387	400	8,086	7.69
	5/14/2009	4.90	67	3,066	0.459	787	8,222	7.37
	9/16/2009	4.72	74	3,368	0.41	812	8,302	7.36
	11/19/2009	5.25	72	--	--	--	8,208	7.40
	2/19/2010	4.38	67	3,343	0.303	927	8,309	7.39
	6/14/2010	4.79	70	3,293	0.365	1,647	8,100	7.47
	9/23/2010	4.53	61	3,158	0.324	948	8,215	7.49
	11/29/2010	4.38	69	2,681	0.317	374	8,554	7.37
	6/8/2011	7.72	127	2,930	0.1	580	6,860	7.16
	9/20/2011	7.57	93	7,500	0.1	1,260	6,130	7.42
	11/4/2011	5.84	79	3,020	0.167	540	6,800	7.34
	1/18/2012	5.50	70	3,040	1.42	550	7,380	7.35
	4/30/2012	5.18	62	2,880	0.227	505	7,460	7.44
	12/3/2012	5.32	71	2,820	0.161	600	7,260	7.39
	3/25/2013	5.34	68	2,750	0	533	6,460	7.37
	6/17/2013	5.81	72	3,090	0	600	6,040	7.31
	9/16/2013	5.27	72	3,050	0	562	6,910	--
	11/19/2013	5.38	66	2,870	0.1	473	6,800	--
	03/03/2014	5.46	73	2,850	0.407	563	7,170	7.31
	06/10/2014	5.95	74	3,160	0.433	570	6,800	--
	09/08/2014	5.54	71	3,420	0.313	611	7,060	--
	12/08/2014	5.71	80	3,230	0.199	508	6,920	--
	03/12/2015	5.50	81	3,130	0.128	627	6,600	--
	06/01/2015	5.82	74	3,260	0.284	604	7,220	--
	09/08/2015	4.94	68	3,120	0.18	563	6,660	--
	10/19/2015	5.38	68	3,350	0.165	612	6,960	--
	01/19/2016	5.18	69	3,110	0.15	558	6,360	--
	04/11/2016	5.85	75	3,390	0.133	613	6,880	--
	08/02/2016	5.00	63	3,460	0.246	626	6,730	--
	10/10/2016	4.93	61	3,130	0.262	561	6,980	--
	01/24/2017	5.62	<50	3,270	0.1	559	5,800	--
	05/04/2017	5.46	63	3,320	0.1	572	6,980	--
min		0.51	42	540	0.00	40	595	5.17
max		7.72	380	7,500	1.42	3,200	9,670	7.72
avg		3.79	76	2,643	0.33	758	6,744	7.40
n		123	85	123	86	123	124	55

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Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
MWA4	9/15/1985	2.80	--	4,000	--	275	11,750	--
	12/15/1985	2.20	--	4,400	--	275	8,670	--
	1/15/1986	2.40	--	4,149	--	200	9,860	--
	2/15/1986	1.50	--	4,300	--	150	11,900	--
	3/15/1986	2.30	--	4,119	--	900	10,710	--
	4/15/1986	2.30	--	4,009	--	275	11,050	--
	5/15/1986	1.70	--	4,238	--	225	11,475	--
	6/15/1986	2.00	--	4,600	--	225	11,900	--
	7/15/1986	2.10	--	4,688	--	275	10,540	--
	8/15/1986	2.55	--	4,199	--	275	1,275	--
	9/15/1986	1.60	--	4,374	--	175	10,880	--
	10/15/1986	2.40	--	4,200	--	50	10,625	--
	12/15/1986	3.10	--	4,349	--	400	11,050	--
	3/15/1987	2.80	--	3,134	--	363	11,900	--
	6/15/1987	1.60	--	4,299	--	400	15,300	--
	9/15/1987	2.10	--	2,700	--	400	10,974	--
	12/15/1987	3.00	--	4,500	--	400	10,328	--
	3/15/1988	1.80	--	4,300	--	425	10,710	--
	6/15/1988	2.40	--	4,209	--	400	10,285	--
	9/15/1988	2.30	--	4,599	--	50	10,192	--
	12/15/1988	1.80	--	4,474	--	400	8,813	--
	3/15/1989	1.80	--	4,400	--	475	9,583	--
	6/15/1989	1.90	--	4,670	--	400	10,605	--
	9/15/1989	3.80	--	4,700	--	450	9,163	--
	12/15/1989	2.00	--	4,519	--	400	9,548	--
	3/15/1990	1.80	--	4,583	--	450	9,547	--
	6/15/1990	1.70	--	4,499	--	450	9,295	--
	9/15/1990	2.20	--	4,500	--	825	10,202	--
	12/15/1990	2.60	--	4,724	--	350	10,289	--
	3/15/1991	2.80	--	4,499	--	400	10,476	--
	6/15/1991	3.30	--	7,598	--	24	14,688	--
	9/15/1991	4.10	--	7,200	--	25	12,852	--
	12/15/1991	4.20	--	7,000	--	29	14,472	--
	3/15/1992	4.10	--	6,800	--	18	10,400	--
	6/15/1992	3.40	--	7,000	--	450	14,688	--
	9/15/1992	4.70	--	7,008	--	25	15,840	--
	12/15/1992	4.20	--	6,498	--	50	13,997	--
	3/15/1993	9.90	233	7,300	0.36	200	14,378	--
	6/15/1993	4.30	207	6,997	0.16	4	10,937	--
	9/15/1993	3.90	211	6,608	0.20	2	14,832	--
	12/15/1993	4.00	225	6,250	0.27	200	15,480	--
	3/15/1994	4.40	171	6,500	0.31	300	15,336	--
	6/15/1994	4.40	381	7,398	0.28	25	16,344	--
	9/15/1994	3.80	347	7,448	0.17	25	15,768	--
	12/15/1994	5.80	196	7,498	0.37	75	14,616	--
	3/15/1995	4.00	207	6,993	0.70	2	15,840	--
	6/15/1995	3.50	211	7,307	0.43	<1	16,056	--
	9/15/1995	4.60	212	7,050	0.55	<1	15,624	--
	12/15/1995	3.40	513	8,247	0.09	1	14,328	--
	4/1/1998	3.90	187	7,098	0.24	1,620	11,858	--
	6/17/1998	4.30	193	7,700	0.30	2	13,536	7.4
	9/22/1998	3.90	189	7,358	0.21	30	17,712	7.1
	12/28/1998	5.80	195	7,198	0.37	4	12,298	7.1
	4/1/1999	4.30	193	7,278	0.19	5	10,375	7.4
	6/23/1999	3.30	225	6,988	0.29	1	13,068	--
	9/21/1999	5.00	202	7,448	0.26	2	11,088	7.3
	4/5/2000	5.00	256	7,400	0.14	13	10,224	--
	6/14/2000	5.90	198	6,200	0.22	195	11,232	7.4
	9/13/2000	5.00	165	7,500	0.26	2	13,550	7.3
	12/28/2000	4.00	199	7,197	0.29	2	13,529	7.3
	4/11/2001	5.80	248	7,397	0.25	5	12,564	7.0
	6/28/2001	4.60	201	7,298	0.18	1	9,382	7.3
	9/11/2001	3.10	235	7,298	0.23	2	10,865	7.3
	12/17/2001	5.10	222	7,448	0.40	1	11,138	6.9
	3/13/2002	4.72	181	7,498	0.33	27	14,544	6.6
	6/21/2002	4.10	170	7,300	0.22	403	12,953	7.0
	9/18/2002	2.54	233	7,398	0.27	70	16,560	6.7
	12/17/2002	3.53	231	7,361	0.28	57	8,150	6.9
	3/31/2003	2.03	262	6,842	0.30	15	11,722	6.9

Appendix C

San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
	6/16/2003	2.14	259	7,546	0.27	4	13,133	6.5
	9/12/2003	2.73	261	7,075	0.27	18	13,961	7.0
	12/10/2003	3.37	211	7,310	0.26	2	13,697	7.3
	2/25/2004	2.48	198	7,370	0.19	7	13,290	7.2
	6/15/2004	4.62	212	7,433	0.25	5	15,660	7.2
	9/28/2004	2.70	205	7,113	0.23	0	15,869	7.0
	12/14/2004	3.13	239	7,041	0.23	2	15,754	5.3
	3/28/2005	4.81	270	7,102	0.27	13	15,458	6.5
	6/15/2005	2.50	195	6,649	0.24	6	15,581	7.1
	9/19/2005	3.57	201	6,493	0.23	11	15,142	7.2
	12/7/2005	5.23	280	6,587	0.18	75	15,147	7.1
	2/7/2006	4.15	203	6,364	0.17	25	15,588	7.1
	6/13/2006	4.72	202	7,151	0.19	31	15,271	7.1
	9/20/2006	3.95	188	7,454	0.21	25	15,307	7.2
	11/8/2006	3.36	219	7,461	0.25	13	15,919	7.1
	2/13/2007	4.66	236	6,892	0.24	34	15,458	--
	4/18/2007	4.41	174	7,444	0.22	6	15,552	7.0
	9/17/2007	4.30	172	8,131	0.28	28	15,631	7.1
	12/5/2007	4.32	188	6,809	0.21	35	15,185	7.21
	2/19/2008	4.64	199	6,542	0.304	172	14,861	7.32
	5/14/2008	5.44	219	6,766	0.276	141	15,185	7.40
	8/18/2008	5.32	222	7,604	0.242	58	15,062	7.34
	10/13/2008	4.57	182	7,687	0.29	51	15,055	7.31
	2/17/2009	4.69	189	7,786	0.29	43	14,976	7.43
	5/15/2009	5.07	205	7,510	0.352	53	15,084	7.06
	9/21/2009	4.63	204	7,696	0.298	51	15,307	7.04
	11/19/2009	5.18	210	--	--	--	15,271	7.08
	2/23/2010	4.33	186	7,534	0.221	55	15,430	7.12
	6/14/2010	4.65	198	7,581	0.26	56	15,077	7.16
	9/23/2010	4.60	192	7,472	0.239	20	15,185	7.03
	11/30/2010	4.00	198	6,955	0.203	49	16,560	7.11
	3/17/2011	7.40	316	7,350	0.1	39	12,900	--
	6/9/2011	5.54	367	7,400	0.1	48	12,700	6.93
	9/21/2011	5.53	308	7,100	0.1	41	11,700	7.05
	11/8/2011	5.53	205	7,600	0.1	44	12,400	7.06
	1/18/2012	5.17	205	7,900	0.1	38	14,300	7.06
	5/3/2012	5.87	214	7,800	0.1	41	15,000	7.11
	12/4/2012	5.54	219	7,200	0	51	15,000	7.01
	3/26/2013	5.68	236	7,160	0	50	13,000	7.02
	6/18/2013	5.83	235	7,490	0	57	12,800	6.99
	9/17/2013	4.99	328	7,430	0	0	12,400	--
	11/20/2013	5.41	216	7,350	0.1	120	13,300	--
	03/05/2014	5.46	204	5,800	0.213	56	12,900	7.01
	06/10/2014	5.73	218	8,100	0.286	68	12,300	--
	09/08/2014	5.68	243	7,950	0.1	80	13,200	--
	12/09/2014	6.09	230	7,730	0.1	75	13,500	--
	03/13/2015	5.08	203	7,520	0.1	89	13,000	--
	06/02/2015	5.88	231	7,550	67	109	11,600	--
	09/09/2015	5.08	218	9,470	0.1	82	12,800	--
	10/19/2015	5.29	217	7,850	0.1	<250	13,000	--
	01/19/2016	5.31	211	7,330	0.1	51	9,260	--
	04/12/2016	5.62	240	7,510	0.1	<250	12,100	--
	08/03/2016	5.95	247	6,900	0.1	430	18,600	--
	10/12/2016	4.75	210	7,230	0.1	230	12,100	--
	01/24/2017	5.86	214	7,930	0.1	60	11,600	--
	05/04/2017	4.61	242	5,960	0.1	723	10,700	--
min		1.50	165	2,700	0.00	0	1,275	5.33
max		9.90	513	9,470	67.00	1,620	18,600	7.43
avg		4.06	225	6,587	0.99	151	13,033	7.07
n		122	88	121	87	117	122	56

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San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
MWAS	9/15/1985	5.00	--	6,750	--	650	16,388	--
	11/15/1988	6.00	--	7,950	--	25	16,159	--
	12/15/1988	3.40	--	7,373	--	25	13,414	--
	3/15/1989	3.40	--	6,500	--	25	14,700	--
	6/15/1989	2.90	--	8,000	--	50	15,820	--
	9/15/1989	5.20	--	7,900	--	2	13,685	--
	12/15/1989	3.80	--	7,250	--	25	14,673	--
	3/15/1990	4.00	--	7,722	--	150	14,616	--
	6/15/1990	3.70	--	7,298	--	25	15,048	--
	9/15/1990	4.80	--	8,000	--	10	14,976	--
	12/15/1990	4.30	--	7,348	--	75	15,264	--
	3/15/1991	5.00	--	7,448	--	50	16,056	--
	6/15/1991	4.00	--	7,248	--	<1	15,912	--
	9/15/1991	5.00	--	7,900	--	25	13,855	--
	6/15/1992	3.10	--	7,100	--	50	15,696	--
	9/15/1992	4.80	--	6,118	--	25	16,992	--
	12/15/1992	4.10	--	7,498	--	50	15,264	--
	3/15/1993	0.10	279	7,100	0.29	4	16,272	--
	6/15/1993	4.20	258	7,297	0.15	<1	11,880	--
	9/15/1993	4.20	262	6,218	0.20	4	15,912	--
	12/15/1993	4.50	263	7,500	0.24	200	15,624	--
	3/15/1994	4.10	239	8,100	0.25	5	15,840	--
	6/15/1994	4.00	478	7,898	0.25	25	17,568	--
	9/15/1994	4.20	404	7,848	0.23	25	16,704	--
	12/15/1994	5.40	293	7,348	0.39	50	15,624	--
	3/15/1995	4.40	259	7,943	0.70	2	16,560	--
	6/15/1995	4.00	262	7,257	0.44	4	16,920	--
	9/15/1995	4.70	262	7,148	0.51	6	16,704	--
	12/15/1995	4.00	599	8,097	0.07	156	14,832	--
	4/1/1998	4.80	243	7,548	0.23	2,250	13,248	--
	6/15/1998	4.50	235	8,300	0.29	3	11,117	7.5
	9/22/1998	5.30	231	7,808	0.20	50	13,975	7.5
	12/28/1998	5.80	240	7,898	0.33	4	12,812	7.5
	4/2/1999	4.70	237	7,578	0.19	2	10,202	7.6
	6/23/1999	3.90	274	7,788	0.30	2	14,472	--
	9/20/1999	4.80	198	7,798	0.30	3	14,321	7.2
	4/5/2000	5.50	323	8,000	0.14	11	11,376	--
	6/14/2000	4.60	299	7,600	0.22	11	12,629	--
	9/13/2000	4.60	196	7,178	0.25	5	12,053	7.5
	12/29/2000	5.20	247	7,798	0.28	3	13,313	7.5
	4/9/2001	5.90	304	8,097	0.23	65	11,362	7.2
	6/28/2001	5.50	240	7,398	0.17	2	10,519	7.5
	9/11/2001	3.70	284	7,398	0.20	3	13,860	7.5
	3/14/2002	3.02	237	7,998	0.31	3	10,578	6.2
	6/21/2002	5.21	179	8,100	0.23	4	15,408	7.2
	9/30/2002	3.91	270	7,678	0.25	11	15,552	7.1
	12/17/2002	3.83	288	7,768	0.27	11	13,090	7.2
	3/31/2003	2.79	327	7,247	0.26	3	14,760	7.4
	6/13/2003	4.21	318	7,637	0.24	3	10,800	7.2
	9/15/2003	4.35	320	7,629	0.27	5	14,178	7.3
	12/9/2003	4.08	249	7,688	0.25	3	13,832	7.4
	2/25/2004	3.30	272	7,605	0.18	7	13,775	7.5
	6/15/2004	2.63	248	7,762	0.24	16	15,970	7.5
	9/28/2004	3.91	236	7,618	0.21	1	16,459	7.2
	12/15/2004	4.07	296	7,402	0.23	1	16,164	5.2
	3/28/2005	4.78	296	7,437	0.24	44	16,114	6.8
	6/15/2005	3.88	260	7,103	0.23	6	16,409	7.4
	9/19/2005	2.34	241	6,443	0.21	7	15,588	7.5
	12/7/2005	5.67	298	7,394	0.16	56	15,761	7.4
	2/7/2006	5.18	249	6,934	0.17	12	16,272	7.2
	6/13/2006	4.43	253	7,448	0.18	4	15,955	--
	9/20/2006	4.30	227	7,730	0.20	25	15,948	7.2
	11/8/2006	5.36	291	7,634	0.22	15	16,294	7.1
	2/13/2007	5.44	298	7,211	0.21	5	15,948	--
	4/19/2007	4.68	215	7,748	0.21	3	16,186	7.4
	9/17/2007	4.54	208	6,813	0.27	4	16,286	7.4
	12/5/2007	4.63	233	7,096	0.196	22	15,898	7.44
	2/19/2008	4.87	215	6,983	0.213	1	15,696	7.48
	5/14/2008	5.72	247	7,330	0.192	26	16,042	7.64

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San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
	8/21/2008	5.41	251	7,886	0.21	26	15,487	7.43
	10/14/2008	4.96	227	7,855	0.258	3	15,732	7.57
	2/17/2009	5.01	226	8,039	0.271	3	15,552	7.36
	5/15/2009	5.19	233	7,799	0.345	25	15,761	7.29
	9/21/2009	4.94	244	7,866	0.275	29	15,912	7.17
	11/19/2009	5.61	254	--	--	--	15,811	7.13
	2/24/2010	4.53	222	7,786	0.202	30	15,890	7.25
	6/14/2010	5.00	237	7,963	0.235	19	15,638	7.37
	9/23/2010	4.88	223	7,696	0.227	2	15,595	7.25
	11/30/2010	4.16	236	7,197	0.201	10	17,122	7.22
	3/17/2011	5.05	424	7,900	0.1	11	13,600	--
	6/9/2011	7.51	405	7,800	0.1	13	13,800	7.03
	9/22/2011	6.20	216	8,000	0.1	8	12,700	7.28
	11/8/2011	5.21	236	7,900	0.1	14	13,000	7.22
	1/18/2012	5.55	274	7,950	0.1	16	12,800	7.09
	5/7/2012	4.80	215	8,250	0.1	5	14,600	7.26
	7/19/2012	6.00	292	7,550	0.1	11	15,000	7.33
	12/5/2012	5.84	245	7,940	0	9	15,300	7.33
	3/26/2013	6.02	285	7,340	0	18	13,700	7.33
	6/18/2013	6.02	279	7,890	0	6	12,500	7.25
	9/17/2013	5.28	330	7,790	0	11	12,600	--
	11/20/2013	5.93	264	7,490	0.1	4,850	13,500	--
	03/05/2014	5.80	236	7,380	0.187	14	13,800	7.28
	06/11/2014	5.89	271	7,910	0.188	25	13,300	--
	09/09/2014	6.74	1,350	11,500	0.1	2,420	24,400	--
	12/09/2014	6.92	1,610	11,200	0.1	2,080	25,700	--
	03/13/2015	5.54	1,200	11,200	0.1	1,820	24,000	--
	06/02/2015	7.69	734	4,550	0.308	2,900	10,600	--
	09/09/2015	5.32	1,260	14,000	0.1	2,000	22,000	--
	10/19/2015	5.75	1,180	10,800	0.1	1,540	21,500	--
	01/20/2016	5.40	1,030	9,810	0.1	1,070	20,800	--
	04/12/2016	5.52	1,070	11,000	0.1	1,150	20,400	--
	08/03/2016	6.81	1,400	12,400	0.1	1,900	27,000	--
	10/12/2016	5.13	1,320	11,800	0.1	1,710	23,200	--
	01/25/2017	5.69	1,340	12,400	0.1	1,710	22,300	--
	05/05/2017	5.93	1,380	11,200	0.1	1,890	20,700	--
	07/13/2017	5.20	1,160	12,700	0.1	1,860	23,300	--
min		0.10	179	4,550	0.00	1	10,202	5.18
max		7.69	1,610	14,000	0.70	4,850	27,000	7.64
avg		4.80	411	8,005	0.20	327	15,602	7.26
n		106	89	105	88	103	106	54

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San Miguel Electric Cooperative, Inc Power Plant
Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
MWA6	9/15/1994	3.80	350	7,048	0.24	200	14,760	--
	12/15/1994	4.80	298	6,898	0.32	50	14,544	--
	3/15/1995	3.80	227	6,543	0.70	40	14,616	--
	6/15/1995	3.70	226	6,458	0.52	28	14,472	--
	9/15/1995	3.60	254	7,498	0.49	0	15,840	--
	12/15/1995	2.90	600	7,948	0.09	91	13,860	--
	4/1/1998	4.10	231	7,198	0.23	40	12,377	--
	6/16/1998	5.10	234	7,000	0.31	3	12,312	7.5
	9/22/1998	4.90	223	7,508	0.20	50	11,066	7.6
	12/28/1998	4.40	226	7,498	0.35	18	12,096	7.5
	4/2/1999	4.30	235	6,978	0.19	4	11,592	7.7
	6/23/1999	3.70	293	7,488	0.26	3	13,665	--
	9/20/1999	4.60	248	7,378	0.28	5	12,571	7.4
	4/5/2000	5.20	322	7,700	0.25	14	10,476	--
	6/15/2000	5.00	270	7,200	0.24	11	11,030	7.6
	9/13/2000	4.90	194	6,678	0.28	2	12,060	7.7
	12/22/2000	3.40	236	7,398	0.30	3	13,284	7.4
	4/9/2001	5.00	308	7,598	0.25	30	10,922	7.7
	6/28/2001	4.40	236	7,498	0.20	3	11,556	7.6
	9/11/2001	3.30	296	7,398	0.24	4	11,254	7.7
	1/2/2002	4.70	228	7,718	0.32	6	13,068	7.6
	3/14/2002	3.45	260	8,097	0.32	7	11,138	6.7
	6/24/2002	4.19	261	7,800	0.23	6	12,226	7.2
	9/26/2002	2.73	345	7,878	0.26	4	13,716	7.5
	12/17/2002	3.45	296	8,002	0.27	7	13,579	7.2
	3/31/2003	2.15	412	8,241	0.25	20	14,544	7.0
	6/13/2003	2.88	409	8,156	0.24	5	11,117	7.2
	9/15/2003	3.14	430	7,599	0.24	25	14,696	7.3
	12/10/2003	2.95	371	8,674	0.23	30	15,949	7.5
	2/25/2004	3.03	409	8,143	0.19	38	16,252	7.6
	6/16/2004	3.57	432	9,216	0.22	59	18,641	7.5
	9/28/2004	3.79	440	9,026	0.17	153	20,016	7.1
	12/15/2004	3.55	540	9,557	0.18	587	20,585	5.2
	3/28/2005	3.82	1,005	9,981	0.19	1,139	21,362	6.7
	6/15/2005	5.39	762	9,514	0.18	1,369	21,744	7.4
	9/19/2005	4.24	785	9,167	0.16	1,252	21,485	7.5
	12/7/2005	6.11	971	9,877	0.07	1,428	21,874	7.6
	2/7/2006	5.32	756	9,055	0.11	1,749	21,650	7.2
	6/13/2006	5.59	658	9,530	0.12	1,077	20,246	--
	9/20/2006	4.94	575	9,606	0.16	1,016	19,850	7.5
	11/8/2006	4.13	612	9,137	0.18	772	19,656	6.7
	2/13/2007	4.91	634	8,884	0.18	1,130	19,858	--
	4/20/2007	4.97	518	9,467	0.17	898	20,081	7.4
	9/17/2007	4.55	478	8,621	0.24	991	20,246	7.4
	12/6/2007	4.75	521	8,848	0.175	793	19,800	7.54
	2/19/2008	4.99	503	8,714	0.185	827	19,728	7.42
	5/15/2008	5.84	552	9,985	0.164	756	19,512	7.51
	8/21/2008	5.52	534	10,106	0.186	645	18,943	7.63
	10/14/2008	4.96	447	9,657	0.222	629	18,331	7.52
	2/18/2009	5.01	432	9,453	0.217	593	18,086	7.70
	5/18/2009	5.05	414	9,243	0.317	560	18,100	7.06
	9/22/2009	4.83	409	10,239	0.231	391	18,151	7.32
	11/23/2009	5.44	420	--	--	--	18,180	7.33
	3/3/2010	4.50	382	9,131	0.195	261	17,986	7.19
	6/15/2010	4.84	392	10,705	0.215	446	17,921	7.39
	9/23/2010	4.68	362	8,953	0.2	238	17,806	7.29
	12/1/2010	3.95	383	8,257	0.189	106	19,440	7.4
	3/17/2011	6.21	758	9,200	0.1	117	16,300	--
	6/9/2011	6.75	612	10,200	0.1	108	16,500	7.15
	9/22/2011	6.98	352	8,150	0.1	157	13,600	7.34
	11/9/2011	6.11	504	9,500	0.1	98	15,500	7.37
	1/19/2012	5.67	392	8,900	0.1	105	14,600	7.29
	5/3/2012	3.91	370	9,600	0.1	84	16,500	7.34
	7/19/2012	5.82	419	9,750	0.1	78	16,200	7.44
	12/6/2012	5.76	407	8,510	0	75	16,500	7.34
	3/27/2013	5.39	384	8,470	0	61	15,400	7.25
	6/18/2013	5.71	391	8,920	0	94	13,900	7.17
	9/24/2013	6.04	447	9,220	0	75	14,700	--
	11/20/2013	5.66	376	19,500	0.01	370	14,600	--

Appendix C

San Miguel Electric Cooperative, Inc Power Plant
 Unit 22 Groundwater Monitoring Data In Vicinity of Plant

Unit 22 Monitoring Well	Sample Date	Boron mg/l	Calcium mg/l	Chloride mg/l	Fluoride mg/l	Sulfate mg/l	TDS mg/l	pH s.u
	03/05/2014	5.49	359	8,340	0.218	60	16,000	7.33
	06/11/2014	5.53	374	8,880	0.187	85	13,900	--
	09/09/2014	5.51	373	9,310	0.01	86	15,800	--
	12/09/2014	5.95	420	8,530	0.01	69	16,100	--
	03/13/2015	5.16	322	8,650	0.01	87	15,500	--
	06/02/2015	5.92	340	8,790	0.01	374	13,500	--
	09/11/2015	5.41	1,020	5,250	0.01	2,210	13,000	--
	10/20/2015	5.20	341	8,960	0.01	96	15,400	--
	01/20/2016	5.69	364	8,200	0.01	87	15,900	--
	04/13/2016	5.52	344	8,840	0.01	113	15,100	--
	08/03/2016	6.10	342	9,110	0.01	<250	20,500	--
	10/12/2016	4.87	350	8,760	0.01	73	14,100	--
	01/25/2017	5.59	327	9,120	0.01	57	13,600	--
	05/08/2017	5.48	326	9,510	0.01	109	14,800	--
	07/11/2017	5.38	303	9,600	0.01	99	14,500	--
min		2.15	194	5,250	0.00	0	10,476	5.18
max		6.98	1,020	19,500	0.70	2,210	21,874	7.70
avg		4.76	419	8,662	0.18	313	15,856	7.33
n		84	84	83	83	82	84	56

APPENDIX C

Laboratory Analytical Reports and Data Usability Summaries

APPENDIX C.1

Data Usability Summary – March 2018 Sampling Event

This Data Usability Summary (DUS) continues the format established in previous summaries completed by AECOM (AECOM, 2017). The DUS may be modified going forward, according to project needs. The laboratory report and field notes for the March 2018 sampling event were reviewed and the data usability was evaluated following the Draft Groundwater Sampling and Analysis Plan (ERM, 2016) and using the National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017 for applicable metals.

Sample collection was performed by Source Environmental Sciences Inc. (Source) on 19 – 21 March 2018.

Sample Collection and Field Documentation: Sample collection and field documentation were performed in general accordance with the Draft Sampling and Analysis Plan (SAP) (ERM, 2016) with the following variances:

- Field Recording - Field notes were not on waterproof paper and/or waterproof ink, pages were not sequentially numbered and signed by field personnel. Weather conditions were not noted. Written errors were not corrected according to the SAP.
- Field Instrument Calibration - The time, date, and location were not specified for instrument calibration.
- Monitor Well Inspection – No documentation of monitoring well inspection was provided by Source
- Water Level and Total Depth Information – Depth to water and total depth measurements were not consistently recorded to 0.01-foot precision.
- Quality Control Sampling – No field duplicate (blind duplicate), field blank, or matrix spike (MS) samples were collected in the Ash Pile area in March 2018.

ALS Environmental located in Houston, Texas was contracted by Source Environmental Sciences Inc. to analyze groundwater samples from the March 2018 semiannual monitoring event. The radionuclide analyses were subcontracted to ALS Environmental in Fort Collins, Colorado. The prepared lab report was reviewed for data usability.

ALS Environmental is a National Environmental Laboratory Accreditation Program (NELAP) accredited lab with the following applicable NELAP certification:

- ALS Environmental in Houston, Texas - Texas certification No. T10470231-18-21
- ALS Environmental in Fort Collins, Colorado – Texas certification No. T104704241

A total of 31 groundwater samples were analyzed during the March 2018 monitoring event. Samples were analyzed for metals (SW6020A), mercury (SW7470A), anions (E300.0), total dissolved solids (SM2540C), pH (SM 4500-H+ B), Radium-226 (Method 903.1) and Radium-228

by Gas Flow Proportional Counting (GFPC). The samples, corresponding laboratory IDs, and analytical methods are listed in Table C.1.1

The data package issued by the lab contained most of the information required to perform the data validation as specified in the SAP, with several variances as noted below. In addition, only the reporting limits were provided for each method and no data was flagged with a “J”-flag by the laboratory.

Preservation and Holding Times: Samples were received under chain-of-custody, in acceptable physical condition, and within the acceptable temperature limits. Analyses were completed within the required holding time as specified by the method for both semiannual events except for pH, which is an immediate test. Sample EP-32 had a pH above the recommended value for Radium-226 analysis upon arrival to the lab. Additional preservative was added to the sample by the lab on 22 March 2018. This data was qualified with a “J”-flag. Qualified samples are summarized in Table C.1.2.

Initial Calibration and Continuing Calibration Verification (ICV and CCV): As per the NFG (USEPA, 2017), the acceptance criteria specified in the following table were used to qualify the data:

Criteria	Action	
	Detection	Non-Detect
ICV/CCV Recovery		
<75%	J- or R	R
75 – 89%	J	UJ
90 – 110%	None	None
111 – 125%	J+	None
>125%	J+ or R	None

The provided laboratory report did not contain information on Initial Calibration and Continuing Calibration Verification (ICV or CCV). Therefore, this quality control metric cannot be evaluated. No data were qualified due to calibration issues.

Blanks: As specified in the NFG (USEPA, 2017), results were qualified as non-detect (“U”-flag) if the sample concentrations were <10x the method blank concentration. No analytes were detected above the reporting limit (RL) in method blanks during the March 2018 sampling event, therefore no data were qualified due to detections in method blanks.

The NFG (USEPA, 2017) do not specify procedures for the qualification of constituents detected in field or equipment blanks. Following AECOM (2017), sample concentrations that were <5x the field or equipment blank concentrations were qualified with a “U”-flag. Isotope analyses (Radium-226 and -228) were qualified with a “U”-flag if sample concentrations were within the field or equipment blank concentrations plus the reported error.

Chloride was detected in the Equipment Blank (collected 19 March 2018), Field Blank 1 (collected 20 March 2018), and Field Blank 2 (collected 21 March 2018) samples at 0.609, 0.664, and 0.537 mg/L, respectively. These chloride concentrations are two orders of magnitude lower than the corresponding samples and no data was qualified.

Sulfate was detected in the Equipment Blank (collected 19 March 2018), Field Blank 1 (collected 20 March 2018), and Field Blank 2 (collected 21 March 2018) samples at 1.34, 1.35, and 1.42 mg/L, respectively. These sulfate concentrations are three orders of magnitude lower than the corresponding samples and no data was qualified.

Laboratory Control Samples: Following the approach used by AECOM (2017), laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) were qualified according to the following NFG criteria:

Criteria	Action	
	Detection	Non-Detect
LCS/LCSD Recovery		
< 40%	J-	R
40 – 69%	J-	UJ
70 – 130%	None	None
>130%	J+	None
>150%	R	None

The LCS/LCSD recoveries were averaged for comparison to the above criteria. The LCS/LCSD variability was evaluated using the NFG duplicate sample acceptance criteria of 20% relative percent difference (RPD).

All LCS/LCSD recoveries were within 70 – 130% and the %RPD between LCS and LCSD were within 20% for March 2018 sampling events. No data were qualified.

Matrix Spike/Matrix Spike Duplicate and Post Digestion Spike: Matrix Spike (MS)/Matrix Spike Duplicate (MSD) and Post digestion spike (PDS) data were evaluated according to the acceptance criteria below:

Criteria		Action	
MS Recovery	PDS Recovery	Detection	Non-Detect
<30%	<75%	J-	R
<30%	≥75%	J	UJ
30-74%	<75%	J-	UJ
30-74%	≥75%	J	UJ
>125%	>125%	J+	None
>125%	≤125%	J	None
<30%	Not performed*	J-	R
30-74%	Not performed*	J-	UJ
75-125	Not required	None	None
>125	Not performed*	J+	None

MS/MSD recoveries were averaged for the evaluation. Per the NFG (USEPA, 2017), MS/MSDs were not qualified if the parent sample concentration was greater than 4x the concentration of the spike added. The MS/MSD variability was evaluated using the NFG duplicate sample acceptance criteria of 20% relative percent difference (RPD).

The MS/MSD and PDS analysis is detailed in Table C.1.3. Data qualified due to MS/MSD recoveries or variability or PDS recoveries are summarized in Table C.1.2.

Serial Dilution: Per the NFG (USEPA, 2017), the acceptance criteria specified in the following table are recommended to evaluate Serial Dilution (SD):

Criteria	Action	
	Detection	Non-Detect
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D > 10%*	J	UJ
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D ≤ 10%≥75%	None	None
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D ≥ 100%<75%	Professional Judgement	
Sample concentration > 5x CRQL and serial dilution sample concentration < CRQL≥75%	None	None
Interferences present	Professional Judgement	

The provided laboratory report did not specify the method detection limits (MDL). Therefore, this quality control metric cannot be evaluated. No data were qualified due to serial dilution issues.

Field Precision: For all analytes except Radium-226 and Radium-228, field duplicates were evaluated using the following acceptance criteria:

Criteria	Action	
	Detection	Non-Detect
Both sample and field duplicate sample results are >5x MQL and RPD >20%	J	UJ
Both sample and field duplicate sample results are >5x MQL and RPD <20%	None	None
RPD > 100%	Professional Judgement	
Sample result or field duplicate result <5x MQL and absolute difference >MQL	J	UJ
Sample result or field duplicate result <5x MQL and absolute difference <MQL	None	None

Radium-226 and Radium-228 results were qualified due to field duplicate variability if the sample result ranges did not overlap. Data qualified due to field precision variability are summarized in Table C.1.2 and detailed in Table C.1.4.

Analytical Duplicate Evaluation: Five duplicate samples were analyzed for total dissolved solids (TDS). Analytical duplicate RPDs were within the NFG duplicate sample acceptance criteria of 20% RPD.

Four lab duplicate samples were analyzed for Radium-226 and Radium-228. Results were qualified due to lab duplicate variability if the sample result ranges did not overlap. Results were qualified due to analytical duplicate variability are summarized in Table C.1.2.

Summary: No March 2018 data were rejected due to this review and data validation. Variances from the SAP were noted; however these variances were not found to significantly impact the data. All March 2018 data are considered usable, however, the limitations indicated by the data validation qualifiers should be considered.

References

AECOM 2017. Groundwater Sampling Report – Event 8 – August 2017, San Miguel Electric Cooperative, Inc., Atascosa County, Texas, October 2017.

ERM 2016. Draft Groundwater Sampling and Analysis Plan, San Miguel Electric Cooperative, Inc., June 2016.

USEPA 2017. National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017.

TABLE C.1.1
Field and Laboratory Sample Identification and Analyses Performed - March 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Sample ID	Lab ID	Anions by E300.0	Total Dissolved Solids by SM2540C	pH by SM4500H+ B	ICP-MS Metals by SW6020A	Mercury by SW7470A	Radium-226 by Radon Emission Method 903.1	Radium-228 Analysis by GFPC
Ash Pile								
SP-1	1803434-24	HS18031061-24	A	A	A	A	B	B
SP-2	1803434-26	HS18031061-26	A	A	A	A	B	B
SP-3	1803434-22	HS18031061-22	A	A	A	A	B	B
SP-32	1803434-23	HS18031061-23	A	A	A	A	B	B
SP-34	1803434-25	HS18031061-25	A	A	A	A	B	B
Ash Pond								
AP-31	1803434-2	HS18031061-02	A	A	A	A	B	B
AP-32	1803434-4	HS18031061-04	A	A	A	A	B	B
AP-33	1803434-5	HS18031061-05	A	A	A	A	B	B
AP-34	1803434-8	HS18031061-08	A	A	A	A	B	B
AP-35	1803434-13	HS18031061-13	A	A	A	A	B	B
AP-36	1803434-9	HS18031061-09	A	A	A	A	B	B
DUP-1	1803434-29	HS18031061-29	A	A	A	A	B	B
MW-3	1803434-3	HS18031061-03	A	A	A	A	B	B
PZ-2	1803434-28	HS18031061-28	A	A	A	A	B	B
PZ-3	1803434-27	HS18031061-27	A	A	A	A	B	B
PZ-5	1803434-6	HS18031061-06	A	A	A	A	B	B
PZ-6	1803434-10	HS18031061-10	A	A	A	A	B	B
Equalization Pond								
DUP-2	1803434-30	HS18031061-30	A	A	A	A	B	B
DUP-3	1803434-31	HS18031061-31	A	A	A	A	B	B
EP-31	1803434-20	HS18031061-20	A	A	A	A	B	B
EP-32	1803434-14	HS18031061-14	A	A	A	A	B	B
EP-33	1803434-15	HS18031061-15	A	A	A	A	B	B
EP-34	1803434-16	HS18031061-16	A	A	A	A	B	B
EP-35	1803434-17	HS18031061-17	A	A	A	A	B	B
EP-36	1803434-18	HS18031061-18	A	A	A	A	B	B
EP-37	1803434-19	HS18031061-19	A	A	A	A	B	B
EP-38	1803434-11	HS18031061-11	A	A	A	A	B	B
MW-4	1803434-12	HS18031061-12	A	A	A	A	B	B
QA/QC Samples								
Equipment Blank	1803434-1	HS18031061-01	A	A	A	A	B	B
Field Blank 1	1803434-7	HS18031061-07	A	A	A	A	B	B
Field Blank 2	1803434-21	HS18031061-21	A	A	A	A	B	B

Notes:

1. A = analyzed by ALS Environmental in Houston, Texas; B = analyzed by ALS Environmental in Fort Collins, Colorado.
2. '-' = not analyzed

TABLE C.1.2
Qualified Analytical Data - March 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Sample ID	Analyte	Result	Units	Qualification	Justification
AP-31	Mercury	0.000505	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
AP-32	Mercury	0.00194	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
AP-33	Mercury	0.00381	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
AP-34	Mercury	0.00358	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
AP-35	Mercury	0.00972	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
AP-36	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
DUP-1	Chloride	1530	mg/L	J+	Average MS/MSD recovery > 125%.
DUP-1	Lithium	2.08	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-1	Mercury	0.000523	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-1	Mercury	0.000523	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
DUP-1	Selenium	0.148	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-1	Sulfate	3130	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-2	Barium	0.0223	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-2	Chloride	2070	mg/L	J+	Average MS/MSD recovery > 125%.
DUP-2	Lithium	1.33	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-2	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
DUP-2	Radium-226 & Radium-228	1.64 ± 0.81	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-2	Radium-228	1.24 ± 0.58	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-3	Chloride	104	mg/L	J+	Average MS/MSD recovery > 125%.
DUP-3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-31	Chloride	108	mg/L	J+	Average MS/MSD recovery > 125%.
EP-31	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-32	Barium	<0.02	mg/L	UJ	Field duplicate variability exceeds acceptance criteria.
EP-32	Chloride	2060	mg/L	J+	Average MS/MSD recovery > 125%.
EP-32	Lithium	1.01	mg/L	J	Field duplicate variability exceeds acceptance criteria.
EP-32	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-32	Radium-226	0.4 ± 0.23	pCi/L	J	pH > 2 upon sample arrival to lab.
EP-32	Radium-226 & Radium-228	4.58 ± 1.4	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
EP-32	Radium-228	3.49 ± 0.99	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
EP-33	Chloride	2720	mg/L	J+	Average MS/MSD recovery > 125%.
EP-33	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-34	Chloride	3430	mg/L	J+	Average MS/MSD recovery > 125%.
EP-34	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-35	Chloride	3040	mg/L	J+	Average MS/MSD recovery > 125%.
EP-35	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-36	Chloride	3500	mg/L	J+	Average MS/MSD recovery > 125%.
EP-36	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-37	Chloride	4040	mg/L	J+	Average MS/MSD recovery > 125%.
EP-37	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-38	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
Equipment Blank	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
Field Blank 1	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
Field Blank 2	Chloride	0.537	mg/L	J+	Average MS/MSD recovery > 125%.
Field Blank 2	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
MW-3	Lithium	1.6	mg/L	J	Field duplicate variability exceeds acceptance criteria.
MW-3	Mercury	<0.0002	mg/L	UJ	Field duplicate variability exceeds acceptance criteria.
MW-3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
MW-3	Selenium	0.0409	mg/L	J	Field duplicate variability exceeds acceptance criteria.
MW-3	Sulfate	4010	mg/L	J	Field duplicate variability exceeds acceptance criteria.
MW-4	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
PZ-2	Chloride	3000	mg/L	J+	Average MS/MSD recovery > 125%.
PZ-2	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
PZ-3	Chloride	4390	mg/L	J+	Average MS/MSD recovery > 125%.
PZ-3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
PZ-5	Mercury	0.000249	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
PZ-6	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-1	Chloride	3020	mg/L	J+	Average MS/MSD recovery > 125%.
SP-1	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-2	Chloride	4430	mg/L	J+	Average MS/MSD recovery > 125%.
SP-2	Mercury	0.00101	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
SP-3	Chloride	3960	mg/L	J+	Average MS/MSD recovery > 125%.
SP-3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-32	Chloride	1470	mg/L	J+	Average MS/MSD recovery > 125%.
SP-32	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-34	Chloride	2050	mg/L	J+	Average MS/MSD recovery > 125%.
SP-34	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.

Notes:

1. pCi/L = pico Curies per liter, mg/L = milligrams per liter.
2. MS = matrix spike; MSD = matrix spike duplicate.
3. J = Result is an estimated value, J- = result is an estimated value that is biased low; J+ = result is an estimated value that is biased high; UJ = analyte was not detected and the reporting limit is an estimate.

TABLE C.1.3
MS/MSD and PDS Results Outside of Acceptance Criteria - March 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Batch	Method	Analyte	MS % Recovery	MSD %Recovery	MS/MSD RPD	PDS %Recovery	Qualified Samples	Qualification
126504	7470A Mercury	Mercury	66.5	65.5	1.31	--	Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	J- or UJ
126549	6020A - ICP-MS Metals	Boron	269	385	1.15	106	Equipment Blank, AP-31, MW-3, AP-32, AP-33, PZ-5, Field Blank 1, AP-34, AP-36, PZ-6, EP-38, MW-4, AP-35, EP-32	No change - Parent Sample is \geq 4x spike amount
126549	6020A - ICP-MS Metals	Calcium	-218	-100	1.06	65.2	Equipment Blank, AP-31, MW-3, AP-32, AP-33, PZ-5, Field Blank 1, AP-34, AP-36, PZ-6, EP-38, MW-4, AP-35, EP-32	No change - Parent Sample is \geq 4x spike amount
126549	6020A - ICP-MS Metals	Cobalt	63.2	61.8	0.239	87.6	Equipment Blank, AP-31, MW-3, AP-32, AP-33, PZ-5, Field Blank 1, AP-34, AP-36, PZ-6, EP-38, MW-4, AP-35, EP-32	No change - Parent Sample is \geq 4x spike amount
126549	6020A - ICP-MS Metals	Lithium	77.8	70.4	0.748	93.4	Equipment Blank, AP-31, MW-3, AP-32, AP-33, PZ-5, Field Blank 1, AP-34, AP-36, PZ-6, EP-38, MW-4, AP-35, EP-32	No change - Parent Sample is \geq 4x spike amount
126556	7470A Mercury	Mercury	61.6	63.2	2.51	--	Equipment Blank, AP-31, MW-3, AP-32, AP-33, PZ-5, Field Blank 1, AP-34, AP-36, PZ-6, EP-38, MW-4, AP-35, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31	J- or UJ
126556	7470A Mercury	Mercury	57.3	59.3	2.92	--	Equipment Blank, AP-31, MW-3, AP-32, AP-33, PZ-5, Field Blank 1, AP-34, AP-36, PZ-6, EP-38, MW-4, AP-35, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31	J- or UJ
126607	6020A - ICP-MS Metals	Boron	199	216	2.92	101	PZ-2	No change - Parent Sample is \geq 4x spike amount
126607	6020A - ICP-MS Metals	Calcium	28.8	346	2.92	-101	PZ-2	No change - Parent Sample is \geq 4x spike amount
126607	6020A - ICP-MS Metals	Lithium	227	222	2.92	110	PZ-2	No change - Parent Sample is \geq 4x spike amount
126679	6020A - ICP-MS Metals	Boron	360	206	4.3	102	DUP-1	No change - Parent Sample is \geq 4x spike amount
126679	6020A - ICP-MS Metals	Calcium	451	-132	5.48	-38.7	DUP-1	No change - Parent Sample is \geq 4x spike amount
126679	6020A - ICP-MS Metals	Cobalt	125	92	4.05	90.9	DUP-1	No change - Parent Sample is \geq 4x spike amount
126679	6020A - ICP-MS Metals	Lithium	226	114	5.74	122	DUP-1	No change - Parent Sample is \geq 4x spike amount
126680	6020A - ICP-MS Metals	Boron	-180	472	7.38	109	EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
126680	6020A - ICP-MS Metals	Calcium	-109	60.5	3.11	59.1	EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
126680	6020A - ICP-MS Metals	Lithium	69.5	134	4.82	547	EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
R313757	Anions by E300.0	Chloride	197	103	22.8	--	EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
R313757	Anions by E300.0	Sulfate	185	99.6	23.6	--	EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
R313757	Anions by E300.0	Chloride	112	146	12.6	--	EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	J+ or none
R313757	Anions by E300.0	Sulfate	156	234	14.9	--	EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, Field Blank 2, SP-3, SP-32, SP-1, SP-34, SP-2, PZ-3, PZ-2, DUP-1, DUP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount

Notes:

1. MS = matrix spike; MSD = matrix spike duplicate; RPD = relative percent difference; PDS = post digestion spike.

TABLE C.1.4
Field Precision Evaluation - March 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Location ID	Analyte	N Sample Result	FD Sample Result	RL	Units	Both N and FD Sample Results $\geq 5x$ RL	RPD (%)	Absolute Difference >RL?	Qualification
MW-03	Arsenic	0.0196	0.0226	0.01	mg/L	No	--	No	None
	Beryllium	0.0299	0.0337	0.01	mg/L	No	--	No	None
	Boron	14.3	14.5	0.4	mg/L	Yes	1%	--	none
	Cadmium	0.055	0.0625	0.01	mg/L	Yes	13%	--	none
	Calcium	528	524	2.5	mg/L	Yes	1%	--	none
	Cobalt	0.343	0.356	0.025	mg/L	Yes	4%	--	none
	Lithium	1.6	2.08	0.01	mg/L	Yes	26%	--	J or UJ
	Mercury	<0.0002	0.000523	0.0002	mg/L	No	--	Yes	J or UJ
	Selenium	0.0409	0.148	0.01	mg/L	No	--	Yes	J or UJ
	Chloride	1720	1530	50	mg/L	Yes	12%	--	none
	Sulfate	4010	3130	50	mg/L	Yes	25%	--	J or UJ
	Total Dissolved Solids	9100	7780	10	mg/L	Yes	16%	--	none
	Radium-226	0.44 ± 0.27	0.62 ± 0.28	--	pCi/L	Result ranges overlap.			none
	Radium-228	5 ± 1.3	3.5 ± 1	--	pCi/L	Result ranges overlap.			none
Radium-226 & Radium-228	5.44 ± 1.6	4.12 ± 1.28	--	pCi/L	Result ranges overlap.			none	
EP-32	Barium	<0.02	0.0223	0.02	mg/L	No	--	Yes	J or UJ
	Boron	28.6	27	0.4	mg/L	Yes	6%	--	none
	Calcium	454	455	5	mg/L	Yes	0.2%	--	none
	Lithium	1.01	1.33	0.025	mg/L	No	--	Yes	J or UJ
	Chloride	2060	2070	50	mg/L	Yes	0.5%	--	none
	Sulfate	3770	3700	50	mg/L	Yes	2%	--	none
	Total Dissolved Solids	9720	9700	10	mg/L	Yes	0.2%	--	none
	Radium-226	1.09 ± 0.4	0.4 ± 0.23	--	pCi/L	Result ranges overlap.			none
	Radium-228	3.49 ± 0.99	1.24 ± 0.58	--	pCi/L	Result ranges do not overlap.			J or UJ
	Radium-226 & Radium-228	4.58 ± 1.4	1.64 ± 0.81	--	pCi/L	Result ranges do not overlap.			J or UJ

TABLE C.1.4
Field Precision Evaluation - March 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Location ID	Analyte	N Sample Result	FD Sample Result	RL	Units	Both N and FD Sample Results $\geq 5x$ RL	RPD (%)	Absolute Difference >RL?	Qualification
EP-31	Arsenic	0.0191	0.0166	0.01	mg/L	No	--	No	None
	Beryllium	0.0766	0.0735	0.01	mg/L	Yes	4%	--	none
	Boron	4.15	4.3	0.1	mg/L	Yes	4%	--	none
	Cadmium	0.0156	0.015	0.01	mg/L	No	--	No	None
	Calcium	451	428	5	mg/L	Yes	5.2%	--	none
	Cobalt	0.112	0.112	0.025	mg/L	No	--	No	None
	Lithium	0.624	0.587	0.025	mg/L	Yes	6.1%	--	none
	Selenium	0.0794	0.0699	0.01	mg/L	Yes	12.7%	--	none
	Chloride	108	104	25	mg/L	No	--	No	None
	Sulfate	3160	3050	25	mg/L	Yes	3.5%	--	none
	Total Dissolved Solids	4770	4830	10	mg/L	Yes	1%	--	none
	Radium-226	ND \pm 0.17	0.28 \pm 0.19	--	pCi/L	Result ranges overlap.			none
	Radium-228	ND \pm 0.48	ND \pm 0.45	--	pCi/L	Result ranges overlap.			none
	Radium-226 & Radium-228	ND \pm 0.65	0.28 \pm 0.64	--	pCi/L	Result ranges overlap.			none

Notes:

1. N = normal sample; FD = field duplicate sample; RL = reporting limit; RPD = relative percent difference.
2. mg/L = milligrams per liter; pCi/L = pico Curies per liter.



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May 01, 2018

Josh Mitchell
Source Environmental Sciences Inc.
2060 North Loop West, Suite 140
Houston, TX 77018

Work Order: **HS18031061**

Laboratory Results for: **San Miguel Electric CCR Well Monitoring**

Dear Josh,

ALS Environmental received 31 sample(s) on Mar 22, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Nicole Edwards
Project Manager

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18031061-01	Equipment Blank	Water		19-Mar-2018 12:35	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-02	AP-31	Water		19-Mar-2018 13:13	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-03	MW-3	Water		19-Mar-2018 14:25	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-04	AP-32	Water		19-Mar-2018 15:08	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-05	AP-33	Water		19-Mar-2018 15:46	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-06	PZ-5	Water		20-Mar-2018 10:50	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-07	Field Blank 1	Water		20-Mar-2018 10:55	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-08	AP-34	Water		20-Mar-2018 11:36	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-09	AP-36	Water		20-Mar-2018 12:28	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-10	PZ-6	Water		20-Mar-2018 13:05	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-11	EP-38	Water		20-Mar-2018 14:45	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-12	MW-4	Water		20-Mar-2018 15:21	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-13	AP-35	Water		20-Mar-2018 16:01	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-14	EP-32	Water		20-Mar-2018 16:55	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-15	EP-33	Water		20-Mar-2018 17:32	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-16	EP-34	Water		20-Mar-2018 18:03	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-17	EP-35	Water		21-Mar-2018 08:56	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-18	EP-36	Water		21-Mar-2018 09:35	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-19	EP-37	Water		21-Mar-2018 10:07	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-20	EP-31	Water		21-Mar-2018 10:58	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-21	Field Blank 2	Water		21-Mar-2018 11:10	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-22	SP-3	Water		21-Mar-2018 11:54	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-23	SP-32	Water		21-Mar-2018 12:47	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-24	SP-1	Water		21-Mar-2018 13:39	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-25	SP-34	Water		21-Mar-2018 14:43	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-26	SP-2	Water		21-Mar-2018 15:29	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-27	PZ-3	Water		21-Mar-2018 16:24	22-Mar-2018 10:35	<input type="checkbox"/>

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18031061-28	PZ-2	Water		21-Mar-2018 17:14	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-29	DUP-1	Water		19-Mar-2018 00:00	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-30	DUP-2	Water		20-Mar-2018 00:00	22-Mar-2018 10:35	<input type="checkbox"/>
HS18031061-31	DUP-3	Water		21-Mar-2018 00:00	22-Mar-2018 10:35	<input type="checkbox"/>

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

CASE NARRATIVE**Work Order Comments**

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analyses for Radium-226 and Radium-228 were subcontracted to ALS Environmental in Fort Collins, CO. Final report attached.

Metals by Method SW6020**Batch ID: 126679****Sample ID: DUP-1 (HS18031061-29)**

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: DUP-1 (HS18031061-29MS)

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Cobalt
- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Boron and Lithium.

Sample ID: DUP-1 (HS18031061-29PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium.

Sample ID: DUP-1 (HS18031061-29SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10%. Selenium.
- The percent difference between the results of the sample and the serial dilution were greater than 10%. Boron.

Batch ID: 126680**Sample ID: DUP-2 (HS18031061-30)**

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: DUP-3 (HS18031061-31)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: EP-31 (HS18031061-20)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: EP-33 (HS18031061-15)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: EP-34 (HS18031061-16)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: EP-35 (HS18031061-17)

- Sample ran at a 5x due to high Sodium concentration.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

CASE NARRATIVE**Metals by Method SW6020****Batch ID: 126680****Sample ID: EP-35 (HS18031061-17MS)**

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Boron, Calcium, and Lithium.

Sample ID: EP-35 (HS18031061-17PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium and Lithium.

Sample ID: EP-36 (HS18031061-18)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: EP-37 (HS18031061-19)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: PZ-3 (HS18031061-27)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: SP-1 (HS18031061-24)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: SP-3 (HS18031061-22)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: SP-32 (HS18031061-23)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: SP-34 (HS18031061-25)

- Sample ran at a 5x due to high Sodium concentration.

Batch ID: 126607**Sample ID: PZ-2 (HS18031061-28)**

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: PZ-2 (HS18031061-28MS)

- Selenium failed in the MS/MSD but passed in the PDS.

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Boron, Calcium, and Lithium.

Sample ID: PZ-2 (HS18031061-28PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium.

Sample ID: PZ-2 (HS18031061-28SD)

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

CASE NARRATIVE**Metals by Method SW6020****Batch ID: 126607**

- The percent difference between the results of the sample and the serial dilution were greater than 10%. Lithium.
- The percent difference between the results of the sample and the serial dilution were greater than 10%. Boron.

Batch ID: 126549**Sample ID: AP-31 (HS18031061-02)**

- Sample ran at a 5x due to high Sodium concentration.
- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: AP-31 (HS18031061-02MS)

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Boron, Calcium, Cobalt, Lithium
- Lead marginally failed in the MS but passed in the MSD and PDS.

Sample ID: AP-31 (HS18031061-02PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium.

Sample ID: AP-31 (HS18031061-02SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10%. Boron.

Sample ID: AP-32 (HS18031061-04)

- Sample ran at a 5x due to high Sodium concentration.
- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: AP-33 (HS18031061-05)

- Sample ran at a 5x due to high Sodium concentration.
- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: AP-34 (HS18031061-08)

- Sample ran at a 5x due to high Sodium concentration.
- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: AP-35 (HS18031061-13)

- Sample ran at a 5x due to high Sodium concentration.
- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: AP-36 (HS18031061-09)

- Sample ran at a 5x due to high Sodium concentration.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

CASE NARRATIVE

Metals by Method SW6020**Batch ID: 126549**

- Sample ran at a 10x due to internal standard 6 (Beryllium, Boron, Lithium) failure.

Sample ID: EP-32 (HS18031061-14)

- Sample ran at a 5x due to high Sodium concentration.

- Sample ran at a 10x due to internal standard 6 (Beryllium) and 209 (Lead and Thallium) failure at a 5x.

Sample ID: EP-38 (HS18031061-11)

- Sample ran at a 5x due to high Sodium concentration.

Sample ID: MW-3 (HS18031061-03)

- Sample ran at a 5x due to high Sodium concentration.

- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: MW-4 (HS18031061-12)

- Sample ran at a 5x due to high Sodium concentration.

- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: PZ-5 (HS18031061-06)

- Sample ran at a 5x due to high Sodium concentration.

- Sample ran at a 10x due to internal standard 6 (Beryllium) failure at a 5x.

Sample ID: PZ-6 (HS18031061-10)

- Sample ran at a 5x due to high Sodium concentration.

- Sample ran at a 10x due to internal standard 6 (Beryllium, Boron, Lithium) failure.

Metals by Method SW7470**Batch ID: 126504****Sample ID: DUP-1 (HS18031061-29MS)**

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: DUP-1 (HS18031061-29MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Batch ID: 126556**Sample ID: AP-31 (HS18031061-02MS)**

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

CASE NARRATIVE

Metals by Method SW7470**Batch ID: 126556****Sample ID: AP-31 (HS18031061-02MSD)**

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Sample ID: EP-35 (HS18031061-17MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: EP-35 (HS18031061-17MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Wet Chemistry by Method E300**Batch ID: R313757****Sample ID: PZ-2 (HS18031061-28MS)**

- The RPD between the MS and MSD was outside of the control limit.

Sample ID: DUP-1 (HS18031061-29MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: DUP-1 (HS18031061-29MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

WetChemistry by Method E300**Batch ID: R313757****Sample ID: DUP-1 (HS18031061-29)**

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: DUP-2 (HS18031061-30)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: DUP-3 (HS18031061-31)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-31 (HS18031061-20)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-32 (HS18031061-14)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-33 (HS18031061-15)

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

CASE NARRATIVE**WetChemistry by Method E300****Batch ID: R313757**

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-34 (HS18031061-16)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-35 (HS18031061-17)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-36 (HS18031061-18)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-37 (HS18031061-19)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-2 (HS18031061-28)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-3 (HS18031061-27)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: SP-1 (HS18031061-24)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: SP-2 (HS18031061-26)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: SP-3 (HS18031061-22)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: SP-32 (HS18031061-23)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: SP-34 (HS18031061-25)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-2 (HS18031061-28MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Batch ID: R313723

Sample ID: AP-31 (HS18031061-02)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18031061

CASE NARRATIVE

WetChemistry by Method E300

Batch ID: R313723

Sample ID: AP-32 (HS18031061-04)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: AP-33 (HS18031061-05)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: AP-34 (HS18031061-08)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: AP-35 (HS18031061-13)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: AP-36 (HS18031061-09)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-38 (HS18031061-11)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: MW-3 (HS18031061-03)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: MW-4 (HS18031061-12)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-5 (HS18031061-06)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-6 (HS18031061-10)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

WetChemistry by Method M2540C

Batch ID: R313140,R313282,R313351

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500H+ B

Batch ID: R313079,R313357,R313441

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Equipment Blank
 Collection Date: 19-Mar-2018 12:35

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-01
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	28-Mar-2018 15:15
Arsenic	ND		0.00200	mg/L	1	28-Mar-2018 15:15
Barium	ND		0.00400	mg/L	1	28-Mar-2018 15:15
Beryllium	ND		0.00200	mg/L	1	28-Mar-2018 15:15
Boron	ND		0.0200	mg/L	1	28-Mar-2018 15:15
Cadmium	ND		0.00200	mg/L	1	28-Mar-2018 15:15
Calcium	ND		0.500	mg/L	1	28-Mar-2018 15:15
Cobalt	ND		0.00500	mg/L	1	28-Mar-2018 15:15
Lead	ND		0.00200	mg/L	1	28-Mar-2018 15:15
Lithium	ND		0.00500	mg/L	1	28-Mar-2018 15:15
Molybdenum	ND		0.00500	mg/L	1	28-Mar-2018 15:15
Selenium	ND		0.00200	mg/L	1	28-Mar-2018 15:15
Thallium	ND		0.00200	mg/L	1	28-Mar-2018 15:15
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:18
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	0.609		0.500	mg/L	1	03-Apr-2018 13:52
Fluoride	ND		0.100	mg/L	1	03-Apr-2018 13:52
Sulfate	1.34		0.500	mg/L	1	03-Apr-2018 13:52
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	26-Mar-2018 09:00
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	6.14	H	0.100	pH Units	1	23-Mar-2018 16:00
Temp Deg C @pH	22.3	H	0	°C	1	23-Mar-2018 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-31
 Collection Date: 19-Mar-2018 13:13

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-02
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 16:20
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 16:20
Barium	ND		0.0200	mg/L	5	27-Mar-2018 16:20
Beryllium	ND		0.0200	mg/L	10	28-Mar-2018 16:38
Boron	43.3		1.00	mg/L	50	28-Mar-2018 15:19
Cadmium	ND		0.0100	mg/L	5	27-Mar-2018 16:20
Calcium	566		2.50	mg/L	5	27-Mar-2018 16:20
Cobalt	0.253		0.0250	mg/L	5	27-Mar-2018 16:20
Lead	ND		0.0200	mg/L	10	28-Mar-2018 16:38
Lithium	0.883		0.250	mg/L	50	28-Mar-2018 15:19
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 16:20
Selenium	0.0372		0.0100	mg/L	5	27-Mar-2018 16:20
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 16:20
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	0.000505		0.000200	mg/L	1	26-Mar-2018 09:04
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,570		25.0	mg/L	50	03-Apr-2018 16:24
Fluoride	ND		5.00	mg/L	50	03-Apr-2018 16:24
Sulfate	3,260		25.0	mg/L	50	03-Apr-2018 16:24
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,580		10.0	mg/L	1	26-Mar-2018 09:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.49	H	0.100	pH Units	1	23-Mar-2018 16:00
Temp Deg C @pH	22.0	H	0	°C	1	23-Mar-2018 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MW-3
 Collection Date: 19-Mar-2018 14:25

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-03
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 16:44
Arsenic	0.0196		0.0100	mg/L	5	27-Mar-2018 16:44
Barium	ND		0.0200	mg/L	5	27-Mar-2018 16:44
Beryllium	0.0299		0.0200	mg/L	10	28-Mar-2018 16:49
Boron	14.3		1.00	mg/L	50	28-Mar-2018 15:35
Cadmium	0.0550		0.0100	mg/L	5	27-Mar-2018 16:44
Calcium	528		2.50	mg/L	5	27-Mar-2018 16:44
Cobalt	0.343		0.0250	mg/L	5	27-Mar-2018 16:44
Lead	ND		0.0200	mg/L	10	28-Mar-2018 16:49
Lithium	1.60		0.250	mg/L	50	28-Mar-2018 15:35
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 16:44
Selenium	0.0409		0.0100	mg/L	5	27-Mar-2018 16:44
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 16:44
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:20
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,720		50.0	mg/L	100	03-Apr-2018 21:34
Fluoride	ND		10.0	mg/L	100	03-Apr-2018 21:34
Sulfate	4,010		50.0	mg/L	100	03-Apr-2018 21:34
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,100		10.0	mg/L	1	26-Mar-2018 09:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.46	H	0.100	pH Units	1	23-Mar-2018 16:00
Temp Deg C @pH	22.4	H	0	°C	1	23-Mar-2018 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-32
 Collection Date: 19-Mar-2018 15:08

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-04
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 16:48
Arsenic	0.0379		0.0100	mg/L	5	27-Mar-2018 16:48
Barium	ND		0.0200	mg/L	5	27-Mar-2018 16:48
Beryllium	0.0564		0.0200	mg/L	10	28-Mar-2018 16:50
Boron	14.0		1.00	mg/L	50	28-Mar-2018 15:39
Cadmium	0.0817		0.0100	mg/L	5	27-Mar-2018 16:48
Calcium	682		2.50	mg/L	5	27-Mar-2018 16:48
Cobalt	0.559		0.0250	mg/L	5	27-Mar-2018 16:48
Lead	ND		0.0200	mg/L	10	28-Mar-2018 16:50
Lithium	1.57		0.250	mg/L	50	28-Mar-2018 15:39
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 16:48
Selenium	0.116		0.0100	mg/L	5	27-Mar-2018 16:48
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 16:48
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	0.00194		0.000200	mg/L	1	26-Mar-2018 09:22
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,730		50.0	mg/L	100	03-Apr-2018 21:56
Fluoride	ND		10.0	mg/L	100	03-Apr-2018 21:56
Sulfate	3,240		50.0	mg/L	100	03-Apr-2018 21:56
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,780		10.0	mg/L	1	26-Mar-2018 09:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.46	H	0.100	pH Units	1	23-Mar-2018 16:00
Temp Deg C @pH	22.5	H	0	°C	1	23-Mar-2018 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-33
 Collection Date: 19-Mar-2018 15:46

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-05
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 16:52
Arsenic	0.0707		0.0100	mg/L	5	27-Mar-2018 16:52
Barium	ND		0.0200	mg/L	5	27-Mar-2018 16:52
Beryllium	0.302		0.0200	mg/L	10	28-Mar-2018 16:52
Boron	56.1		1.00	mg/L	50	28-Mar-2018 15:42
Cadmium	0.131		0.0100	mg/L	5	27-Mar-2018 16:52
Calcium	839		2.50	mg/L	5	27-Mar-2018 16:52
Cobalt	1.20		0.0250	mg/L	5	27-Mar-2018 16:52
Lead	ND		0.0200	mg/L	10	28-Mar-2018 16:52
Lithium	1.09		0.250	mg/L	50	28-Mar-2018 15:42
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 16:52
Selenium	0.234		0.0100	mg/L	5	27-Mar-2018 16:52
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 16:52
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	0.00381		0.000200	mg/L	1	26-Mar-2018 09:23
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,380		50.0	mg/L	100	03-Apr-2018 22:17
Fluoride	ND		10.0	mg/L	100	03-Apr-2018 22:17
Sulfate	3,240		50.0	mg/L	100	03-Apr-2018 22:17
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	12,900		10.0	mg/L	1	26-Mar-2018 09:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.12	H	0.100	pH Units	1	23-Mar-2018 16:00
Temp Deg C @pH	22.1	H	0	°C	1	23-Mar-2018 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-5
 Collection Date: 20-Mar-2018 10:50

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-06
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 16:56
Arsenic	0.0332		0.0100	mg/L	5	27-Mar-2018 16:56
Barium	ND		0.0200	mg/L	5	27-Mar-2018 16:56
Beryllium	0.232		0.0200	mg/L	10	28-Mar-2018 17:02
Boron	45.0		1.00	mg/L	50	28-Mar-2018 15:46
Cadmium	0.0458		0.0100	mg/L	5	27-Mar-2018 16:56
Calcium	718		2.50	mg/L	5	27-Mar-2018 16:56
Cobalt	0.659		0.0250	mg/L	5	27-Mar-2018 16:56
Lead	ND		0.0200	mg/L	10	28-Mar-2018 17:02
Lithium	0.724		0.250	mg/L	50	28-Mar-2018 15:46
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 16:56
Selenium	0.111		0.0100	mg/L	5	27-Mar-2018 16:56
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 16:56
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	0.000249		0.000200	mg/L	1	26-Mar-2018 09:25
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,710		50.0	mg/L	100	03-Apr-2018 22:39
Fluoride	ND		10.0	mg/L	100	03-Apr-2018 22:39
Sulfate	2,880		50.0	mg/L	100	03-Apr-2018 22:39
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,760		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.32	H	0.100	pH Units	1	23-Mar-2018 16:00
Temp Deg C @pH	22.7	H	0	°C	1	23-Mar-2018 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 1
 Collection Date: 20-Mar-2018 10:55

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-07
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	28-Mar-2018 16:34
Arsenic	ND		0.00200	mg/L	1	28-Mar-2018 16:34
Barium	ND		0.00400	mg/L	1	28-Mar-2018 16:34
Beryllium	ND		0.00200	mg/L	1	28-Mar-2018 16:34
Boron	ND		0.100	mg/L	5	28-Mar-2018 15:50
Cadmium	ND		0.00200	mg/L	1	28-Mar-2018 16:34
Calcium	ND		0.500	mg/L	1	28-Mar-2018 16:34
Cobalt	ND		0.00500	mg/L	1	28-Mar-2018 16:34
Lead	ND		0.00200	mg/L	1	28-Mar-2018 16:34
Lithium	ND		0.00500	mg/L	1	28-Mar-2018 16:34
Molybdenum	ND		0.00500	mg/L	1	28-Mar-2018 16:34
Selenium	ND		0.00200	mg/L	1	28-Mar-2018 16:34
Thallium	ND		0.00200	mg/L	1	28-Mar-2018 16:34
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:27
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	0.664		0.500	mg/L	1	03-Apr-2018 21:12
Fluoride	ND		0.100	mg/L	1	03-Apr-2018 21:12
Sulfate	1.35		0.500	mg/L	1	03-Apr-2018 21:12
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.55	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	22.0	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-34
 Collection Date: 20-Mar-2018 11:36

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-08
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 17:08
Arsenic	0.0410		0.0100	mg/L	5	27-Mar-2018 17:08
Barium	ND		0.0200	mg/L	5	27-Mar-2018 17:08
Beryllium	0.252		0.0200	mg/L	10	28-Mar-2018 17:04
Boron	25.0		1.00	mg/L	50	28-Mar-2018 15:58
Cadmium	0.0461		0.0100	mg/L	5	27-Mar-2018 17:08
Calcium	704		2.50	mg/L	5	27-Mar-2018 17:08
Cobalt	1.18		0.0250	mg/L	5	27-Mar-2018 17:08
Lead	ND		0.0200	mg/L	10	28-Mar-2018 17:04
Lithium	1.19		0.250	mg/L	50	28-Mar-2018 15:58
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 17:08
Selenium	0.129		0.0100	mg/L	5	27-Mar-2018 17:08
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 17:08
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	0.00358		0.000200	mg/L	1	26-Mar-2018 09:28
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,310		50.0	mg/L	100	03-Apr-2018 23:01
Fluoride	ND		10.0	mg/L	100	03-Apr-2018 23:01
Sulfate	3,190		50.0	mg/L	100	03-Apr-2018 23:01
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,840		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.33	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	21.9	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-36
 Collection Date: 20-Mar-2018 12:28

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-09
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 17:12
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 17:12
Barium	ND		0.0200	mg/L	5	27-Mar-2018 17:12
Beryllium	ND		0.0200	mg/L	10	28-Mar-2018 16:03
Boron	2.28		0.200	mg/L	10	28-Mar-2018 16:03
Cadmium	ND		0.0100	mg/L	5	27-Mar-2018 17:12
Calcium	650		2.50	mg/L	5	27-Mar-2018 17:12
Cobalt	0.0689		0.0250	mg/L	5	27-Mar-2018 17:12
Lead	ND		0.0200	mg/L	10	28-Mar-2018 16:03
Lithium	0.983		0.0500	mg/L	10	28-Mar-2018 16:03
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 17:12
Selenium	ND		0.0100	mg/L	5	27-Mar-2018 17:12
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 17:12
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:34
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,800		50.0	mg/L	100	03-Apr-2018 23:22
Fluoride	ND		10.0	mg/L	100	03-Apr-2018 23:22
Sulfate	2,510		50.0	mg/L	100	03-Apr-2018 23:22
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,280		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	4.05	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	20.5	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-6
 Collection Date: 20-Mar-2018 13:05

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-10
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 17:16
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 17:16
Barium	ND		0.0200	mg/L	5	27-Mar-2018 17:16
Beryllium	ND		0.0200	mg/L	10	28-Mar-2018 16:06
Boron	2.93		0.200	mg/L	10	28-Mar-2018 16:06
Cadmium	ND		0.0100	mg/L	5	27-Mar-2018 17:16
Calcium	578		2.50	mg/L	5	27-Mar-2018 17:16
Cobalt	ND		0.0250	mg/L	5	27-Mar-2018 17:16
Lead	ND		0.0200	mg/L	10	28-Mar-2018 16:06
Lithium	0.921		0.0500	mg/L	10	28-Mar-2018 16:06
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 17:16
Selenium	ND		0.0100	mg/L	5	27-Mar-2018 17:16
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 17:16
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:35
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,340		50.0	mg/L	100	03-Apr-2018 23:44
Fluoride	ND		10.0	mg/L	100	03-Apr-2018 23:44
Sulfate	2,890		50.0	mg/L	100	03-Apr-2018 23:44
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,260		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.84	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	20.7	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-38
 Collection Date: 20-Mar-2018 14:45

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-11
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 17:20
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 17:20
Barium	ND		0.0200	mg/L	5	27-Mar-2018 17:20
Beryllium	ND		0.0100	mg/L	5	27-Mar-2018 17:20
Boron	2.42		0.100	mg/L	5	28-Mar-2018 16:10
Cadmium	ND		0.0100	mg/L	5	27-Mar-2018 17:20
Calcium	239		2.50	mg/L	5	27-Mar-2018 17:20
Cobalt	ND		0.0250	mg/L	5	27-Mar-2018 17:20
Lead	ND		0.0100	mg/L	5	28-Mar-2018 16:10
Lithium	0.591		0.0250	mg/L	5	27-Mar-2018 17:20
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 17:20
Selenium	ND		0.0100	mg/L	5	27-Mar-2018 17:20
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 17:20
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:37
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,030		25.0	mg/L	50	04-Apr-2018 00:06
Fluoride	ND		5.00	mg/L	50	04-Apr-2018 00:06
Sulfate	1,910		25.0	mg/L	50	04-Apr-2018 00:06
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	4,780		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.78	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	22.4	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MW-4
 Collection Date: 20-Mar-2018 15:21

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-12
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 17:28
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 17:28
Barium	ND		0.0200	mg/L	5	27-Mar-2018 17:28
Beryllium	ND		0.0200	mg/L	10	28-Mar-2018 17:06
Boron	8.91		1.00	mg/L	50	28-Mar-2018 16:14
Cadmium	ND		0.0100	mg/L	5	27-Mar-2018 17:28
Calcium	278		2.50	mg/L	5	27-Mar-2018 17:28
Cobalt	ND		0.0250	mg/L	5	27-Mar-2018 17:28
Lead	ND		0.0200	mg/L	10	28-Mar-2018 17:06
Lithium	0.663		0.250	mg/L	50	28-Mar-2018 16:14
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 17:28
Selenium	ND		0.0100	mg/L	5	27-Mar-2018 17:28
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 17:28
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:39
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,650		25.0	mg/L	50	04-Apr-2018 01:33
Fluoride	ND		5.00	mg/L	50	04-Apr-2018 01:33
Sulfate	2,250		25.0	mg/L	50	04-Apr-2018 01:33
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	5,940		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.16	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	21.0	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-35
 Collection Date: 20-Mar-2018 16:01

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-13
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 17:32
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 17:32
Barium	ND		0.0200	mg/L	5	27-Mar-2018 17:32
Beryllium	0.0665		0.0200	mg/L	10	28-Mar-2018 17:08
Boron	41.1		1.00	mg/L	50	28-Mar-2018 16:22
Cadmium	0.0195		0.0100	mg/L	5	27-Mar-2018 17:32
Calcium	645		2.50	mg/L	5	27-Mar-2018 17:32
Cobalt	0.148		0.0250	mg/L	5	27-Mar-2018 17:32
Lead	ND		0.0200	mg/L	10	28-Mar-2018 17:08
Lithium	0.896		0.250	mg/L	50	28-Mar-2018 16:22
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 17:32
Selenium	0.0325		0.0100	mg/L	5	27-Mar-2018 17:32
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 17:32
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	0.00972		0.000200	mg/L	1	26-Mar-2018 09:40
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,000		25.0	mg/L	50	04-Apr-2018 01:54
Fluoride	ND		5.00	mg/L	50	04-Apr-2018 01:54
Sulfate	2,670		25.0	mg/L	50	04-Apr-2018 01:54
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,460		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.54	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	21.5	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-32
 Collection Date: 20-Mar-2018 16:55

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-14
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 23-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 17:36
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 17:36
Barium	ND		0.0200	mg/L	5	27-Mar-2018 17:36
Beryllium	ND		0.0200	mg/L	10	28-Mar-2018 17:10
Boron	28.6		1.00	mg/L	50	28-Mar-2018 16:26
Cadmium	ND		0.0100	mg/L	5	27-Mar-2018 17:36
Calcium	454		2.50	mg/L	5	27-Mar-2018 17:36
Cobalt	ND		0.0250	mg/L	5	27-Mar-2018 17:36
Lead	ND		0.0200	mg/L	10	28-Mar-2018 17:10
Lithium	1.01		0.250	mg/L	50	28-Mar-2018 16:26
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 17:36
Selenium	ND		0.0100	mg/L	5	27-Mar-2018 17:36
Thallium	ND		0.0200	mg/L	10	28-Mar-2018 17:10
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:42
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,060		50.0	mg/L	100	04-Apr-2018 02:59
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 02:59
Sulfate	3,770		50.0	mg/L	100	04-Apr-2018 02:59
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,720		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.61	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	21.1	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-33
 Collection Date: 20-Mar-2018 17:32

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-15
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 15:42
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 15:42
Barium	ND		0.0200	mg/L	5	29-Mar-2018 15:42
Beryllium	ND		0.0100	mg/L	5	29-Mar-2018 15:42
Boron	85.8		1.00	mg/L	50	30-Mar-2018 13:19
Cadmium	ND		0.0100	mg/L	5	29-Mar-2018 15:42
Calcium	577		5.00	mg/L	5	29-Mar-2018 15:42
Cobalt	ND		0.0250	mg/L	5	29-Mar-2018 15:42
Lead	ND		0.0100	mg/L	5	29-Mar-2018 15:42
Lithium	0.696		0.0250	mg/L	5	29-Mar-2018 15:42
Molybdenum	0.0284		0.0250	mg/L	5	29-Mar-2018 15:42
Selenium	ND		0.0100	mg/L	5	29-Mar-2018 15:42
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 15:42
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:44
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,720		50.0	mg/L	100	04-Apr-2018 03:21
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 03:21
Sulfate	2,760		50.0	mg/L	100	04-Apr-2018 03:21
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,800		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.46	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	20.9	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-34
 Collection Date: 20-Mar-2018 18:03

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-16
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 15:44
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 15:44
Barium	0.0208		0.0200	mg/L	5	29-Mar-2018 15:44
Beryllium	ND		0.0100	mg/L	5	29-Mar-2018 15:44
Boron	50.8		1.00	mg/L	50	30-Mar-2018 13:23
Cadmium	ND		0.0100	mg/L	5	29-Mar-2018 15:44
Calcium	483		5.00	mg/L	5	29-Mar-2018 15:44
Cobalt	ND		0.0250	mg/L	5	29-Mar-2018 15:44
Lead	ND		0.0100	mg/L	5	29-Mar-2018 15:44
Lithium	1.00		0.0250	mg/L	5	29-Mar-2018 15:44
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 15:44
Selenium	ND		0.0100	mg/L	5	29-Mar-2018 15:44
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 15:44
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:45
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,430		50.0	mg/L	100	04-Apr-2018 03:43
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 03:43
Sulfate	3,160		50.0	mg/L	100	04-Apr-2018 03:43
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,500		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.82	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	21.7	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-35
 Collection Date: 21-Mar-2018 08:56

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-17
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 15:46
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 15:46
Barium	ND		0.0200	mg/L	5	29-Mar-2018 15:46
Beryllium	ND		0.0100	mg/L	5	29-Mar-2018 15:46
Boron	32.3		1.00	mg/L	50	30-Mar-2018 15:37
Cadmium	ND		0.0100	mg/L	5	29-Mar-2018 15:46
Calcium	273		5.00	mg/L	5	29-Mar-2018 15:46
Cobalt	ND		0.0250	mg/L	5	29-Mar-2018 15:46
Lead	ND		0.0100	mg/L	5	29-Mar-2018 15:46
Lithium	1.23		0.0250	mg/L	5	29-Mar-2018 15:46
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 15:46
Selenium	ND		0.0100	mg/L	5	29-Mar-2018 15:46
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 15:46
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:13
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,040		50.0	mg/L	100	04-Apr-2018 04:05
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 04:05
Sulfate	2,610		50.0	mg/L	100	04-Apr-2018 04:05
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,200		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.45	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	21.1	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-36
 Collection Date: 21-Mar-2018 09:35

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-18
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 15:56
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 15:56
Barium	0.0305		0.0200	mg/L	5	29-Mar-2018 15:56
Beryllium	ND		0.0100	mg/L	5	29-Mar-2018 15:56
Boron	21.5		2.00	mg/L	100	30-Mar-2018 15:45
Cadmium	ND		0.0100	mg/L	5	29-Mar-2018 15:56
Calcium	456		5.00	mg/L	5	29-Mar-2018 15:56
Cobalt	ND		0.0250	mg/L	5	29-Mar-2018 15:56
Lead	ND		0.0100	mg/L	5	29-Mar-2018 15:56
Lithium	1.45		0.0250	mg/L	5	29-Mar-2018 15:56
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 15:56
Selenium	ND		0.0100	mg/L	5	29-Mar-2018 15:56
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 15:56
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:47
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,500		50.0	mg/L	100	04-Apr-2018 06:58
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 06:58
Sulfate	2,510		50.0	mg/L	100	04-Apr-2018 06:58
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,200		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.23	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	21.5	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-37
 Collection Date: 21-Mar-2018 10:07

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-19
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 15:58
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 15:58
Barium	0.0242		0.0200	mg/L	5	29-Mar-2018 15:58
Beryllium	ND		0.0100	mg/L	5	29-Mar-2018 15:58
Boron	7.59		0.200	mg/L	10	30-Mar-2018 15:53
Cadmium	ND		0.0100	mg/L	5	29-Mar-2018 15:58
Calcium	531		5.00	mg/L	5	29-Mar-2018 15:58
Cobalt	ND		0.0250	mg/L	5	29-Mar-2018 15:58
Lead	ND		0.0100	mg/L	5	29-Mar-2018 15:58
Lithium	1.73		0.0250	mg/L	5	29-Mar-2018 15:58
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 15:58
Selenium	ND		0.0100	mg/L	5	29-Mar-2018 15:58
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 15:58
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:49
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,040		50.0	mg/L	100	04-Apr-2018 07:42
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 07:42
Sulfate	2,840		50.0	mg/L	100	04-Apr-2018 07:42
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,200		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.36	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	22.2	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-31
 Collection Date: 21-Mar-2018 10:58

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-20
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:00
Arsenic	0.0191		0.0100	mg/L	5	29-Mar-2018 16:00
Barium	ND		0.0200	mg/L	5	29-Mar-2018 16:00
Beryllium	0.0766		0.0100	mg/L	5	29-Mar-2018 16:00
Boron	4.15		0.200	mg/L	10	30-Mar-2018 15:57
Cadmium	0.0156		0.0100	mg/L	5	29-Mar-2018 16:00
Calcium	451		5.00	mg/L	5	29-Mar-2018 16:00
Cobalt	0.112		0.0250	mg/L	5	29-Mar-2018 16:00
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:00
Lithium	0.624		0.0250	mg/L	5	29-Mar-2018 16:00
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:00
Selenium	0.0794		0.0100	mg/L	5	29-Mar-2018 16:00
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:00
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 09:54
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	108		25.0	mg/L	50	04-Apr-2018 08:03
Fluoride	ND		5.00	mg/L	50	04-Apr-2018 08:03
Sulfate	3,160		25.0	mg/L	50	04-Apr-2018 08:03
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	4,770		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.92	H	0.100	pH Units	1	29-Mar-2018 16:06
Temp Deg C @pH	22.1	H	0	°C	1	29-Mar-2018 16:06
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 2
 Collection Date: 21-Mar-2018 11:10

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-21
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	29-Mar-2018 23:27
Arsenic	ND		0.00200	mg/L	1	29-Mar-2018 23:27
Barium	ND		0.00400	mg/L	1	29-Mar-2018 23:27
Beryllium	ND		0.00200	mg/L	1	29-Mar-2018 23:27
Boron	ND		0.0200	mg/L	1	29-Mar-2018 23:27
Cadmium	ND		0.00200	mg/L	1	29-Mar-2018 23:27
Calcium	ND		1.00	mg/L	1	29-Mar-2018 23:27
Cobalt	ND		0.00500	mg/L	1	29-Mar-2018 23:27
Lead	ND		0.00200	mg/L	1	29-Mar-2018 23:27
Lithium	ND		0.00500	mg/L	1	29-Mar-2018 23:27
Molybdenum	ND		0.00500	mg/L	1	29-Mar-2018 23:27
Selenium	ND		0.00200	mg/L	1	29-Mar-2018 23:27
Thallium	ND		0.00200	mg/L	1	29-Mar-2018 23:27
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:13
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	0.537		0.500	mg/L	1	04-Apr-2018 07:20
Fluoride	ND		0.100	mg/L	1	04-Apr-2018 07:20
Sulfate	1.42		0.500	mg/L	1	04-Apr-2018 07:20
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	4.62	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.2	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-3
 Collection Date: 21-Mar-2018 11:54

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-22
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:08
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 16:08
Barium	0.0235		0.0200	mg/L	5	29-Mar-2018 16:08
Beryllium	0.0491		0.0100	mg/L	5	29-Mar-2018 16:08
Boron	6.75		0.200	mg/L	10	30-Mar-2018 16:01
Cadmium	0.0482		0.0100	mg/L	5	29-Mar-2018 16:08
Calcium	786		5.00	mg/L	5	29-Mar-2018 16:08
Cobalt	0.160		0.0250	mg/L	5	29-Mar-2018 16:08
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:08
Lithium	2.00		0.0250	mg/L	5	29-Mar-2018 16:08
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:08
Selenium	0.0897		0.0100	mg/L	5	29-Mar-2018 16:08
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:08
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:19
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,960		50.0	mg/L	100	04-Apr-2018 08:25
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 08:25
Sulfate	2,520		50.0	mg/L	100	04-Apr-2018 08:25
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,100		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.51	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.3	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-32
 Collection Date: 21-Mar-2018 12:47

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-23
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:10
Arsenic	0.116		0.0100	mg/L	5	29-Mar-2018 16:10
Barium	ND		0.0200	mg/L	5	29-Mar-2018 16:10
Beryllium	0.449		0.0200	mg/L	10	29-Mar-2018 23:23
Boron	8.54		0.200	mg/L	10	29-Mar-2018 23:23
Cadmium	0.402		0.0100	mg/L	5	29-Mar-2018 16:10
Calcium	431		5.00	mg/L	5	29-Mar-2018 16:10
Cobalt	2.55		0.0250	mg/L	5	29-Mar-2018 16:10
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:10
Lithium	3.30		0.0500	mg/L	10	29-Mar-2018 23:23
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:10
Selenium	0.806		0.0100	mg/L	5	29-Mar-2018 16:10
Thallium	0.0167		0.0100	mg/L	5	29-Mar-2018 16:10
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:20
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,470		50.0	mg/L	100	04-Apr-2018 08:47
Fluoride	11.0		10.0	mg/L	100	04-Apr-2018 08:47
Sulfate	9,720		50.0	mg/L	100	04-Apr-2018 08:47
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	17,600		10.0	mg/L	1	28-Mar-2018 16:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.35	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.2	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-1
 Collection Date: 21-Mar-2018 13:39

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-24
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:12
Arsenic	0.0518		0.0100	mg/L	5	29-Mar-2018 16:12
Barium	ND		0.0200	mg/L	5	29-Mar-2018 16:12
Beryllium	0.292		0.0100	mg/L	5	29-Mar-2018 16:12
Boron	3.88		0.200	mg/L	10	30-Mar-2018 16:05
Cadmium	0.280		0.0100	mg/L	5	29-Mar-2018 16:12
Calcium	280		5.00	mg/L	5	29-Mar-2018 16:12
Cobalt	1.45		0.0250	mg/L	5	29-Mar-2018 16:12
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:12
Lithium	1.58		0.0250	mg/L	5	29-Mar-2018 16:12
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:12
Selenium	0.375		0.0100	mg/L	5	29-Mar-2018 16:12
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:12
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:22
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,020		50.0	mg/L	100	04-Apr-2018 09:08
Fluoride	11.9		10.0	mg/L	100	04-Apr-2018 09:08
Sulfate	6,280		50.0	mg/L	100	04-Apr-2018 09:08
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	13,900		10.0	mg/L	1	28-Mar-2018 16:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.19	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.7	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-34
 Collection Date: 21-Mar-2018 14:43

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-25
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:14
Arsenic	0.0323		0.0100	mg/L	5	29-Mar-2018 16:14
Barium	0.0211		0.0200	mg/L	5	29-Mar-2018 16:14
Beryllium	0.172		0.0100	mg/L	5	29-Mar-2018 16:14
Boron	12.1		0.200	mg/L	10	30-Mar-2018 16:09
Cadmium	0.195		0.0100	mg/L	5	29-Mar-2018 16:14
Calcium	691		5.00	mg/L	5	29-Mar-2018 16:14
Cobalt	0.682		0.0250	mg/L	5	29-Mar-2018 16:14
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:14
Lithium	1.21		0.0250	mg/L	5	29-Mar-2018 16:14
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:14
Selenium	0.244		0.0100	mg/L	5	29-Mar-2018 16:14
Thallium	0.0187		0.0100	mg/L	5	29-Mar-2018 16:14
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:24
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,050		50.0	mg/L	100	04-Apr-2018 10:13
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 10:13
Sulfate	2,910		50.0	mg/L	100	04-Apr-2018 10:13
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,880		10.0	mg/L	1	28-Mar-2018 16:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.23	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.8	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-2
 Collection Date: 21-Mar-2018 15:29

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-26
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A			Method:SW6020		Prep:SW3010A / 28-Mar-2018	Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:16
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 16:16
Barium	ND		0.0200	mg/L	5	29-Mar-2018 16:16
Beryllium	0.0116		0.0100	mg/L	5	29-Mar-2018 16:16
Boron	9.13		0.200	mg/L	10	30-Mar-2018 16:18
Cadmium	0.0164		0.0100	mg/L	5	29-Mar-2018 16:16
Calcium	1,200		10.0	mg/L	10	30-Mar-2018 16:18
Cobalt	ND		0.0250	mg/L	5	29-Mar-2018 16:16
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:16
Lithium	0.650		0.0250	mg/L	5	29-Mar-2018 16:16
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:16
Selenium	0.107		0.0100	mg/L	5	29-Mar-2018 16:16
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:16
MERCURY BY SW7470A			Method:SW7470		Prep:SW7470 / 23-Mar-2018	Analyst: JBA
Mercury	0.00101		0.000200	mg/L	1	26-Mar-2018 10:25
ANIONS BY E300.0			Method:E300			Analyst: KMU
Chloride	4,430		50.0	mg/L	100	04-Apr-2018 10:35
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 10:35
Sulfate	1,660		50.0	mg/L	100	04-Apr-2018 10:35
TOTAL DISSOLVED SOLIDS BY SM2540C			Method:M2540C			Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	13,100		10.0	mg/L	1	28-Mar-2018 16:00
PH BY SM4500H+ B			Method:SM4500H+ B			Analyst: MZD
pH	5.55	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.9	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226			Method:NA			Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228			Method:NA			Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-3
 Collection Date: 21-Mar-2018 16:24

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-27
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:18
Arsenic	0.0743		0.0100	mg/L	5	29-Mar-2018 16:18
Barium	0.0245		0.0200	mg/L	5	29-Mar-2018 16:18
Beryllium	0.425		0.0100	mg/L	5	29-Mar-2018 16:18
Boron	10.2		0.200	mg/L	10	30-Mar-2018 16:22
Cadmium	0.463		0.0100	mg/L	5	29-Mar-2018 16:18
Calcium	694		5.00	mg/L	5	29-Mar-2018 16:18
Cobalt	1.69		0.0250	mg/L	5	29-Mar-2018 16:18
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:18
Lithium	3.57		0.0250	mg/L	5	29-Mar-2018 16:18
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:18
Selenium	0.518		0.0100	mg/L	5	29-Mar-2018 16:18
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:18
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:27
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,390		50.0	mg/L	100	04-Apr-2018 10:57
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 10:57
Sulfate	4,160		50.0	mg/L	100	04-Apr-2018 10:57
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	14,000		10.0	mg/L	1	28-Mar-2018 16:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.21	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.8	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-2
 Collection Date: 21-Mar-2018 17:14

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-28
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 26-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	27-Mar-2018 00:26
Arsenic	ND		0.0100	mg/L	5	27-Mar-2018 00:26
Barium	0.0272		0.0200	mg/L	5	27-Mar-2018 00:26
Beryllium	ND		0.0100	mg/L	5	27-Mar-2018 00:26
Boron	5.13		1.00	mg/L	50	27-Mar-2018 11:28
Cadmium	ND		0.0100	mg/L	5	27-Mar-2018 00:26
Calcium	726		2.50	mg/L	5	27-Mar-2018 00:26
Cobalt	ND		0.0250	mg/L	5	27-Mar-2018 00:26
Lead	ND		0.0100	mg/L	5	27-Mar-2018 00:26
Lithium	1.87		0.0250	mg/L	5	27-Mar-2018 00:26
Molybdenum	ND		0.0250	mg/L	5	27-Mar-2018 00:26
Selenium	ND		0.0100	mg/L	5	27-Mar-2018 00:26
Thallium	ND		0.0100	mg/L	5	27-Mar-2018 00:26
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:03
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,000		50.0	mg/L	100	04-Apr-2018 18:52
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 18:52
Sulfate	2,600		50.0	mg/L	100	04-Apr-2018 18:52
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,760		10.0	mg/L	1	28-Mar-2018 16:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.57	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.8	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: DUP-1
 Collection Date: 19-Mar-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-29
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:34
Arsenic	0.0226		0.0100	mg/L	5	29-Mar-2018 16:34
Barium	ND		0.0200	mg/L	5	29-Mar-2018 16:34
Beryllium	0.0337		0.0100	mg/L	5	29-Mar-2018 16:34
Boron	14.5		0.400	mg/L	20	30-Mar-2018 16:34
Cadmium	0.0625		0.0100	mg/L	5	29-Mar-2018 16:34
Calcium	524		2.50	mg/L	5	29-Mar-2018 16:34
Cobalt	0.356		0.0250	mg/L	5	29-Mar-2018 16:34
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:34
Lithium	2.08		0.0250	mg/L	5	29-Mar-2018 16:34
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:34
Selenium	0.148		0.0100	mg/L	5	29-Mar-2018 16:34
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:34
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	0.000523		0.000200	mg/L	1	26-Mar-2018 10:08
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,530		50.0	mg/L	100	04-Apr-2018 19:57
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 19:57
Sulfate	3,130		50.0	mg/L	100	04-Apr-2018 19:57
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,780		10.0	mg/L	1	26-Mar-2018 09:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.78	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.7	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: DUP-2
 Collection Date: 20-Mar-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-30
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:20
Arsenic	ND		0.0100	mg/L	5	29-Mar-2018 16:20
Barium	0.0223		0.0200	mg/L	5	29-Mar-2018 16:20
Beryllium	ND		0.0100	mg/L	5	29-Mar-2018 16:20
Boron	27.0		0.400	mg/L	20	30-Mar-2018 16:26
Cadmium	ND		0.0100	mg/L	5	29-Mar-2018 16:20
Calcium	455		5.00	mg/L	5	29-Mar-2018 16:20
Cobalt	ND		0.0250	mg/L	5	29-Mar-2018 16:20
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:20
Lithium	1.33		0.0250	mg/L	5	29-Mar-2018 16:20
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:20
Selenium	ND		0.0100	mg/L	5	29-Mar-2018 16:20
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:20
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:54
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,070		50.0	mg/L	100	04-Apr-2018 15:39
Fluoride	ND		10.0	mg/L	100	04-Apr-2018 15:39
Sulfate	3,700		50.0	mg/L	100	04-Apr-2018 15:39
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,700		10.0	mg/L	1	27-Mar-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.37	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.7	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: DUP-3
 Collection Date: 21-Mar-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18031061
 Lab ID:HS18031061-31
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 28-Mar-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	29-Mar-2018 16:22
Arsenic	0.0166		0.0100	mg/L	5	29-Mar-2018 16:22
Barium	ND		0.0200	mg/L	5	29-Mar-2018 16:22
Beryllium	0.0735		0.0100	mg/L	5	29-Mar-2018 16:22
Boron	4.30		0.100	mg/L	5	30-Mar-2018 16:30
Cadmium	0.0150		0.0100	mg/L	5	29-Mar-2018 16:22
Calcium	428		5.00	mg/L	5	29-Mar-2018 16:22
Cobalt	0.112		0.0250	mg/L	5	29-Mar-2018 16:22
Lead	ND		0.0100	mg/L	5	29-Mar-2018 16:22
Lithium	0.587		0.0250	mg/L	5	29-Mar-2018 16:22
Molybdenum	ND		0.0250	mg/L	5	29-Mar-2018 16:22
Selenium	0.0699		0.0100	mg/L	5	29-Mar-2018 16:22
Thallium	ND		0.0100	mg/L	5	29-Mar-2018 16:22
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 23-Mar-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	26-Mar-2018 10:55
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	104		25.0	mg/L	50	04-Apr-2018 16:01
Fluoride	ND		5.00	mg/L	50	04-Apr-2018 16:01
Sulfate	3,050		25.0	mg/L	50	04-Apr-2018 16:01
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	4,830		10.0	mg/L	1	28-Mar-2018 16:00
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.81	H	0.100	pH Units	1	30-Mar-2018 14:39
Temp Deg C @pH	21.0	H	0	°C	1	30-Mar-2018 14:39
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	01-May-2018 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

Batch ID: 126504 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18031061-21	1	10	10 (mL)	1
HS18031061-22	1	10	10 (mL)	1
HS18031061-23	1	10	10 (mL)	1
HS18031061-24	1	10	10 (mL)	1
HS18031061-25	1	10	10 (mL)	1
HS18031061-26	1	10	10 (mL)	1
HS18031061-27	1	10	10 (mL)	1
HS18031061-28	1	10	10 (mL)	1
HS18031061-29	1	10	10 (mL)	1
HS18031061-30	1	10	10 (mL)	1
HS18031061-31	1	10	10 (mL)	1

Batch ID: 126549 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18031061-01	1	10	10 (mL)	1
HS18031061-02	1	10	10 (mL)	1
HS18031061-03	1	10	10 (mL)	1
HS18031061-04	1	10	10 (mL)	1
HS18031061-05	1	10	10 (mL)	1
HS18031061-06	1	10	10 (mL)	1
HS18031061-07	1	10	10 (mL)	1
HS18031061-08	1	10	10 (mL)	1
HS18031061-09	1	10	10 (mL)	1
HS18031061-10	1	10	10 (mL)	1
HS18031061-11	1	10	10 (mL)	1
HS18031061-12	1	10	10 (mL)	1
HS18031061-13	1	10	10 (mL)	1
HS18031061-14	1	10	10 (mL)	1

WEIGHT LOG

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

Batch ID: 126556 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18031061-01	1	10	10 (mL)	1
HS18031061-02	1	10	10 (mL)	1
HS18031061-03	1	10	10 (mL)	1
HS18031061-04	1	10	10 (mL)	1
HS18031061-05	1	10	10 (mL)	1
HS18031061-06	1	10	10 (mL)	1
HS18031061-07	1	10	10 (mL)	1
HS18031061-08	1	10	10 (mL)	1
HS18031061-09	1	10	10 (mL)	1
HS18031061-10	1	10	10 (mL)	1
HS18031061-11	1	10	10 (mL)	1
HS18031061-12	1	10	10 (mL)	1
HS18031061-13	1	10	10 (mL)	1
HS18031061-14	1	10	10 (mL)	1
HS18031061-15	1	10	10 (mL)	1
HS18031061-16	1	10	10 (mL)	1
HS18031061-17	1	10	10 (mL)	1
HS18031061-18	1	10	10 (mL)	1
HS18031061-19	1	10	10 (mL)	1
HS18031061-20	1	10	10 (mL)	1

Batch ID: 126607 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18031061-28	1	10	10 (mL)	1

Batch ID: 126679 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18031061-29	1	10	10 (mL)	1

Batch ID: 126680 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18031061-15	1	10	10 (mL)	1
HS18031061-16	1	10	10 (mL)	1
HS18031061-17	1	10	10 (mL)	1
HS18031061-18	1	10	10 (mL)	1
HS18031061-19	1	10	10 (mL)	1
HS18031061-20	1	10	10 (mL)	1
HS18031061-21	1	10	10 (mL)	1
HS18031061-22	1	10	10 (mL)	1
HS18031061-23	1	10	10 (mL)	1
HS18031061-24	1	10	10 (mL)	1
HS18031061-25	1	10	10 (mL)	1
HS18031061-26	1	10	10 (mL)	1
HS18031061-27	1	10	10 (mL)	1
HS18031061-30	1	10	10 (mL)	1
HS18031061-31	1	10	10 (mL)	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 126504	Test Name : MERCURY BY SW7470A			Matrix: Water		
HS18031061-21	Field Blank 2	21 Mar 2018 11:10		23 Mar 2018 15:06	26 Mar 2018 10:13	1
HS18031061-22	SP-3	21 Mar 2018 11:54		23 Mar 2018 15:06	26 Mar 2018 10:19	1
HS18031061-23	SP-32	21 Mar 2018 12:47		23 Mar 2018 15:06	26 Mar 2018 10:20	1
HS18031061-24	SP-1	21 Mar 2018 13:39		23 Mar 2018 15:06	26 Mar 2018 10:22	1
HS18031061-25	SP-34	21 Mar 2018 14:43		23 Mar 2018 15:06	26 Mar 2018 10:24	1
HS18031061-26	SP-2	21 Mar 2018 15:29		23 Mar 2018 15:06	26 Mar 2018 10:25	1
HS18031061-27	PZ-3	21 Mar 2018 16:24		23 Mar 2018 15:06	26 Mar 2018 10:27	1
HS18031061-28	PZ-2	21 Mar 2018 17:14		23 Mar 2018 15:06	26 Mar 2018 10:03	1
HS18031061-29	DUP-1	19 Mar 2018 00:00		23 Mar 2018 15:06	26 Mar 2018 10:08	1
HS18031061-30	DUP-2	20 Mar 2018 00:00		23 Mar 2018 15:06	26 Mar 2018 10:54	1
HS18031061-31	DUP-3	21 Mar 2018 00:00		23 Mar 2018 15:06	26 Mar 2018 10:55	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 126549	Test Name : ICP-MS METALS BY SW6020A				Matrix: Water	
HS18031061-01	Equipment Blank	19 Mar 2018 12:35		23 Mar 2018 11:00	28 Mar 2018 15:15	1
HS18031061-02	AP-31	19 Mar 2018 13:13		23 Mar 2018 11:00	28 Mar 2018 16:38	10
HS18031061-02	AP-31	19 Mar 2018 13:13		23 Mar 2018 11:00	28 Mar 2018 15:19	50
HS18031061-02	AP-31	19 Mar 2018 13:13		23 Mar 2018 11:00	27 Mar 2018 16:20	5
HS18031061-03	MW-3	19 Mar 2018 14:25		23 Mar 2018 11:00	28 Mar 2018 16:49	10
HS18031061-03	MW-3	19 Mar 2018 14:25		23 Mar 2018 11:00	28 Mar 2018 15:35	50
HS18031061-03	MW-3	19 Mar 2018 14:25		23 Mar 2018 11:00	27 Mar 2018 16:44	5
HS18031061-04	AP-32	19 Mar 2018 15:08		23 Mar 2018 11:00	28 Mar 2018 16:50	10
HS18031061-04	AP-32	19 Mar 2018 15:08		23 Mar 2018 11:00	28 Mar 2018 15:39	50
HS18031061-04	AP-32	19 Mar 2018 15:08		23 Mar 2018 11:00	27 Mar 2018 16:48	5
HS18031061-05	AP-33	19 Mar 2018 15:46		23 Mar 2018 11:00	28 Mar 2018 16:52	10
HS18031061-05	AP-33	19 Mar 2018 15:46		23 Mar 2018 11:00	28 Mar 2018 15:42	50
HS18031061-05	AP-33	19 Mar 2018 15:46		23 Mar 2018 11:00	27 Mar 2018 16:52	5
HS18031061-06	PZ-5	20 Mar 2018 10:50		23 Mar 2018 11:00	28 Mar 2018 17:02	10
HS18031061-06	PZ-5	20 Mar 2018 10:50		23 Mar 2018 11:00	28 Mar 2018 15:46	50
HS18031061-06	PZ-5	20 Mar 2018 10:50		23 Mar 2018 11:00	27 Mar 2018 16:56	5
HS18031061-07	Field Blank 1	20 Mar 2018 10:55		23 Mar 2018 11:00	28 Mar 2018 16:34	1
HS18031061-07	Field Blank 1	20 Mar 2018 10:55		23 Mar 2018 11:00	28 Mar 2018 15:50	5
HS18031061-08	AP-34	20 Mar 2018 11:36		23 Mar 2018 11:00	28 Mar 2018 17:04	10
HS18031061-08	AP-34	20 Mar 2018 11:36		23 Mar 2018 11:00	28 Mar 2018 15:58	50
HS18031061-08	AP-34	20 Mar 2018 11:36		23 Mar 2018 11:00	27 Mar 2018 17:08	5
HS18031061-09	AP-36	20 Mar 2018 12:28		23 Mar 2018 11:00	28 Mar 2018 16:03	10
HS18031061-09	AP-36	20 Mar 2018 12:28		23 Mar 2018 11:00	27 Mar 2018 17:12	5
HS18031061-10	PZ-6	20 Mar 2018 13:05		23 Mar 2018 11:00	28 Mar 2018 16:06	10
HS18031061-10	PZ-6	20 Mar 2018 13:05		23 Mar 2018 11:00	27 Mar 2018 17:16	5
HS18031061-11	EP-38	20 Mar 2018 14:45		23 Mar 2018 11:00	28 Mar 2018 16:10	5
HS18031061-11	EP-38	20 Mar 2018 14:45		23 Mar 2018 11:00	27 Mar 2018 17:20	5
HS18031061-12	MW-4	20 Mar 2018 15:21		23 Mar 2018 11:00	28 Mar 2018 17:06	10
HS18031061-12	MW-4	20 Mar 2018 15:21		23 Mar 2018 11:00	28 Mar 2018 16:14	50
HS18031061-12	MW-4	20 Mar 2018 15:21		23 Mar 2018 11:00	27 Mar 2018 17:28	5
HS18031061-13	AP-35	20 Mar 2018 16:01		23 Mar 2018 11:00	28 Mar 2018 17:08	10
HS18031061-13	AP-35	20 Mar 2018 16:01		23 Mar 2018 11:00	28 Mar 2018 16:22	50
HS18031061-13	AP-35	20 Mar 2018 16:01		23 Mar 2018 11:00	27 Mar 2018 17:32	5
HS18031061-14	EP-32	20 Mar 2018 16:55		23 Mar 2018 11:00	28 Mar 2018 17:10	10
HS18031061-14	EP-32	20 Mar 2018 16:55		23 Mar 2018 11:00	28 Mar 2018 16:26	50
HS18031061-14	EP-32	20 Mar 2018 16:55		23 Mar 2018 11:00	27 Mar 2018 17:36	5

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 126556		Test Name : MERCURY BY SW7470A		Matrix: Water		
HS18031061-01	Equipment Blank	19 Mar 2018 12:35		23 Mar 2018 15:04	26 Mar 2018 09:18	1
HS18031061-02	AP-31	19 Mar 2018 13:13		23 Mar 2018 15:04	26 Mar 2018 09:04	1
HS18031061-03	MW-3	19 Mar 2018 14:25		23 Mar 2018 15:04	26 Mar 2018 09:20	1
HS18031061-04	AP-32	19 Mar 2018 15:08		23 Mar 2018 15:04	26 Mar 2018 09:22	1
HS18031061-05	AP-33	19 Mar 2018 15:46		23 Mar 2018 15:04	26 Mar 2018 09:23	1
HS18031061-06	PZ-5	20 Mar 2018 10:50		23 Mar 2018 15:04	26 Mar 2018 09:25	1
HS18031061-07	Field Blank 1	20 Mar 2018 10:55		23 Mar 2018 15:04	26 Mar 2018 09:27	1
HS18031061-08	AP-34	20 Mar 2018 11:36		23 Mar 2018 15:04	26 Mar 2018 09:28	1
HS18031061-09	AP-36	20 Mar 2018 12:28		23 Mar 2018 15:04	26 Mar 2018 09:34	1
HS18031061-10	PZ-6	20 Mar 2018 13:05		23 Mar 2018 15:04	26 Mar 2018 09:35	1
HS18031061-11	EP-38	20 Mar 2018 14:45		23 Mar 2018 15:04	26 Mar 2018 09:37	1
HS18031061-12	MW-4	20 Mar 2018 15:21		23 Mar 2018 15:04	26 Mar 2018 09:39	1
HS18031061-13	AP-35	20 Mar 2018 16:01		23 Mar 2018 15:04	26 Mar 2018 09:40	1
HS18031061-14	EP-32	20 Mar 2018 16:55		23 Mar 2018 15:04	26 Mar 2018 09:42	1
HS18031061-15	EP-33	20 Mar 2018 17:32		23 Mar 2018 15:04	26 Mar 2018 09:44	1
HS18031061-16	EP-34	20 Mar 2018 18:03		23 Mar 2018 15:04	26 Mar 2018 09:45	1
HS18031061-17	EP-35	21 Mar 2018 08:56		23 Mar 2018 15:04	26 Mar 2018 09:13	1
HS18031061-18	EP-36	21 Mar 2018 09:35		23 Mar 2018 15:04	26 Mar 2018 09:47	1
HS18031061-19	EP-37	21 Mar 2018 10:07		23 Mar 2018 15:04	26 Mar 2018 09:49	1
HS18031061-20	EP-31	21 Mar 2018 10:58		23 Mar 2018 15:04	26 Mar 2018 09:54	1
Batch ID 126607		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18031061-28	PZ-2	21 Mar 2018 17:14		26 Mar 2018 15:00	27 Mar 2018 11:28	50
HS18031061-28	PZ-2	21 Mar 2018 17:14		26 Mar 2018 15:00	27 Mar 2018 00:26	5
Batch ID 126679		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18031061-29	DUP-1	19 Mar 2018 00:00		28 Mar 2018 10:58	30 Mar 2018 16:34	20
HS18031061-29	DUP-1	19 Mar 2018 00:00		28 Mar 2018 10:58	29 Mar 2018 16:34	5

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 126680		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18031061-15	EP-33	20 Mar 2018 17:32		28 Mar 2018 11:00	30 Mar 2018 13:19	50
HS18031061-15	EP-33	20 Mar 2018 17:32		28 Mar 2018 11:00	29 Mar 2018 15:42	5
HS18031061-16	EP-34	20 Mar 2018 18:03		28 Mar 2018 11:00	30 Mar 2018 13:23	50
HS18031061-16	EP-34	20 Mar 2018 18:03		28 Mar 2018 11:00	29 Mar 2018 15:44	5
HS18031061-17	EP-35	21 Mar 2018 08:56		28 Mar 2018 11:00	30 Mar 2018 15:37	50
HS18031061-17	EP-35	21 Mar 2018 08:56		28 Mar 2018 11:00	29 Mar 2018 15:46	5
HS18031061-18	EP-36	21 Mar 2018 09:35		28 Mar 2018 11:00	30 Mar 2018 15:45	100
HS18031061-18	EP-36	21 Mar 2018 09:35		28 Mar 2018 11:00	29 Mar 2018 15:56	5
HS18031061-19	EP-37	21 Mar 2018 10:07		28 Mar 2018 11:00	30 Mar 2018 15:53	10
HS18031061-19	EP-37	21 Mar 2018 10:07		28 Mar 2018 11:00	29 Mar 2018 15:58	5
HS18031061-20	EP-31	21 Mar 2018 10:58		28 Mar 2018 11:00	30 Mar 2018 15:57	10
HS18031061-20	EP-31	21 Mar 2018 10:58		28 Mar 2018 11:00	29 Mar 2018 16:00	5
HS18031061-21	Field Blank 2	21 Mar 2018 11:10		28 Mar 2018 11:00	29 Mar 2018 23:27	1
HS18031061-22	SP-3	21 Mar 2018 11:54		28 Mar 2018 11:00	30 Mar 2018 16:01	10
HS18031061-22	SP-3	21 Mar 2018 11:54		28 Mar 2018 11:00	29 Mar 2018 16:08	5
HS18031061-23	SP-32	21 Mar 2018 12:47		28 Mar 2018 11:00	29 Mar 2018 23:23	10
HS18031061-23	SP-32	21 Mar 2018 12:47		28 Mar 2018 11:00	29 Mar 2018 16:10	5
HS18031061-24	SP-1	21 Mar 2018 13:39		28 Mar 2018 11:00	30 Mar 2018 16:05	10
HS18031061-24	SP-1	21 Mar 2018 13:39		28 Mar 2018 11:00	29 Mar 2018 16:12	5
HS18031061-25	SP-34	21 Mar 2018 14:43		28 Mar 2018 11:00	30 Mar 2018 16:09	10
HS18031061-25	SP-34	21 Mar 2018 14:43		28 Mar 2018 11:00	29 Mar 2018 16:14	5
HS18031061-26	SP-2	21 Mar 2018 15:29		28 Mar 2018 11:00	30 Mar 2018 16:18	10
HS18031061-26	SP-2	21 Mar 2018 15:29		28 Mar 2018 11:00	29 Mar 2018 16:16	5
HS18031061-27	PZ-3	21 Mar 2018 16:24		28 Mar 2018 11:00	30 Mar 2018 16:22	10
HS18031061-27	PZ-3	21 Mar 2018 16:24		28 Mar 2018 11:00	29 Mar 2018 16:18	5
HS18031061-30	DUP-2	20 Mar 2018 00:00		28 Mar 2018 11:00	30 Mar 2018 16:26	20
HS18031061-30	DUP-2	20 Mar 2018 00:00		28 Mar 2018 11:00	29 Mar 2018 16:20	5
HS18031061-31	DUP-3	21 Mar 2018 00:00		28 Mar 2018 11:00	30 Mar 2018 16:30	5
HS18031061-31	DUP-3	21 Mar 2018 00:00		28 Mar 2018 11:00	29 Mar 2018 16:22	5
Batch ID R313079		Test Name : PH BY SM4500H+ B		Matrix: Water		
HS18031061-01	Equipment Blank	19 Mar 2018 12:35			23 Mar 2018 16:00	1
HS18031061-02	AP-31	19 Mar 2018 13:13			23 Mar 2018 16:00	1
HS18031061-03	MW-3	19 Mar 2018 14:25			23 Mar 2018 16:00	1
HS18031061-04	AP-32	19 Mar 2018 15:08			23 Mar 2018 16:00	1
HS18031061-05	AP-33	19 Mar 2018 15:46			23 Mar 2018 16:00	1
HS18031061-06	PZ-5	20 Mar 2018 10:50			23 Mar 2018 16:00	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R313140		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS18031061-01	Equipment Blank	19 Mar 2018 12:35			26 Mar 2018 09:00	1
HS18031061-02	AP-31	19 Mar 2018 13:13			26 Mar 2018 09:00	1
HS18031061-03	MW-3	19 Mar 2018 14:25			26 Mar 2018 09:00	1
HS18031061-04	AP-32	19 Mar 2018 15:08			26 Mar 2018 09:00	1
HS18031061-05	AP-33	19 Mar 2018 15:46			26 Mar 2018 09:00	1
HS18031061-29	DUP-1	19 Mar 2018 00:00			26 Mar 2018 09:00	1
Batch ID R313282		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS18031061-06	PZ-5	20 Mar 2018 10:50			27 Mar 2018 16:50	1
HS18031061-07	Field Blank 1	20 Mar 2018 10:55			27 Mar 2018 16:50	1
HS18031061-08	AP-34	20 Mar 2018 11:36			27 Mar 2018 16:50	1
HS18031061-09	AP-36	20 Mar 2018 12:28			27 Mar 2018 16:50	1
HS18031061-10	PZ-6	20 Mar 2018 13:05			27 Mar 2018 16:50	1
HS18031061-11	EP-38	20 Mar 2018 14:45			27 Mar 2018 16:50	1
HS18031061-12	MW-4	20 Mar 2018 15:21			27 Mar 2018 16:50	1
HS18031061-13	AP-35	20 Mar 2018 16:01			27 Mar 2018 16:50	1
HS18031061-14	EP-32	20 Mar 2018 16:55			27 Mar 2018 16:50	1
HS18031061-15	EP-33	20 Mar 2018 17:32			27 Mar 2018 16:50	1
HS18031061-16	EP-34	20 Mar 2018 18:03			27 Mar 2018 16:50	1
HS18031061-17	EP-35	21 Mar 2018 08:56			27 Mar 2018 16:50	1
HS18031061-18	EP-36	21 Mar 2018 09:35			27 Mar 2018 16:50	1
HS18031061-19	EP-37	21 Mar 2018 10:07			27 Mar 2018 16:50	1
HS18031061-20	EP-31	21 Mar 2018 10:58			27 Mar 2018 16:50	1
HS18031061-21	Field Blank 2	21 Mar 2018 11:10			27 Mar 2018 16:50	1
HS18031061-22	SP-3	21 Mar 2018 11:54			27 Mar 2018 16:50	1
HS18031061-30	DUP-2	20 Mar 2018 00:00			27 Mar 2018 16:50	1
Batch ID R313351		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS18031061-23	SP-32	21 Mar 2018 12:47			28 Mar 2018 16:00	1
HS18031061-24	SP-1	21 Mar 2018 13:39			28 Mar 2018 16:00	1
HS18031061-25	SP-34	21 Mar 2018 14:43			28 Mar 2018 16:00	1
HS18031061-26	SP-2	21 Mar 2018 15:29			28 Mar 2018 16:00	1
HS18031061-27	PZ-3	21 Mar 2018 16:24			28 Mar 2018 16:00	1
HS18031061-28	PZ-2	21 Mar 2018 17:14			28 Mar 2018 16:00	1
HS18031061-31	DUP-3	21 Mar 2018 00:00			28 Mar 2018 16:00	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R313357		Test Name : PH BY SM4500H+ B			Matrix: Water	
HS18031061-07	Field Blank 1	20 Mar 2018 10:55			29 Mar 2018 16:06	1
HS18031061-08	AP-34	20 Mar 2018 11:36			29 Mar 2018 16:06	1
HS18031061-09	AP-36	20 Mar 2018 12:28			29 Mar 2018 16:06	1
HS18031061-10	PZ-6	20 Mar 2018 13:05			29 Mar 2018 16:06	1
HS18031061-11	EP-38	20 Mar 2018 14:45			29 Mar 2018 16:06	1
HS18031061-12	MW-4	20 Mar 2018 15:21			29 Mar 2018 16:06	1
HS18031061-13	AP-35	20 Mar 2018 16:01			29 Mar 2018 16:06	1
HS18031061-14	EP-32	20 Mar 2018 16:55			29 Mar 2018 16:06	1
HS18031061-15	EP-33	20 Mar 2018 17:32			29 Mar 2018 16:06	1
HS18031061-16	EP-34	20 Mar 2018 18:03			29 Mar 2018 16:06	1
HS18031061-17	EP-35	21 Mar 2018 08:56			29 Mar 2018 16:06	1
HS18031061-18	EP-36	21 Mar 2018 09:35			29 Mar 2018 16:06	1
HS18031061-19	EP-37	21 Mar 2018 10:07			29 Mar 2018 16:06	1
HS18031061-20	EP-31	21 Mar 2018 10:58			29 Mar 2018 16:06	1
Batch ID R313441		Test Name : PH BY SM4500H+ B			Matrix: Water	
HS18031061-21	Field Blank 2	21 Mar 2018 11:10			30 Mar 2018 14:39	1
HS18031061-22	SP-3	21 Mar 2018 11:54			30 Mar 2018 14:39	1
HS18031061-23	SP-32	21 Mar 2018 12:47			30 Mar 2018 14:39	1
HS18031061-24	SP-1	21 Mar 2018 13:39			30 Mar 2018 14:39	1
HS18031061-25	SP-34	21 Mar 2018 14:43			30 Mar 2018 14:39	1
HS18031061-26	SP-2	21 Mar 2018 15:29			30 Mar 2018 14:39	1
HS18031061-27	PZ-3	21 Mar 2018 16:24			30 Mar 2018 14:39	1
HS18031061-28	PZ-2	21 Mar 2018 17:14			30 Mar 2018 14:39	1
HS18031061-29	DUP-1	19 Mar 2018 00:00			30 Mar 2018 14:39	1
HS18031061-30	DUP-2	20 Mar 2018 00:00			30 Mar 2018 14:39	1
HS18031061-31	DUP-3	21 Mar 2018 00:00			30 Mar 2018 14:39	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R313723		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18031061-01	Equipment Blank	19 Mar 2018 12:35			03 Apr 2018 13:52	1
HS18031061-02	AP-31	19 Mar 2018 13:13			03 Apr 2018 16:24	50
HS18031061-03	MW-3	19 Mar 2018 14:25			03 Apr 2018 21:34	100
HS18031061-04	AP-32	19 Mar 2018 15:08			03 Apr 2018 21:56	100
HS18031061-05	AP-33	19 Mar 2018 15:46			03 Apr 2018 22:17	100
HS18031061-06	PZ-5	20 Mar 2018 10:50			03 Apr 2018 22:39	100
HS18031061-07	Field Blank 1	20 Mar 2018 10:55			03 Apr 2018 21:12	1
HS18031061-08	AP-34	20 Mar 2018 11:36			03 Apr 2018 23:01	100
HS18031061-09	AP-36	20 Mar 2018 12:28			03 Apr 2018 23:22	100
HS18031061-10	PZ-6	20 Mar 2018 13:05			03 Apr 2018 23:44	100
HS18031061-11	EP-38	20 Mar 2018 14:45			04 Apr 2018 00:06	50
HS18031061-12	MW-4	20 Mar 2018 15:21			04 Apr 2018 01:33	50
HS18031061-13	AP-35	20 Mar 2018 16:01			04 Apr 2018 01:54	50
Batch ID R313757		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18031061-14	EP-32	20 Mar 2018 16:55			04 Apr 2018 02:59	100
HS18031061-15	EP-33	20 Mar 2018 17:32			04 Apr 2018 03:21	100
HS18031061-16	EP-34	20 Mar 2018 18:03			04 Apr 2018 03:43	100
HS18031061-17	EP-35	21 Mar 2018 08:56			04 Apr 2018 04:05	100
HS18031061-18	EP-36	21 Mar 2018 09:35			04 Apr 2018 06:58	100
HS18031061-19	EP-37	21 Mar 2018 10:07			04 Apr 2018 07:42	100
HS18031061-20	EP-31	21 Mar 2018 10:58			04 Apr 2018 08:03	50
HS18031061-21	Field Blank 2	21 Mar 2018 11:10			04 Apr 2018 07:20	1
HS18031061-22	SP-3	21 Mar 2018 11:54			04 Apr 2018 08:25	100
HS18031061-23	SP-32	21 Mar 2018 12:47			04 Apr 2018 08:47	100
HS18031061-24	SP-1	21 Mar 2018 13:39			04 Apr 2018 09:08	100
HS18031061-25	SP-34	21 Mar 2018 14:43			04 Apr 2018 10:13	100
HS18031061-26	SP-2	21 Mar 2018 15:29			04 Apr 2018 10:35	100
HS18031061-27	PZ-3	21 Mar 2018 16:24			04 Apr 2018 10:57	100
HS18031061-28	PZ-2	21 Mar 2018 17:14			04 Apr 2018 18:52	100
HS18031061-29	DUP-1	19 Mar 2018 00:00			04 Apr 2018 19:57	100
HS18031061-30	DUP-2	20 Mar 2018 00:00			04 Apr 2018 15:39	100
HS18031061-31	DUP-3	21 Mar 2018 00:00			04 Apr 2018 16:01	50

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R315391	Test Name : SUBCONTRACT ANALYSIS - RADIUM 228			Matrix: Water		
HS18031061-01	Equipment Blank	19 Mar 2018 12:35			01 May 2018 09:28	1
HS18031061-01	Equipment Blank	19 Mar 2018 12:35			01 May 2018 09:28	1
HS18031061-02	AP-31	19 Mar 2018 13:13			01 May 2018 09:28	1
HS18031061-02	AP-31	19 Mar 2018 13:13			01 May 2018 09:28	1
HS18031061-03	MW-3	19 Mar 2018 14:25			01 May 2018 09:28	1
HS18031061-03	MW-3	19 Mar 2018 14:25			01 May 2018 09:28	1
HS18031061-04	AP-32	19 Mar 2018 15:08			01 May 2018 09:28	1
HS18031061-04	AP-32	19 Mar 2018 15:08			01 May 2018 09:28	1
HS18031061-05	AP-33	19 Mar 2018 15:46			01 May 2018 09:28	1
HS18031061-05	AP-33	19 Mar 2018 15:46			01 May 2018 09:28	1
HS18031061-06	PZ-5	20 Mar 2018 10:50			01 May 2018 09:28	1
HS18031061-06	PZ-5	20 Mar 2018 10:50			01 May 2018 09:28	1
HS18031061-07	Field Blank 1	20 Mar 2018 10:55			01 May 2018 09:28	1
HS18031061-07	Field Blank 1	20 Mar 2018 10:55			01 May 2018 09:28	1
HS18031061-08	AP-34	20 Mar 2018 11:36			01 May 2018 09:28	1
HS18031061-08	AP-34	20 Mar 2018 11:36			01 May 2018 09:28	1
HS18031061-09	AP-36	20 Mar 2018 12:28			01 May 2018 09:28	1
HS18031061-09	AP-36	20 Mar 2018 12:28			01 May 2018 09:28	1
HS18031061-10	PZ-6	20 Mar 2018 13:05			01 May 2018 09:28	1
HS18031061-10	PZ-6	20 Mar 2018 13:05			01 May 2018 09:28	1
HS18031061-11	EP-38	20 Mar 2018 14:45			01 May 2018 09:28	1
HS18031061-11	EP-38	20 Mar 2018 14:45			01 May 2018 09:28	1
HS18031061-12	MW-4	20 Mar 2018 15:21			01 May 2018 09:28	1
HS18031061-12	MW-4	20 Mar 2018 15:21			01 May 2018 09:28	1
HS18031061-13	AP-35	20 Mar 2018 16:01			01 May 2018 09:28	1
HS18031061-13	AP-35	20 Mar 2018 16:01			01 May 2018 09:28	1
HS18031061-14	EP-32	20 Mar 2018 16:55			01 May 2018 09:28	1
HS18031061-14	EP-32	20 Mar 2018 16:55			01 May 2018 09:28	1
HS18031061-15	EP-33	20 Mar 2018 17:32			01 May 2018 09:28	1
HS18031061-15	EP-33	20 Mar 2018 17:32			01 May 2018 09:28	1
HS18031061-16	EP-34	20 Mar 2018 18:03			01 May 2018 09:28	1
HS18031061-16	EP-34	20 Mar 2018 18:03			01 May 2018 09:28	1
HS18031061-17	EP-35	21 Mar 2018 08:56			01 May 2018 09:28	1
HS18031061-17	EP-35	21 Mar 2018 08:56			01 May 2018 09:28	1
HS18031061-18	EP-36	21 Mar 2018 09:35			01 May 2018 09:28	1
HS18031061-18	EP-36	21 Mar 2018 09:35			01 May 2018 09:28	1
HS18031061-19	EP-37	21 Mar 2018 10:07			01 May 2018 09:28	1
HS18031061-19	EP-37	21 Mar 2018 10:07			01 May 2018 09:28	1
HS18031061-20	EP-31	21 Mar 2018 10:58			01 May 2018 09:28	1
HS18031061-20	EP-31	21 Mar 2018 10:58			01 May 2018 09:28	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
HS18031061-21	Field Blank 2	21 Mar 2018 11:10			01 May 2018 09:28	1
HS18031061-21	Field Blank 2	21 Mar 2018 11:10			01 May 2018 09:28	1
HS18031061-22	SP-3	21 Mar 2018 11:54			01 May 2018 09:28	1
HS18031061-22	SP-3	21 Mar 2018 11:54			01 May 2018 09:28	1
HS18031061-23	SP-32	21 Mar 2018 12:47			01 May 2018 09:28	1
HS18031061-23	SP-32	21 Mar 2018 12:47			01 May 2018 09:28	1
HS18031061-24	SP-1	21 Mar 2018 13:39			01 May 2018 09:28	1
HS18031061-24	SP-1	21 Mar 2018 13:39			01 May 2018 09:28	1
HS18031061-25	SP-34	21 Mar 2018 14:43			01 May 2018 09:28	1
HS18031061-25	SP-34	21 Mar 2018 14:43			01 May 2018 09:28	1
HS18031061-26	SP-2	21 Mar 2018 15:29			01 May 2018 09:28	1
HS18031061-26	SP-2	21 Mar 2018 15:29			01 May 2018 09:28	1
HS18031061-27	PZ-3	21 Mar 2018 16:24			01 May 2018 09:28	1
HS18031061-27	PZ-3	21 Mar 2018 16:24			01 May 2018 09:28	1
HS18031061-28	PZ-2	21 Mar 2018 17:14			01 May 2018 09:28	1
HS18031061-28	PZ-2	21 Mar 2018 17:14			01 May 2018 09:28	1
HS18031061-29	DUP-1	19 Mar 2018 00:00			01 May 2018 09:28	1
HS18031061-29	DUP-1	19 Mar 2018 00:00			01 May 2018 09:28	1
HS18031061-30	DUP-2	20 Mar 2018 00:00			01 May 2018 09:28	1
HS18031061-30	DUP-2	20 Mar 2018 00:00			01 May 2018 09:28	1
HS18031061-31	DUP-3	21 Mar 2018 00:00			01 May 2018 09:28	1
HS18031061-31	DUP-3	21 Mar 2018 00:00			01 May 2018 09:28	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126504		Instrument: HG03		Method: SW7470					
MBLK	Sample ID: MBLK-126504	Units: mg/L		Analysis Date: 26-Mar-2018 10:00					
Client ID:	Run ID: HG03_313088	SeqNo: 4487781		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Mercury	ND	0.000200							
LCS	Sample ID: LCS-126504	Units: mg/L		Analysis Date: 26-Mar-2018 10:01					
Client ID:	Run ID: HG03_313088	SeqNo: 4487782		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Mercury	0.00451	0.000200	0.005	0	90.2	80 - 120			
MS	Sample ID: HS18031061-29MS	Units: mg/L		Analysis Date: 26-Mar-2018 10:10					
Client ID: DUP-1	Run ID: HG03_313088	SeqNo: 4487787		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Mercury	0.00385	0.000200	0.005	0.000523	66.5	75 - 125		S	
MS	Sample ID: HS18031061-28MS	Units: mg/L		Analysis Date: 26-Mar-2018 10:05					
Client ID: PZ-2	Run ID: HG03_313088	SeqNo: 4487784		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Mercury	0.0044	0.000200	0.005	-0.000007	88.1	75 - 125			
MSD	Sample ID: HS18031061-29MSD	Units: mg/L		Analysis Date: 26-Mar-2018 10:12					
Client ID: DUP-1	Run ID: HG03_313088	SeqNo: 4487788		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Mercury	0.0038	0.000200	0.005	0.000523	65.5	75 - 125	0.00385	1.31 20 S	
MSD	Sample ID: HS18031061-28MSD	Units: mg/L		Analysis Date: 26-Mar-2018 10:07					
Client ID: PZ-2	Run ID: HG03_313088	SeqNo: 4487785		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Mercury	0.00431	0.000200	0.005	-0.000007	86.3	75 - 125	0.0044	2.07 20	
The following samples were analyzed in this batch:									
	HS18031061-21	HS18031061-22	HS18031061-23	HS18031061-24					
	HS18031061-25	HS18031061-26	HS18031061-27	HS18031061-28					
	HS18031061-29	HS18031061-30	HS18031061-31						

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126549	Instrument: ICPMS05	Method: SW6020								
MBLK	Sample ID: MBLK-126549	Units: mg/L	Analysis Date: 27-Mar-2018 16:07							
Client ID:	Run ID: ICPMS05_313161	SeqNo: 4491075	PrepDate: 23-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Boron	ND	0.0200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

LCS	Sample ID: LCS-126549	Units: mg/L	Analysis Date: 27-Mar-2018 16:09							
Client ID:	Run ID: ICPMS05_313161	SeqNo: 4491076	PrepDate: 23-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04725	0.00200	0.05	0	94.5	80 - 120				
Arsenic	0.0475	0.00200	0.05	0	95.0	80 - 120				
Barium	0.04804	0.00400	0.05	0	96.1	80 - 120				
Beryllium	0.05357	0.00200	0.05	0	107	80 - 120				
Boron	0.5231	0.0200	0.5	0	105	80 - 120				
Cadmium	0.0493	0.00200	0.05	0	98.6	80 - 120				
Calcium	4.819	0.500	5	0	96.4	80 - 120				
Cobalt	0.04993	0.00500	0.05	0	99.9	80 - 120				
Lead	0.04633	0.00200	0.05	0	92.7	80 - 120				
Lithium	0.1007	0.00500	0.1	0	101	80 - 120				
Molybdenum	0.04743	0.00500	0.05	0	94.9	80 - 120				
Selenium	0.0495	0.00200	0.05	0	99.0	80 - 120				
Thallium	0.04703	0.00200	0.05	0	94.1	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126549		Instrument: ICPMS05		Method: SW6020					
MS		Sample ID: HS18031061-02MS		Units: mg/L		Analysis Date: 27-Mar-2018 16:28			
Client ID: AP-31		Run ID: ICPMS05_313161		SeqNo: 4491085		PrepDate: 23-Mar-2018 DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Antimony	0.04129	0.0100	0.05	0	82.6	80 - 120			
Arsenic	0.05333	0.0100	0.05	0.009416	87.8	80 - 120			
Barium	0.05867	0.0200	0.05	0.01207	93.2	80 - 120			
Boron	50.12	0.100	0.5	48.77	269	80 - 120			SEO
Cadmium	0.04685	0.0100	0.05	0.005182	83.3	80 - 120			
Calcium	554.6	2.50	5	565.5	-218	80 - 120			SO
Cobalt	0.2845	0.0250	0.05	0.2529	63.2	80 - 120			SO
Lithium	0.9848	0.0250	0.1	0.907	77.8	80 - 120			SO
Molybdenum	0.04373	0.0250	0.05	0	87.5	80 - 120			
Thallium	0.04466	0.0100	0.05	0.002323	84.7	80 - 120			
MS		Sample ID: HS18031061-02MS		Units: mg/L		Analysis Date: 28-Mar-2018 16:43			
Client ID: AP-31		Run ID: ICPMS05_313239		SeqNo: 4493068		PrepDate: 23-Mar-2018 DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Beryllium	0.05631	0.0200	0.05	0.01054	91.5	80 - 120			
Selenium	0.1074	0.0200	0.05	0.05261	110	80 - 120			
MS		Sample ID: HS18031061-02MS		Units: mg/L		Analysis Date: 28-Mar-2018 23:43			
Client ID: AP-31		Run ID: ICPMS05_313239		SeqNo: 4493125		PrepDate: 23-Mar-2018 DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Lead	0.03999	0.0200	0.05	0	80.0	80 - 120			S

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126549	Instrument: ICPMS05	Method: SW6020
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MSD		Sample ID: HS18031061-02MSD			Units: mg/L		Analysis Date: 27-Mar-2018 16:32			
Client ID: AP-31		Run ID: ICPMS05_313161			SeqNo: 4491087		PrepDate: 23-Mar-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04259	0.0100	0.05	0	85.2	80 - 120	0.04129	3.11	20	
Arsenic	0.05404	0.0100	0.05	0.009416	89.2	80 - 120	0.05333	1.32	20	
Barium	0.05666	0.0200	0.05	0.01207	89.2	80 - 120	0.05867	3.49	20	
Boron	50.7	0.100	0.5	48.77	385	80 - 120	50.12	1.15	20	SEO
Cadmium	0.05472	0.0100	0.05	0.005182	99.1	80 - 120	0.04685	15.5	20	
Calcium	560.5	2.50	5	565.5	-100	80 - 120	554.6	1.06	20	SO
Cobalt	0.2838	0.0250	0.05	0.2529	61.8	80 - 120	0.2845	0.239	20	SO
Lithium	0.9774	0.0250	0.1	0.907	70.4	80 - 120	0.9848	0.748	20	SO
Molybdenum	0.04506	0.0250	0.05	0	90.1	80 - 120	0.04373	2.99	20	
Thallium	0.04459	0.0100	0.05	0.002323	84.5	80 - 120	0.04466	0.173	20	

MSD		Sample ID: HS18031061-02MSD			Units: mg/L		Analysis Date: 28-Mar-2018 16:45			
Client ID: AP-31		Run ID: ICPMS05_313239			SeqNo: 4493069		PrepDate: 23-Mar-2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.05752	0.0200	0.05	0.01054	94.0	80 - 120	0.05631	2.13	20	
Selenium	0.1057	0.0200	0.05	0.05261	106	80 - 120	0.1074	1.57	20	

MSD		Sample ID: HS18031061-02MSD			Units: mg/L		Analysis Date: 28-Mar-2018 23:45			
Client ID: AP-31		Run ID: ICPMS05_313239			SeqNo: 4493126		PrepDate: 23-Mar-2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.04359	0.0200	0.05	0	87.2	80 - 120	0.03999	8.61	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126549		Instrument: ICPMS05			Method: SW6020					
PDS		Sample ID: HS18031061-02PDS			Units: mg/L		Analysis Date: 27-Mar-2018 16:40			
Client ID: AP-31		Run ID: ICPMS05_313161			SeqNo: 4491091		PrepDate: 23-Mar-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4208	0.0100	0.5	0	84.2	75 - 125				
Arsenic	0.474	0.0100	0.5	0.009416	92.9	75 - 125				
Barium	0.4707	0.0200	0.5	0.01207	91.7	75 - 125				
Cadmium	0.4771	0.0100	0.5	0.005182	94.4	75 - 125				
Calcium	598.1	2.50	50	565.5	65.2	75 - 125				SO
Cobalt	0.6912	0.0250	0.5	0.2529	87.6	75 - 125				
Molybdenum	0.4458	0.0250	0.5	0	89.2	75 - 125				
Selenium	0.482	0.0100	0.5	0.03716	89.0	75 - 125				
Thallium	0.4577	0.0100	0.5	0.002323	91.1	75 - 125				
PDS		Sample ID: HS18031061-02PDS			Units: mg/L		Analysis Date: 28-Mar-2018 16:47			
Client ID: AP-31		Run ID: ICPMS05_313239			SeqNo: 4493070		PrepDate: 23-Mar-2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	1.025	0.0200	1	0.01054	101	75 - 125				
PDS		Sample ID: HS18031061-02PDS			Units: mg/L		Analysis Date: 28-Mar-2018 15:27			
Client ID: AP-31		Run ID: ICPMS05_313239			SeqNo: 4492883		PrepDate: 23-Mar-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	96.18	1.00	50	43.27	106	75 - 125				E
Lithium	5.553	0.250	5	0.8829	93.4	70 - 125				
PDS		Sample ID: HS18031061-02PDS			Units: mg/L		Analysis Date: 28-Mar-2018 23:47			
Client ID: AP-31		Run ID: ICPMS05_313239			SeqNo: 4493127		PrepDate: 23-Mar-2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.9053	0.0200	1	0	90.5	75 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126549 **Instrument:** ICPMS05 **Method:** SW6020

SD		Sample ID: HS18031061-02SD			Units: mg/L		Analysis Date: 27-Mar-2018 16:24			
Client ID: AP-31		Run ID: ICPMS05_313161			SeqNo: 4491083		PrepDate: 23-Mar-2018		DF: 25	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Antimony	ND	0.0500					-0.000001	0	10	
Arsenic	ND	0.0500					0.009416	0	10	
Barium	ND	0.100					0.01207	0	10	
Cadmium	ND	0.0500					0.005182	0	10	
Calcium	534	12.5					565.5	5.57	10	
Cobalt	0.2505	0.125					0.2529	0.98	10	
Molybdenum	ND	0.125					-0.000214	0	10	
Selenium	ND	0.0500					0.03716	0	10	
Thallium	ND	0.0500					0.002323	0	10	

SD		Sample ID: HS18031061-02SD			Units: mg/L		Analysis Date: 28-Mar-2018 16:41			
Client ID: AP-31		Run ID: ICPMS05_313239			SeqNo: 4493067		PrepDate: 23-Mar-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Beryllium	ND	0.100					0.01054	0	10	
Lead	ND	0.100					0.000094	0	10	

SD		Sample ID: HS18031061-02SD			Units: mg/L		Analysis Date: 28-Mar-2018 15:23			
Client ID: AP-31		Run ID: ICPMS05_313239			SeqNo: 4492881		PrepDate: 23-Mar-2018		DF: 250	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Boron	32.43	5.00					43.27	25.1	10	R
Lithium	0.7429	1.25					0.8829	0	10	J

The following samples were analyzed in this batch:

HS18031061-01	HS18031061-02	HS18031061-03	HS18031061-04
HS18031061-05	HS18031061-06	HS18031061-07	HS18031061-08
HS18031061-09	HS18031061-10	HS18031061-11	HS18031061-12
HS18031061-13	HS18031061-14		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126556		Instrument: HG03		Method: SW7470					
MBLK	Sample ID: MBLK-126556	Units: mg/L		Analysis Date: 26-Mar-2018 09:01					
Client ID:	Run ID: HG03_313088	SeqNo: 4487692		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury ND 0.000200

LCS		Sample ID: LCS-126556		Units: mg/L		Analysis Date: 26-Mar-2018 09:03			
Client ID:	Run ID: HG03_313088	SeqNo: 4487693		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00461 0.000200 0.005 0 92.2 80 - 120

MS		Sample ID: HS18031061-17MS		Units: mg/L		Analysis Date: 26-Mar-2018 09:15			
Client ID: EP-35	Run ID: HG03_313088	SeqNo: 4487698		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00315 0.000200 0.005 0.000072 61.6 75 - 125 S

MS		Sample ID: HS18031061-02MS		Units: mg/L		Analysis Date: 26-Mar-2018 09:06			
Client ID: AP-31	Run ID: HG03_313088	SeqNo: 4487695		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00337 0.000200 0.005 0.000505 57.3 75 - 125 S

MSD		Sample ID: HS18031061-17MSD		Units: mg/L		Analysis Date: 26-Mar-2018 09:16			
Client ID: EP-35	Run ID: HG03_313088	SeqNo: 4487699		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00323 0.000200 0.005 0.000072 63.2 75 - 125 0.00315 2.51 20 S

MSD		Sample ID: HS18031061-02MSD		Units: mg/L		Analysis Date: 26-Mar-2018 09:08			
Client ID: AP-31	Run ID: HG03_313088	SeqNo: 4487696		PrepDate: 23-Mar-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00347 0.000200 0.005 0.000505 59.3 75 - 125 0.00337 2.92 20 S

The following samples were analyzed in this batch:	HS18031061-01	HS18031061-02	HS18031061-03	HS18031061-04
	HS18031061-05	HS18031061-06	HS18031061-07	HS18031061-08
	HS18031061-09	HS18031061-10	HS18031061-11	HS18031061-12
	HS18031061-13	HS18031061-14	HS18031061-15	HS18031061-16
	HS18031061-17	HS18031061-18	HS18031061-19	HS18031061-20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126607	Instrument: ICPMS05	Method: SW6020								
MBLK	Sample ID: MBLK-126607	Units: mg/L	Analysis Date: 26-Mar-2018 22:56							
Client ID:	Run ID: ICPMS05_313098	SeqNo: 4489121	PrepDate: 26-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Boron	ND	0.0200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

LCS	Sample ID: LCS-126607	Units: mg/L	Analysis Date: 26-Mar-2018 22:58							
Client ID:	Run ID: ICPMS05_313098	SeqNo: 4489122	PrepDate: 26-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04849	0.00200	0.05	0	97.0	80 - 120				
Arsenic	0.04836	0.00200	0.05	0	96.7	80 - 120				
Barium	0.0468	0.00400	0.05	0	93.6	80 - 120				
Beryllium	0.04954	0.00200	0.05	0	99.1	80 - 120				
Boron	0.5165	0.0200	0.5	0	103	80 - 120				
Cadmium	0.04832	0.00200	0.05	0	96.6	80 - 120				
Calcium	4.979	0.500	5	0	99.6	80 - 120				
Cobalt	0.05021	0.00500	0.05	0	100	80 - 120				
Lead	0.04484	0.00200	0.05	0	89.7	80 - 120				
Lithium	0.091	0.00500	0.1	0	91.0	80 - 120				
Molybdenum	0.04821	0.00500	0.05	0	96.4	80 - 120				
Selenium	0.05484	0.00200	0.05	0	110	80 - 120				
Thallium	0.04691	0.00200	0.05	0	93.8	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126607	Instrument: ICPMS05	Method: SW6020
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MS		Sample ID: HS18031061-28MS			Units: mg/L		Analysis Date: 27-Mar-2018 11:52			
Client ID: PZ-2		Run ID: ICPMS05_313161			SeqNo: 4490229		PrepDate: 26-Mar-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05089	0.0100	0.05	0	102	80 - 120				
Arsenic	0.05063	0.0100	0.05	0	101	80 - 120				
Barium	0.07962	0.0200	0.05	0.02785	104	80 - 120				
Boron	7.06	0.100	0.5	6.065	199	80 - 120				SO
Cadmium	0.04799	0.0100	0.05	0	96.0	80 - 120				
Calcium	780.2	2.50	5	778.7	28.8	80 - 120				SO
Cobalt	0.05634	0.0250	0.05	0.00776	97.2	80 - 120				
Lead	0.04349	0.0100	0.05	0	87.0	80 - 120				
Lithium	2.162	0.0250	0.1	1.935	227	80 - 120				SO
Molybdenum	0.04775	0.0250	0.05	0	95.5	80 - 120				
Selenium	0.03975	0.0100	0.05	0	79.5	80 - 120				S
Thallium	0.04451	0.0100	0.05	0	89.0	80 - 120				

MS		Sample ID: HS18031061-28MS			Units: mg/L		Analysis Date: 27-Mar-2018 00:34			
Client ID: PZ-2		Run ID: ICPMS05_313098			SeqNo: 4489408		PrepDate: 26-Mar-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.04821	0.0100	0.05	0	96.4	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126607	Instrument: ICPMS05	Method: SW6020								
MSD	Sample ID: HS18031061-28MSD	Units: mg/L	Analysis Date: 27-Mar-2018 11:56							
Client ID: PZ-2	Run ID: ICPMS05_313161	SeqNo: 4490231	PrepDate: 26-Mar-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.04881	0.0100	0.05	0	97.6	80 - 120	0.05089	4.17	20
Arsenic	0.04876	0.0100	0.05	0	97.5	80 - 120	0.05063	3.74	20
Barium	0.07796	0.0200	0.05	0.02785	100	80 - 120	0.07962	2.11	20
Beryllium	0.05981	0.0100	0.05	0	120	80 - 120	0.06038	0.958	20
Boron	7.143	0.100	0.5	6.065	216	80 - 120	7.06	1.17	20 SO
Cadmium	0.049	0.0100	0.05	0	98.0	80 - 120	0.04799	2.08	20
Calcium	796	2.50	5	778.7	346	80 - 120	780.2	2.01	20 SO
Cobalt	0.05709	0.0250	0.05	0.00776	98.7	80 - 120	0.05634	1.32	20
Lead	0.04312	0.0100	0.05	0	86.2	80 - 120	0.04349	0.866	20
Lithium	2.157	0.0250	0.1	1.935	222	80 - 120	2.162	0.222	20 SO
Molybdenum	0.04592	0.0250	0.05	0	91.8	80 - 120	0.04775	3.92	20
Thallium	0.04574	0.0100	0.05	0	91.5	80 - 120	0.04451	2.73	20

MSD	Sample ID: HS18031061-28MSD	Units: mg/L	Analysis Date: 27-Mar-2018 00:38							
Client ID: PZ-2	Run ID: ICPMS05_313098	SeqNo: 4489410	PrepDate: 26-Mar-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Selenium	0.03845	0.0100	0.05	0	76.9	80 - 120	0.03862	0.449	20	S
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PDS	Sample ID: HS18031061-28PDS	Units: mg/L	Analysis Date: 27-Mar-2018 00:42							
Client ID: PZ-2	Run ID: ICPMS05_313098	SeqNo: 4489412	PrepDate: 26-Mar-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.5079	0.0100	0.5	0	102	75 - 125				
Arsenic	0.5337	0.0100	0.5	0	107	75 - 125				
Barium	0.5444	0.0200	0.5	0.02723	103	75 - 125				
Cadmium	0.5087	0.0100	0.5	0	102	75 - 125				
Calcium	675.6	2.50	50	726.1	-101	75 - 125				SO
Cobalt	0.5403	0.0250	0.5	0.008432	106	75 - 125				
Lead	0.5156	0.0100	0.5	0	103	75 - 125				
Lithium	2.418	0.0250	0.5	1.867	110	70 - 125				
Molybdenum	0.5423	0.0250	0.5	0	108	75 - 125				
Selenium	0.4938	0.0100	0.5	0	98.8	75 - 125				
Thallium	0.5282	0.0100	0.5	0	106	75 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126607	Instrument: ICPMS05	Method: SW6020								
PDS	Sample ID: HS18031061-28PDS	Units: mg/L	Analysis Date: 27-Mar-2018 11:36							
Client ID: PZ-2	Run ID: ICPMS05_313161	SeqNo: 4490221	PrepDate: 26-Mar-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	55.63	1.00	50	5.13	101	75 - 125
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SD	Sample ID: HS18031061-28SD	Units: mg/L	Analysis Date: 27-Mar-2018 00:30							
Client ID: PZ-2	Run ID: ICPMS05_313098	SeqNo: 4489406	PrepDate: 26-Mar-2018 DF: 25							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual

Antimony	ND	0.0500					-0.00044	0	10	
Arsenic	ND	0.0500					0.001735	0	10	
Barium	ND	0.100					0.02723	0	10	
Beryllium	ND	0.0500					0.000622	0	10	
Boron	5.458	0.500					6.028	9.47	10	
Cadmium	ND	0.0500					-0.000075	0	10	
Calcium	787	12.5					726.1	8.39	10	
Cobalt	0.00959	0.125					0.008432	0	10	J
Lead	ND	0.0500					0.00037	0	10	
Lithium	1.645	0.125					1.867	11.9	10	R
Molybdenum	ND	0.125					0.000466	0	10	
Selenium	ND	0.0500					0.000367	0	10	
Thallium	ND	0.0500					0.000076	0	10	

SD	Sample ID: HS18031061-28SD	Units: mg/L	Analysis Date: 27-Mar-2018 11:32							
Client ID: PZ-2	Run ID: ICPMS05_313161	SeqNo: 4490219	PrepDate: 26-Mar-2018 DF: 250							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual

Boron	5.72	5.00					5.13	11.5	10	R
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The following samples were analyzed in this batch: HS18031061-28

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126679	Instrument: ICPMS05	Method: SW6020								
MBLK	Sample ID: MBLK-126679	Units: mg/L	Analysis Date: 29-Mar-2018 15:28							
Client ID:	Run ID: ICPMS05_313326	SeqNo: 4494502	PrepDate: 28-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Beryllium	ND	0.00200								
Boron	ND	0.0200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

MBLK	Sample ID: MBLK-126679	Units: mg/L	Analysis Date: 30-Mar-2018 14:57							
Client ID:	Run ID: ICPMS05_313420	SeqNo: 4496923	PrepDate: 28-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Barium	ND	0.00400								
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126679	Instrument: ICPMS05	Method: SW6020								
LCS	Sample ID: LCS-126679	Units: mg/L	Analysis Date: 29-Mar-2018 15:30							
Client ID:	Run ID: ICPMS05_313326	SeqNo: 4494503	PrepDate: 28-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.04969	0.00200	0.05	0	99.4	80 - 120				
Arsenic	0.04957	0.00200	0.05	0	99.1	80 - 120				
Barium	0.04887	0.00400	0.05	0	97.7	80 - 120				
Beryllium	0.05204	0.00200	0.05	0	104	80 - 120				
Boron	0.501	0.0200	0.5	0	100	80 - 120				
Cadmium	0.04892	0.00200	0.05	0	97.8	80 - 120				
Calcium	4.88	0.500	5	0	97.6	80 - 120				
Cobalt	0.04958	0.00500	0.05	0	99.2	80 - 120				
Lead	0.05074	0.00200	0.05	0	101	80 - 120				
Lithium	0.09689	0.00500	0.1	0	96.9	80 - 120				
Molybdenum	0.05014	0.00500	0.05	0	100	80 - 120				
Selenium	0.05095	0.00200	0.05	0	102	80 - 120				
Thallium	0.04743	0.00200	0.05	0	94.9	80 - 120				

MS	Sample ID: HS18031061-29MS	Units: mg/L	Analysis Date: 29-Mar-2018 16:38							
Client ID: DUP-1	Run ID: ICPMS05_313326	SeqNo: 4495395	PrepDate: 28-Mar-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0478	0.0100	0.05	0	95.6	80 - 120				
Arsenic	0.06666	0.0100	0.05	0.02263	88.0	80 - 120				
Barium	0.06029	0.0200	0.05	0.00976	101	80 - 120				
Cadmium	0.1044	0.0100	0.05	0.06248	83.8	80 - 120				
Calcium	547	2.50	5	524.4	451	80 - 120				SO
Cobalt	0.419	0.0250	0.05	0.3564	125	80 - 120				SO
Molybdenum	0.05028	0.0250	0.05	0	101	80 - 120				
Selenium	0.1957	0.0100	0.05	0.1475	96.4	80 - 120				
Thallium	0.04785	0.0100	0.05	0.002017	91.7	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126679		Instrument: ICPMS05			Method: SW6020					
MS		Sample ID: HS18031061-29MS			Units: mg/L		Analysis Date: 30-Mar-2018 17:10			
Client ID: DUP-1		Run ID: ICPMS05_313420			SeqNo: 4497602		PrepDate: 28-Mar-2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.08404	0.0200	0.05	0.02817	112	80 - 120				
Boron	18.26	0.200	0.5	16.46	360	80 - 120				SEO
Lithium	2.006	0.0500	0.1	1.78	226	80 - 120				SO
MS		Sample ID: HS18031061-29MS			Units: mg/L		Analysis Date: 30-Mar-2018 20:38			
Client ID: DUP-1		Run ID: ICPMS05_313420			SeqNo: 4497832		PrepDate: 28-Mar-2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.04985	0.0200	0.05	0	99.7	80 - 120				
MSD		Sample ID: HS18031061-29MSD			Units: mg/L		Analysis Date: 29-Mar-2018 16:40			
Client ID: DUP-1		Run ID: ICPMS05_313326			SeqNo: 4495396		PrepDate: 28-Mar-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04681	0.0100	0.05	0	93.6	80 - 120	0.0478	2.11	20	
Arsenic	0.07285	0.0100	0.05	0.02263	100	80 - 120	0.06666	8.88	20	
Barium	0.05818	0.0200	0.05	0.00976	96.8	80 - 120	0.06029	3.56	20	
Cadmium	0.1088	0.0100	0.05	0.06248	92.6	80 - 120	0.1044	4.13	20	
Calcium	517.8	2.50	5	524.4	-132	80 - 120	547	5.48	20	SO
Cobalt	0.4024	0.0250	0.05	0.3564	92.0	80 - 120	0.419	4.05	20	O
Molybdenum	0.04843	0.0250	0.05	0	96.9	80 - 120	0.05028	3.74	20	
Thallium	0.04965	0.0100	0.05	0.002017	95.3	80 - 120	0.04785	3.7	20	
MSD		Sample ID: HS18031061-29MSD			Units: mg/L		Analysis Date: 30-Mar-2018 17:12			
Client ID: DUP-1		Run ID: ICPMS05_313420			SeqNo: 4497603		PrepDate: 28-Mar-2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.08041	0.0200	0.05	0.02817	104	80 - 120	0.08404	4.41	20	
Boron	17.49	0.200	0.5	16.46	206	80 - 120	18.26	4.3	20	SO
Lithium	1.894	0.0500	0.1	1.78	114	80 - 120	2.006	5.74	20	O

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126679		Instrument: ICPMS05			Method: SW6020					
MSD	Sample ID: HS18031061-29MSD	Units: mg/L			Analysis Date: 30-Mar-2018 20:40					
Client ID: DUP-1	Run ID: ICPMS05_313420	SeqNo: 4497833			PrepDate: 28-Mar-2018		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead	0.04934	0.0200	0.05	0	98.7	80 - 120	0.04985	1.03	20
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PDS	Sample ID: HS18031061-29PDS	Units: mg/L			Analysis Date: 29-Mar-2018 16:42					
Client ID: DUP-1	Run ID: ICPMS05_313326	SeqNo: 4495397			PrepDate: 28-Mar-2018		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.4333	0.0100	0.5	0	86.7	75 - 125				
Arsenic	0.5026	0.0100	0.5	0.02263	96.0	75 - 125				
Barium	0.5024	0.0200	0.5	0.00976	98.5	75 - 125				
Cadmium	0.5342	0.0100	0.5	0.06248	94.3	75 - 125				
Calcium	505.1	2.50	50	524.4	-38.7	75 - 125				SO
Cobalt	0.8107	0.0250	0.5	0.3564	90.9	75 - 125				
Molybdenum	0.5091	0.0250	0.5	0	102	75 - 125				
Selenium	0.6229	0.0100	0.5	0.1475	95.1	75 - 125				
Thallium	0.484	0.0100	0.5	0.002017	96.4	75 - 125				

PDS	Sample ID: HS18031061-29PDS	Units: mg/L			Analysis Date: 30-Mar-2018 17:14					
Client ID: DUP-1	Run ID: ICPMS05_313420	SeqNo: 4497604			PrepDate: 28-Mar-2018		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Beryllium	1.156	0.0200	1	0.02817	113	75 - 125				
Lithium	3.005	0.0500	1	1.78	122	70 - 125				

PDS	Sample ID: HS18031061-29PDS	Units: mg/L			Analysis Date: 30-Mar-2018 16:50					
Client ID: DUP-1	Run ID: ICPMS05_313420	SeqNo: 4497524			PrepDate: 28-Mar-2018		DF: 20			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	34.97	0.400	20	14.49	102	75 - 125				
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PDS	Sample ID: HS18031061-29PDS	Units: mg/L			Analysis Date: 30-Mar-2018 20:42					
Client ID: DUP-1	Run ID: ICPMS05_313420	SeqNo: 4497834			PrepDate: 28-Mar-2018		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead	0.989	0.0200	1	0	98.9	75 - 125				
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126679	Instrument: ICPMS05	Method: SW6020								
SD	Sample ID: HS18031061-29SD	Units: mg/L	Analysis Date: 29-Mar-2018 16:36							
Client ID: DUP-1	Run ID: ICPMS05_313326	SeqNo: 4495394	PrepDate: 28-Mar-2018 DF: 25							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual

Antimony	ND	0.0500					0	0	10	
Arsenic	0.02143	0.0500					0.02263	0	10	J
Barium	ND	0.100					0.00976	0	10	
Beryllium	0.0261	0.0500					0.0337	0	10	J
Calcium	481.1	12.5					524.4	8.26	10	
Cobalt	0.3579	0.125					0.3564	0.436	10	
Lead	ND	0.0500					0	0	10	
Molybdenum	ND	0.125					0	0	10	
Selenium	0.128	0.0500					0.1475	13.2	10	R
Thallium	ND	0.0500					0.002017	0	10	

SD	Sample ID: HS18031061-29SD	Units: mg/L	Analysis Date: 30-Mar-2018 16:46							
Client ID: DUP-1	Run ID: ICPMS05_313420	SeqNo: 4497522	PrepDate: 28-Mar-2018 DF: 100							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual

Boron	16.08	2.00					14.49	10.9	10	R
Lithium	1.659	0.500					1.644	0.936	10	

SD	Sample ID: HS18031061-29SD	Units: mg/L	Analysis Date: 30-Mar-2018 17:04							
Client ID: DUP-1	Run ID: ICPMS05_313420	SeqNo: 4497599	PrepDate: 28-Mar-2018 DF: 25							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual

Cadmium	0.05896	0.0500					0.06248	5.63	10	
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The following samples were analyzed in this batch: HS18031061-29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126680	Instrument: ICPMS05	Method: SW6020								
MBLK	Sample ID: MBLK-126680	Units: mg/L	Analysis Date: 29-Mar-2018 15:14							
Client ID:	Run ID: ICPMS05_313326	SeqNo: 4494495	PrepDate: 28-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Boron	ND	0.0200								
Cadmium	ND	0.00200								
Calcium	ND	1.00								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

LCS	Sample ID: LCS-126680	Units: mg/L	Analysis Date: 29-Mar-2018 15:16							
Client ID:	Run ID: ICPMS05_313326	SeqNo: 4494496	PrepDate: 28-Mar-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04951	0.00200	0.05	0	99.0	80 - 120				
Arsenic	0.04791	0.00200	0.05	0	95.8	80 - 120				
Barium	0.04845	0.00400	0.05	0	96.9	80 - 120				
Beryllium	0.05092	0.00200	0.05	0	102	80 - 120				
Boron	0.4962	0.0200	0.5	0	99.2	80 - 120				
Cadmium	0.0496	0.00200	0.05	0	99.2	80 - 120				
Calcium	4.824	1.00	5	0	96.5	80 - 120				
Cobalt	0.04851	0.00500	0.05	0	97.0	80 - 120				
Lead	0.05088	0.00200	0.05	0	102	80 - 120				
Lithium	0.09885	0.00500	0.1	0	98.8	80 - 120				
Molybdenum	0.04938	0.00500	0.05	0	98.8	80 - 120				
Selenium	0.04865	0.00200	0.05	0	97.3	80 - 120				
Thallium	0.0459	0.00200	0.05	0	91.8	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126680		Instrument: ICPMS05		Method: SW6020						
MS		Sample ID: HS18031061-17MS		Units: mg/L		Analysis Date: 29-Mar-2018 15:50				
Client ID: EP-35		Run ID: ICPMS05_313326		SeqNo: 4495371		PrepDate: 28-Mar-2018		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Antimony	0.04866	0.0100	0.05	0.000622	96.1	80 - 120				
Arsenic	0.05145	0.0100	0.05	0.001962	99.0	80 - 120				
Barium	0.06781	0.0200	0.05	0.01802	99.6	80 - 120				
Beryllium	0.05596	0.0100	0.05	0.000154	112	80 - 120				
Boron	42.57	0.100	0.5	43.47	-180	80 - 120			SEO	
Cadmium	0.04918	0.0100	0.05	0.000059	98.2	80 - 120				
Calcium	267.9	5.00	5	273.4	-109	80 - 120			SO	
Cobalt	0.04845	0.0250	0.05	0.00076	95.4	80 - 120				
Lead	0.0453	0.0100	0.05	0.000593	89.4	80 - 120				
Lithium	1.303	0.0250	0.1	1.234	69.5	80 - 120			SO	
Molybdenum	0.05104	0.0250	0.05	0.002473	97.1	80 - 120				
Selenium	0.04986	0.0100	0.05	0.002888	93.9	80 - 120				
Thallium	0.04865	0.0100	0.05	0.000119	97.1	80 - 120				

MSD		Sample ID: HS18031061-17MSD		Units: mg/L		Analysis Date: 29-Mar-2018 15:52			
Client ID: EP-35		Run ID: ICPMS05_313326		SeqNo: 4495372		PrepDate: 28-Mar-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Antimony	0.04885	0.0100	0.05	0.000622	96.4	80 - 120	0.04866	0.379	20
Arsenic	0.05167	0.0100	0.05	0.001962	99.4	80 - 120	0.05145	0.434	20
Barium	0.06998	0.0200	0.05	0.01802	104	80 - 120	0.06781	3.14	20
Beryllium	0.05902	0.0100	0.05	0.000154	118	80 - 120	0.05596	5.33	20
Boron	45.83	0.100	0.5	43.47	472	80 - 120	42.57	7.38	20 SEO
Cadmium	0.04863	0.0100	0.05	0.000059	97.1	80 - 120	0.04918	1.13	20
Calcium	276.4	5.00	5	273.4	60.5	80 - 120	267.9	3.11	20 SO
Cobalt	0.05004	0.0250	0.05	0.00076	98.6	80 - 120	0.04845	3.22	20
Lead	0.04903	0.0100	0.05	0.000593	96.9	80 - 120	0.0453	7.93	20
Lithium	1.368	0.0250	0.1	1.234	134	80 - 120	1.303	4.82	20 SO
Molybdenum	0.05491	0.0250	0.05	0.002473	105	80 - 120	0.05104	7.31	20
Selenium	0.04401	0.0100	0.05	0.002888	82.2	80 - 120	0.04986	12.5	20
Thallium	0.04638	0.0100	0.05	0.000119	92.5	80 - 120	0.04865	4.79	20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126680	Instrument: ICPMS05	Method: SW6020								
PDS	Sample ID: HS18031061-17PDS	Units: mg/L	Analysis Date: 29-Mar-2018 15:54							
Client ID: EP-35	Run ID: ICPMS05_313326	SeqNo: 4495373	PrepDate: 28-Mar-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.4729	0.0100	0.5	0.000622	94.4	75 - 125				
Arsenic	0.4946	0.0100	0.5	0.001962	98.5	75 - 125				
Barium	0.5086	0.0200	0.5	0.01802	98.1	75 - 125				
Beryllium	0.5958	0.0100	0.5	0.000154	119	75 - 125				
Cadmium	0.4844	0.0100	0.5	0.000059	96.9	75 - 125				
Calcium	302.9	5.00	50	273.4	59.1	75 - 125				SO
Cobalt	0.4809	0.0250	0.5	0.00076	96.0	75 - 125				
Lead	0.4502	0.0100	0.5	0.000593	89.9	75 - 125				
Lithium	1.781	0.0250	0.1	1.234	547	70 - 125				SO
Molybdenum	0.4932	0.0250	0.5	0.002473	98.2	75 - 125				
Selenium	0.5049	0.0100	0.5	0.002888	100	75 - 125				
Thallium	0.4579	0.0100	0.5	0.000119	91.6	75 - 125				

PDS	Sample ID: HS18031061-17PDS	Units: mg/L	Analysis Date: 30-Mar-2018 15:41							
Client ID: EP-35	Run ID: ICPMS05_313420	SeqNo: 4497490	PrepDate: 28-Mar-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	86.77	1.00	50	32.3	109	75 - 125				
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SD	Sample ID: HS18031061-17SD	Units: mg/L	Analysis Date: 29-Mar-2018 15:48							
Client ID: EP-35	Run ID: ICPMS05_313326	SeqNo: 4495370	PrepDate: 28-Mar-2018 DF: 25							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual

Antimony	ND	0.0500					0.000622		0	10
Arsenic	ND	0.0500					0.001962		0	10
Barium	ND	0.100					0.01802		0	10
Beryllium	ND	0.0500					0.000154		0	10
Cadmium	ND	0.0500					0.000059		0	10
Calcium	248	25.0					273.4	9.28	10	
Cobalt	ND	0.125					0.00076		0	10
Lead	ND	0.0500					0.000593		0	10
Molybdenum	ND	0.125					0.002473		0	10
Selenium	ND	0.0500					0.002888		0	10
Thallium	ND	0.0500					0.000119		0	10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: 126680	Instrument: ICPMS05	Method: SW6020								
SD	Sample ID: HS18031061-17SD	Units: mg/L	Analysis Date: 30-Mar-2018 15:33							
Client ID: EP-35	Run ID: ICPMS05_313420	SeqNo: 4497486	PrepDate: 28-Mar-2018 DF: 250							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual

Boron	30.78	5.00					32.3	4.7	10	
Lithium	1.111	1.25					1.036	0	10	J

The following samples were analyzed in this batch:

HS18031061-15	HS18031061-16	HS18031061-17	HS18031061-18
HS18031061-19	HS18031061-20	HS18031061-21	HS18031061-22
HS18031061-23	HS18031061-24	HS18031061-25	HS18031061-26
HS18031061-27	HS18031061-30	HS18031061-31	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313079	Instrument: WetChem_HS	Method: SM4500H+ B
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DUP	Sample ID: HS18031061-02DUP	Units: pH Units	Analysis Date: 23-Mar-2018 16:00							
Client ID: AP-31	Run ID: WetChem_HS_313079	SeqNo: 4487491	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	3.52	0.100					3.49	0.856	10	
Temp Deg C @pH	21.9	0					22	0.456	10	

The following samples were analyzed in this batch:

HS18031061-01	HS18031061-02	HS18031061-03	HS18031061-04
HS18031061-05	HS18031061-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313140	Instrument: Balance1	Method: M2540C
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MBLK	Sample ID: WBLK-032618	Units: mg/L	Analysis Date: 26-Mar-2018 09:00							
Client ID:	Run ID: Balance1_313140	SeqNo: 4488877	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-032618	Units: mg/L	Analysis Date: 26-Mar-2018 09:00							
Client ID:	Run ID: Balance1_313140	SeqNo: 4488878	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1008 10.0 1000 0 101 85 - 115

DUP	Sample ID: HS18031061-29DUP	Units: mg/L	Analysis Date: 26-Mar-2018 09:00							
Client ID: DUP-1	Run ID: Balance1_313140	SeqNo: 4488875	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 7800 10.0 7780 0.257 5

DUP	Sample ID: HS18031061-02DUP	Units: mg/L	Analysis Date: 26-Mar-2018 09:00							
Client ID: AP-31	Run ID: Balance1_313140	SeqNo: 4488870	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 7520 10.0 7580 0.795 5

The following samples were analyzed in this batch:	HS18031061-01	HS18031061-02	HS18031061-03	HS18031061-04
	HS18031061-05	HS18031061-29		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313282	Instrument: Balance1	Method: M2540C
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MBLK	Sample ID: WBLK-032718	Units: mg/L	Analysis Date: 27-Mar-2018 16:50							
Client ID:	Run ID: Balance1_313282	SeqNo: 4492643	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-032718	Units: mg/L	Analysis Date: 27-Mar-2018 16:50							
Client ID:	Run ID: Balance1_313282	SeqNo: 4492644	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1022 10.0 1000 0 102 85 - 115

DUP	Sample ID: HS18031061-17DUP	Units: mg/L	Analysis Date: 27-Mar-2018 16:50							
Client ID: EP-35	Run ID: Balance1_313282	SeqNo: 4492636	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 10220 10.0 10200 0.196 5

DUP	Sample ID: HS18030994-01DUP	Units: mg/L	Analysis Date: 27-Mar-2018 16:50							
Client ID:	Run ID: Balance1_313282	SeqNo: 4492622	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1044 10.0 1050 0.573 5

The following samples were analyzed in this batch:	HS18031061-06	HS18031061-07	HS18031061-08	HS18031061-09
	HS18031061-10	HS18031061-11	HS18031061-12	HS18031061-13
	HS18031061-14	HS18031061-15	HS18031061-16	HS18031061-17
	HS18031061-18	HS18031061-19	HS18031061-20	HS18031061-21
	HS18031061-22	HS18031061-30		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313351	Instrument: Balance1	Method: M2540C
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MBLK	Sample ID: WBLK-032818	Units: mg/L	Analysis Date: 28-Mar-2018 16:00							
Client ID:	Run ID: Balance1_313351	SeqNo: 4494454	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-032818	Units: mg/L	Analysis Date: 28-Mar-2018 16:00							
Client ID:	Run ID: Balance1_313351	SeqNo: 4494455	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1024 10.0 1000 0 102 85 - 115

DUP	Sample ID: HS18031061-28DUP	Units: mg/L	Analysis Date: 28-Mar-2018 16:00							
Client ID: PZ-2	Run ID: Balance1_313351	SeqNo: 4494440	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 9960 10.0 9760 2.03 5

DUP	Sample ID: HS18031061-23DUP	Units: mg/L	Analysis Date: 28-Mar-2018 16:00							
Client ID: SP-32	Run ID: Balance1_313351	SeqNo: 4494434	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 17460 10.0 17640 1.03 5

The following samples were analyzed in this batch:	HS18031061-23	HS18031061-24	HS18031061-25	HS18031061-26
	HS18031061-27	HS18031061-28	HS18031061-31	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313357		Instrument: WetChem_HS		Method: SM4500H+ B						
DUP	Sample ID: HS18031061-17DUP	Units: pH Units		Analysis Date: 29-Mar-2018 16:06						
Client ID: EP-35	Run ID: WetChem_HS_313357	SeqNo: 4494600		PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	6.44	0.100					6.45	0.155	10	
Temp Deg C @pH	21.1	0					21.1	0	10	

The following samples were analyzed in this batch:

HS18031061-07	HS18031061-08	HS18031061-09	HS18031061-10
HS18031061-11	HS18031061-12	HS18031061-13	HS18031061-14
HS18031061-15	HS18031061-16	HS18031061-17	HS18031061-18
HS18031061-19	HS18031061-20		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313441	Instrument: WetChem_HS	Method: SM4500H+ B
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DUP	Sample ID: HS18031061-29DUP	Units: pH Units	Analysis Date: 30-Mar-2018 14:39							
Client ID: DUP-1	Run ID: WetChem_HS_313441	SeqNo: 4496827	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.75	0.100					3.78	0.797	10	
Temp Deg C @pH	21.3	0					21.7	1.86	10	

DUP	Sample ID: HS18031061-28DUP	Units: pH Units	Analysis Date: 30-Mar-2018 14:39							
Client ID: PZ-2	Run ID: WetChem_HS_313441	SeqNo: 4496826	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	5.55	0.100					5.57	0.36	10	
Temp Deg C @pH	21.2	0					21.8	2.79	10	

The following samples were analyzed in this batch:

HS18031061-21	HS18031061-22	HS18031061-23	HS18031061-24
HS18031061-25	HS18031061-26	HS18031061-27	HS18031061-28
HS18031061-29	HS18031061-30	HS18031061-31	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313723	Instrument: ICS3K2	Method: E300
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MBLK	Sample ID: WBLKW1-040318	Units: mg/L	Analysis Date: 03-Apr-2018 11:56							
Client ID:	Run ID: ICS3K2_313723	SeqNo: 4503689	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								

LCS	Sample ID: WLCSW1-040318	Units: mg/L	Analysis Date: 03-Apr-2018 12:18							
Client ID:	Run ID: ICS3K2_313723	SeqNo: 4503690	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.17	0.500	20	0	95.9	90 - 110				
Fluoride	4.183	0.100	4	0	105	90 - 110				
Sulfate	19.72	0.500	20	0	98.6	90 - 110				

LCS D	Sample ID: WLCSDW1-040318	Units: mg/L	Analysis Date: 03-Apr-2018 12:39							
Client ID:	Run ID: ICS3K2_313723	SeqNo: 4503691	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.23	0.500	20	0	96.2	90 - 110	19.17	0.318	20	
Fluoride	4.223	0.100	4	0	106	90 - 110	4.183	0.952	20	
Sulfate	19.91	0.500	20	0	99.6	90 - 110	19.72	0.959	20	

MS	Sample ID: HS18031061-13MS	Units: mg/L	Analysis Date: 04-Apr-2018 02:16							
Client ID: AP-35	Run ID: ICS3K2_313723	SeqNo: 4503723	PrepDate: DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2452	25.0	500	2002	89.9	80 - 120				O
Fluoride	101.1	5.00	100	3.895	97.2	80 - 120				
Sulfate	3104	25.0	500	2667	87.3	80 - 120				O

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313723	Instrument: ICS3K2	Method: E300
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MS	Sample ID: HS18031061-02MS	Units: mg/L	Analysis Date: 03-Apr-2018 16:45							
Client ID: AP-31	Run ID: ICS3K2_313723	SeqNo: 4503702	PrepDate: DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2015	25.0	500	1573	88.6	80 - 120				
Fluoride	98.7	5.00	100	0	98.7	80 - 120				
Sulfate	3743	25.0	500	3263	96.0	80 - 120				O

MSD	Sample ID: HS18031061-13MSD	Units: mg/L	Analysis Date: 04-Apr-2018 02:38							
Client ID: AP-35	Run ID: ICS3K2_313723	SeqNo: 4503724	PrepDate: DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2453	25.0	500	2002	90.1	80 - 120	2452	0.0326	20	O
Fluoride	101.1	5.00	100	3.895	97.2	80 - 120	101.1	0.0692	20	
Sulfate	3115	25.0	500	2667	89.6	80 - 120	3104	0.361	20	O

MSD	Sample ID: HS18031061-02MSD	Units: mg/L	Analysis Date: 03-Apr-2018 17:31							
Client ID: AP-31	Run ID: ICS3K2_313723	SeqNo: 4503703	PrepDate: DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2053	25.0	500	1573	96.1	80 - 120	2015	1.86	20	
Fluoride	98.85	5.00	100	0	98.8	80 - 120	98.7	0.147	20	
Sulfate	3776	25.0	500	3263	103	80 - 120	3743	0.87	20	O

The following samples were analyzed in this batch:

HS18031061-01	HS18031061-02	HS18031061-03	HS18031061-04
HS18031061-05	HS18031061-06	HS18031061-07	HS18031061-08
HS18031061-09	HS18031061-10	HS18031061-11	HS18031061-12
HS18031061-13			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313757 **Instrument:** ICS3K2 **Method:** E300

MBLK		Sample ID: WBLKW2-040318			Units: mg/L		Analysis Date: 04-Apr-2018 05:53			
Client ID:		Run ID: ICS3K2_313757			SeqNo: 4504530		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								

LCS		Sample ID: WLCSW2-040318			Units: mg/L		Analysis Date: 04-Apr-2018 06:15			
Client ID:		Run ID: ICS3K2_313757			SeqNo: 4504531		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.02	0.500	20	0	95.1	90 - 110				
Fluoride	4.186	0.100	4	0	105	90 - 110				
Sulfate	19.67	0.500	20	0	98.3	90 - 110				

LCS D		Sample ID: WLCSDW2-040318			Units: mg/L		Analysis Date: 04-Apr-2018 06:36			
Client ID:		Run ID: ICS3K2_313757			SeqNo: 4504532		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.08	0.500	20	0	95.4	90 - 110	19.02	0.294	20	
Fluoride	4.217	0.100	4	0	105	90 - 110	4.186	0.738	20	
Sulfate	19.79	0.500	20	0	98.9	90 - 110	19.67	0.603	20	

MS		Sample ID: HS18031061-29MS			Units: mg/L		Analysis Date: 04-Apr-2018 20:19			
Client ID: DUP-1		Run ID: ICS3K2_313757			SeqNo: 4505880		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2423	50.0	1000	1527	89.6	80 - 120				
Fluoride	196.4	10.0	200	0	98.2	80 - 120				
Sulfate	4102	50.0	1000	3133	96.8	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313757		Instrument: ICS3K2			Method: E300					
MS	Sample ID: HS18031061-28MS	Units: mg/L			Analysis Date: 04-Apr-2018 11:40					
Client ID: PZ-2	Run ID: ICS3K2_313757	SeqNo: 4504546			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	4591	50.0	1000	2625	197	80 - 120				S
Fluoride	192.6	10.0	200	0	96.3	80 - 120				
Sulfate	4048	50.0	1000	2198	185	80 - 120				S
MS	Sample ID: HS18031061-29MS	Units: mg/L			Analysis Date: 04-Apr-2018 12:45					
Client ID: DUP-1	Run ID: ICS3K2_313757	SeqNo: 4504549			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2520	50.0	1000	1401	112	80 - 120				
Fluoride	194.4	10.0	200	0	97.2	80 - 120				
Sulfate	4819	50.0	1000	3261	156	80 - 120				S
MS	Sample ID: HS18031061-28MS	Units: mg/L			Analysis Date: 04-Apr-2018 19:14					
Client ID: PZ-2	Run ID: ICS3K2_313757	SeqNo: 4505877			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3879	50.0	1000	2998	88.1	80 - 120				
Fluoride	197.2	10.0	200	0	98.6	80 - 120				
Sulfate	3566	50.0	1000	2603	96.4	80 - 120				
MS	Sample ID: HS18031061-17MS	Units: mg/L			Analysis Date: 04-Apr-2018 04:26					
Client ID: EP-35	Run ID: ICS3K2_313757	SeqNo: 4504526			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	4085	50.0	1000	3036	105	80 - 120				
Fluoride	197	10.0	200	0	98.5	80 - 120				
Sulfate	3730	50.0	1000	2612	112	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313757		Instrument: ICS3K2			Method: E300					
MSD	Sample ID: HS18031061-29MSD	Units: mg/L			Analysis Date: 04-Apr-2018 20:41					
Client ID: DUP-1	Run ID: ICS3K2_313757	SeqNo: 4505881			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2431	50.0	1000	1527	90.4	80 - 120	2423	0.323	20	
Fluoride	197.5	10.0	200	0	98.8	80 - 120	196.4	0.589	20	
Sulfate	4107	50.0	1000	3133	97.4	80 - 120	4102	0.137	20	
MSD	Sample ID: HS18031061-29MSD	Units: mg/L			Analysis Date: 04-Apr-2018 13:07					
Client ID: DUP-1	Run ID: ICS3K2_313757	SeqNo: 4504550			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2859	50.0	1000	1401	146	80 - 120	2520	12.6	20	S
Fluoride	195.1	10.0	200	0	97.6	80 - 120	194.4	0.334	20	
Sulfate	5596	50.0	1000	3261	234	80 - 120	4819	14.9	20	S
MSD	Sample ID: HS18031061-28MSD	Units: mg/L			Analysis Date: 04-Apr-2018 19:36					
Client ID: PZ-2	Run ID: ICS3K2_313757	SeqNo: 4505878			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3897	50.0	1000	2998	89.9	80 - 120	3879	0.472	20	
Fluoride	196.9	10.0	200	0	98.4	80 - 120	197.2	0.162	20	
Sulfate	3583	50.0	1000	2603	98.0	80 - 120	3566	0.467	20	
MSD	Sample ID: HS18031061-28MSD	Units: mg/L			Analysis Date: 04-Apr-2018 12:02					
Client ID: PZ-2	Run ID: ICS3K2_313757	SeqNo: 4504547			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3651	50.0	1000	2625	103	80 - 120	4591	22.8	20	R
Fluoride	193.9	10.0	200	0	96.9	80 - 120	192.6	0.683	20	
Sulfate	3194	50.0	1000	2198	99.6	80 - 120	4048	23.6	20	R

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

QC BATCH REPORT

Batch ID: R313757 **Instrument:** ICS3K2 **Method:** E300

MSD		Sample ID: HS18031061-17MSD		Units: mg/L		Analysis Date: 04-Apr-2018 04:48				
Client ID: EP-35		Run ID: ICS3K2_313757		SeqNo: 4504527		PrepDate:		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3957	50.0	1000	3036	92.1	80 - 120	4085	3.18	20	
Fluoride	199.1	10.0	200	0	99.6	80 - 120	197	1.07	20	
Sulfate	3599	50.0	1000	2612	98.7	80 - 120	3730	3.58	20	

The following samples were analyzed in this batch:

HS18031061-14	HS18031061-15	HS18031061-16	HS18031061-17
HS18031061-18	HS18031061-19	HS18031061-20	HS18031061-21
HS18031061-22	HS18031061-23	HS18031061-24	HS18031061-25
HS18031061-26	HS18031061-27	HS18031061-28	HS18031061-29
HS18031061-30	HS18031061-31		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18031061

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Oklahoma	2017-088	31-Aug-2018
North Carolina	624-2018	31-Dec-2018
Louisiana	03087 2017-2018	30-Jun-2018
Arkansas	88-0356	27-Mar-2019

Sample Receipt Checklist

Client Name: Source
 Work Order: HS18031061

Date/Time Received: **22-Mar-2018 10:35**
 Received by: **PMG**

Checklist completed by: Paresh M. Giga 22-Mar-2018 Reviewed by: Nicole Edwards 23-Mar-2018
 eSignature Date eSignature Date

Matrices: **Water** Carrier name: **Client**

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): IR11

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

Corrective Action:



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Chain of Custody Form

Page 1 of 4

COC ID: 176874

HS18031061

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



Customer Information		Project Information		
Purchase Order		Project Name	San Miguel Electric CCR Well M	A 300_W (Cl, FI, SO4)
Work Order		Project Number		B HG_W
Company Name	Source Environmental Sciences	Bill To Company	Source Environmental Sciences	C ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D PH_W M4500H+B
Address	2060 North Loop West, Suite 14	Address	2060 North Loop West, Suite 14	E Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H
Fax	(713) 621-4588	Fax	(713) 621-4588	I
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	EQUIPMENT BLANK	3/19/18	12:35	2 H ₂ O	2,7,8	4	X	X	X	X	X	X	X				
2	AP-31		13:13														
3	AP-31 MS		13:19														
4	MW-3		14:25														
5	AP-32		15:08														
6	AP-33		15:46														
7	PE-5	3/29/18	10:50														
8	FIELD BLANK 1		10:55														
9	AP-34		11:36														
10	AP-36		12:28														

Sampler(s) Please Print & Sign: <u>Josh Mitchell</u>		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:		
Relinquished by: <u>[Signature]</u>		Date: <u>3/22/18</u>	Time: <u>10:35</u>	Received by: <u>[Signature]</u>		<input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				
Relinquished by:		Date:	Time:	Received by (Laboratory): <u>3-22-18 10:35</u>		Notes: San Miguel Electric CCR Well Monitoring				
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler ID: <u>54658</u>	Cooler Temp.: <u>1.2°</u>	QC Package: (Check One Box Below)		
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NAOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						<u>42689</u>	<u>1.6°</u>	<input checked="" type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRRP Checklist	
						<u>42683</u>	<u>0.8°</u>	<input type="checkbox"/> Level III Std QC/Raw Data	<input type="checkbox"/> TRRP Level IV	
						<u>25355</u>	<u>1.1°</u>	<input type="checkbox"/> Level IV SW846/CLP	<input type="checkbox"/> Other	
						<u>42680</u>	<u>1.5°</u>			
						<u>42688</u>	<u>1.7°</u>			

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Page 2 of 4

COC ID: 176876

HS18031061

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



1, WV

Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	San Miguel Electric CCR Well M	A	300_W (Cl, FI, SO4)
Work Order		Project Number		B	HG_W
Company Name	Source Environmental Sciences	Bill To Company	Source Environmental Sciences	C	ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D	PH_W M4500H+B
Address	2060 North Loop West, Suite 14	Address	2060 North Loop West, Suite 14	E	Radium 226 by Method 903 (will be performed by ALS-Fort)
				F	Radium 228 by Method 904 (will be performed by ALS-Fort)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G	TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H	
Fax	(713) 621-4588	Fax	(713) 621-4588	I	
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PZ-6	3/20/18	13:05	H2O	2,7,8	4	X	X	X	X	X	X	X				
2	EP-38	↓	14:45	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
3	MW-4		15:21														
4	AP-35		16:01														
5	EP-32		16:55														
6	EP-33		17:32														
7	EP-34		18:03														
8	EP-35		3/21/18														
9	EP-36	9:35															
10	EP-37	10:07															

Sampler(s) Please Print & Sign <i>Josh Mitchell</i>		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
Relinquished by: <i>[Signature]</i>		Date: 3/22/18	Time: 10:35	Received by: <i>[Signature]</i>		Notes: San Miguel Electric CCR Well Monitoring			
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID		Cooler Temp.	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		QC Package: (Check One Box Below)			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						<input checked="" type="checkbox"/> Level II Std QC		<input type="checkbox"/> TRRF Checklist	
						<input type="checkbox"/> Level III Std QC/Raw Data		<input type="checkbox"/> TRRF Level IV	
						<input type="checkbox"/> Level IV SW846/CLP		<input type="checkbox"/> Other	

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Page 3 of 4

COC ID: 176873

HS18031061

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



n, WV

ALS Project Manager:

Customer Information		Project Information		
Purchase Order		Project Name	San Miguel Electric CCR Well M	A 300_W (Cl, FI, SO4)
Work Order		Project Number		B HG_W
Company Name	Source Environmental Sciences	Bill To Company	Source Environmental Sciences	C ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D PH_W M4500H+B
Address	2060 North Loop West, Suite 14	Address	2060 North Loop West, Suite 14	E Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H
Fax	(713) 621-4588	Fax	(713) 621-4588	I
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	GP-35 MS	3/21/18	9:02	H ₂ O	2,7,8	4	X	X	X	X	X	X					
2	GP-31		10:58														
3	FIELD BLANK 2		11:10														
4	SP-3		11:54														
5	SP-32		12:47														
6	SP-1		13:39														
7	SP-34		14:43														
8	SP-2		15:29														
9	PZ-3		16:24														
10	PZ-2		17:14														

Sampler(s) Please Print & Sign <i>Joshua Mitchell</i>		Shipment Method		Required Turnaround Time: (Check Box)			Results Due Date:	
Relinquished by: <i>[Signature]</i>		Date: 3/22/18	Time: 10:35	<input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				
Relinquished by:		Date:	Time:	Received by (Laboratory):		Notes: San Miguel Electric CCR Well Monitoring		
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
								<input checked="" type="checkbox"/> Level II Std QC <input type="checkbox"/> TRRP Checklist <input type="checkbox"/> Level III Std QC/Raw Data <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> Level IV SWB46/CLP <input type="checkbox"/> Other

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

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Chain of Custody Form

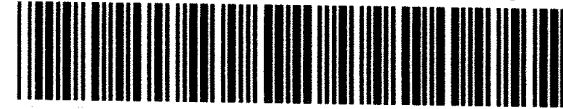
Page 4 of 4

COC ID: 176875

HS18031061

WV

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



ALS Project Manager:

Customer Information		Project Information		
Purchase Order		Project Name	San Miguel Electric CCR Well M	A 300_W (Cl, FI, SO4)
Work Order		Project Number		B HG_W
Company Name	Source Environmental Sciences	Bill To Company	Source Environmental Sciences	C ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D PH_W M4500H+B
Address	2060 North Loop West, Suite 14	Address	2060 North Loop West, Suite 14	E Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H
Fax	(713) 621-4588	Fax	(713) 621-4588	I
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	PZ-2 MS	3/21/18	17:20	H2O	2,7,8	4	X	X	X	X	X	X	X				
2	DUP-1	3/19/18															
3	DUP-2	3/20/18															
4	DUP-3	3/21/18															
5	MS DUP	3/19/18															
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Joshua Mitchell</i>		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
Relinquished by:		Date: 3/22/18	Time: 10:35	Received by:		Notes: San Miguel Electric CCR Well Monitoring			
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID		Cooler Temp.	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		QC Package: (Check One Box Below)			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						<input checked="" type="checkbox"/> Level II Std QC		<input type="checkbox"/> TRRP Checklist	
						<input type="checkbox"/> Level III Std QC/Raw Data		<input type="checkbox"/> TRRP Level IV	
						<input type="checkbox"/> Level IV SW846/CLP			
						<input type="checkbox"/> Other			

- ote: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.



Monday, April 30, 2018

Nicole Edwards
ALS Environmental
10450 Stancliff Rd, Suite 210
Houston, TX 77099

Re: ALS Workorder: 1803434
Project Name:
Project Number: HS18031061

Dear Ms. Edwards:

Thirty one water samples were received from ALS Environmental, on 3/23/2018. The samples were scheduled for the following analyses:

Radium-226

Radium-228

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Jeff R. Kujawa
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Connecticut (CT)	PH-0232
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
L-A-B (DoD ELAP/ISO 170250)	L2257
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



1803434

Radium-228:

The samples were analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac , which is the ingrown progeny of ^{228}Ra , according to EPA 904.0.

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1803434

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS18031061

Client PO Number: 10-8812

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Equipment Blank	1803434-1		WATER	19-Mar-18	12:35
AP-31	1803434-2		WATER	19-Mar-18	13:13
MW-3	1803434-3		WATER	19-Mar-18	14:25
AP-32	1803434-4		WATER	19-Mar-18	15:08
AP-33	1803434-5		WATER	19-Mar-18	15:46
PZ-5	1803434-6		WATER	20-Mar-18	10:50
Field Blank 1	1803434-7		WATER	20-Mar-18	10:55
AP-34	1803434-8		WATER	20-Mar-18	11:36
AP-36	1803434-9		WATER	20-Mar-18	12:28
PZ-6	1803434-10		WATER	20-Mar-18	13:05
EP-38	1803434-11		WATER	20-Mar-18	14:45
MW-4	1803434-12		WATER	20-Mar-18	15:21
AP-35	1803434-13		WATER	20-Mar-18	16:01
EP-32	1803434-14		WATER	20-Mar-18	16:55
EP-33	1803434-15		WATER	20-Mar-18	17:32
EP-34	1803434-16		WATER	20-Mar-18	18:03
EP-35	1803434-17		WATER	21-Mar-18	8:56
EP-36	1803434-18		WATER	21-Mar-18	9:35
EP-37	1803434-19		WATER	21-Mar-18	10:07
EP-31	1803434-20		WATER	21-Mar-18	10:58
Field Bank 2	1803434-21		WATER	21-Mar-18	11:10
SP-3	1803434-22		WATER	21-Mar-18	11:54
SP-32	1803434-23		WATER	21-Mar-18	12:47
SP-1	1803434-24		WATER	21-Mar-18	13:39
SP-34	1803434-25		WATER	21-Mar-18	14:43
SP-2	1803434-26		WATER	21-Mar-18	15:29
PZ-3	1803434-27		WATER	21-Mar-18	16:24
PZ-1	1803434-28		WATER	21-Mar-18	17:14
DUP-1	1803434-29		WATER	19-Mar-18	
DUP-2	1803434-30		WATER	20-Mar-18	

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1803434

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS18031061

Client PO Number: 10-8812

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
DUP-3	1803434-31		WATER	21-Mar-18	



1803434

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

COC ID: 8812

SUBCONTRACT TO:

ALS Environmental, Fort Collins
225 Commerce Drive
Fort Collins, CO 80524

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

Company: ALS Houston
Contact: Nicole Edwards
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: Nicole.Edwards@alsglobal.com
Alternate Contact:
Email:

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS18031061
TSR: Jennifer Bell

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	HS18031061-01	Equipment Blank	Water	19 Mar 2018 12:35
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
2.	HS18031061-02	AP-31	Water	19 Mar 2018 13:13
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
3.	HS18031061-03	MW-3	Water	19 Mar 2018 14:25
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
4.	HS18031061-04	AP-32	Water	19 Mar 2018 15:08
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
5.	HS18031061-05	AP-33	Water	19 Mar 2018 15:46
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
6.	HS18031061-06	PZ-5	Water	20 Mar 2018 10:50
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018



1803434

Subcontract Chain of Custody

COC ID: 8812

	LAB SAMPLE ID ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE DUE DATE
7.	HS18031061-07 SUB_RA 226 SUB_RA 228	Field Blank 1	Water	20 Mar 2018 10:55 05 Apr 2018 05 Apr 2018
8.	HS18031061-08 SUB_RA 226 SUB_RA 228	AP-34	Water	20 Mar 2018 11:36 05 Apr 2018 05 Apr 2018
9.	HS18031061-09 SUB_RA 226 SUB_RA 228	AP-36	Water	20 Mar 2018 12:28 05 Apr 2018 05 Apr 2018
10.	HS18031061-10 SUB_RA 226 SUB_RA 228	PZ-6	Water	20 Mar 2018 13:05 05 Apr 2018 05 Apr 2018
11.	HS18031061-11 SUB_RA 226 SUB_RA 228	EP-38	Water	20 Mar 2018 14:45 05 Apr 2018 05 Apr 2018
12.	HS18031061-12 SUB_RA 226 SUB_RA 228	MW-4	Water	20 Mar 2018 15:21 05 Apr 2018 05 Apr 2018
13.	HS18031061-13 SUB_RA 226 SUB_RA 228	AP-35	Water	20 Mar 2018 16:01 05 Apr 2018 05 Apr 2018
14.	HS18031061-14 SUB_RA 226 SUB_RA 228	EP-32	Water	20 Mar 2018 16:55 05 Apr 2018 05 Apr 2018
15.	HS18031061-15 SUB_RA 226 SUB_RA 228	EP-33	Water	20 Mar 2018 17:32 05 Apr 2018 05 Apr 2018
16.	HS18031061-16 SUB_RA 226 SUB_RA 228	EP-34	Water	20 Mar 2018 18:03 05 Apr 2018 05 Apr 2018
17.	HS18031061-17	EP-35	Water	21 Mar 2018 08:56



1803434

Subcontract Chain of Custody

COC ID: 8812

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
18.	HS18031061-18	EP-36	Water	21 Mar 2018 09:35
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
19.	HS18031061-19	EP-37	Water	21 Mar 2018 10:07
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
20.	HS18031061-20	EP-31	Water	21 Mar 2018 10:58
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
21.	HS18031061-21	Field Blank 2	Water	21 Mar 2018 11:10
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
22.	HS18031061-22	SP-3	Water	21 Mar 2018 11:54
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
23.	HS18031061-23	SP-32	Water	21 Mar 2018 12:47
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
24.	HS18031061-24	SP-1	Water	21 Mar 2018 13:39
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
25.	HS18031061-25	SP-34	Water	21 Mar 2018 14:43
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
26.	HS18031061-26	SP-2	Water	21 Mar 2018 15:29
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
27.	HS18031061-27	PZ-3	Water	21 Mar 2018 16:24
	SUB_RA 226			05 Apr 2018



1803434

Subcontract Chain of Custody

COC ID: 8812

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	SUB_RA 228			05 Apr 2018
28	HS18031061-28	PZ-2	Water	21 Mar 2018 17:14
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
29	HS18031061-29	DUP-1	Water	19 Mar 2018 00:00
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
30	HS18031061-30	DUP-2	Water	20 Mar 2018 00:00
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018
31	HS18031061-31	DUP-3	Water	21 Mar 2018 00:00
	SUB_RA 226			05 Apr 2018
	SUB_RA 228			05 Apr 2018

Comments: Please analyze for the analysis listed above.
 Send report to the emails shown above.
 Please analyse MS/MSD for the following samples ;
 HS18031061-02; HS18031061-17
 HS18031061-28; HS18031061-29

QC Level: STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By: *[Signature]* Date/Time: 3/22/18 1800
 Received By: *[Signature]* Date/Time: 3-23-18 1020
 Cooler ID(s): _____ Temperature(s): _____



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS-TX
Project Manager: JK

Workorder No: 1803434
Initials: CD Date: 3-23-18

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	NONE	<input checked="" type="radio"/> YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<input checked="" type="radio"/> N/A	YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ___ < green pea ___ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do any water samples contain sediment? Amount of sediment: ___ dusting ___ moderate ___ heavy	Amount N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		YES	<input checked="" type="radio"/> NO
17. Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #1 #3 #4	<input checked="" type="radio"/> RAD ONLY	<input checked="" type="radio"/> YES <input checked="" type="radio"/> NO
Cooler #:	<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>5</u>		
Temperature (°C):	<u>Amb</u> <u>Amb</u> <u>Amb</u> <u>Amb</u> <u>Amb</u>		
No. of custody seals on cooler:	<u>2</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u>		
External µR/hr reading:	<u>9</u> <u>9</u> <u>10</u> <u>9</u> <u>8</u>		
Background µR/hr reading:	<u>9</u>		
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____
Project Manager Signature / Date: [Signature] 3-23-18

180 3 434



8-2

ORIGIN ID:SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

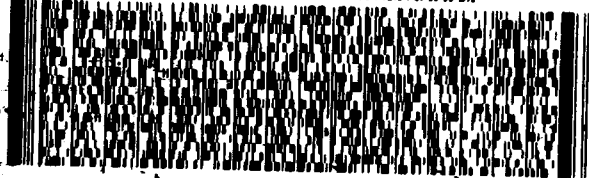
SHIP DATE: 22MAR18
ACTWT: 49.10 LB
CAD: 300130/CAFE3111
DIMS: 26x14x14 IN
BILL SENDER

10 **SAMPLE RECEIVING**
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524

(970) 490-1511
REF: HS18031061 - NE

01 0000 010010010101 01 0000 1001 01 1001 01 0000 10 1001 01 00 0000



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Express



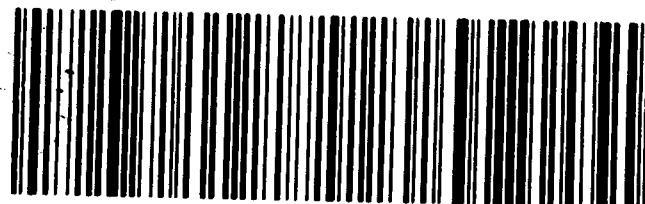
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1 of 5
TRK# 7376 9753 5519
0201
MASTER

FRI - 23 MAR 3:00P
STANDARD OVERNIGHT

AG FTCA

80524
CO-US DEN



1803434



ORIGIN ID:SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

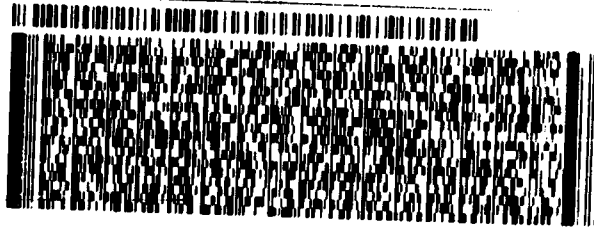
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ACTWGT: 49.10 LB
CAD: 300130, CAFE3111
DIMS: 26x14x14 IN
BILL SENDER

TO **SAMPLE RECEIVING**
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

9-2

FORT COLLINS CO 80524

(970) 490-1511
REF: HS18031061 - NE



FedEx
Express



4 of 5

MPS# 7376 9753 5541
0263

Mstr# 7376 9753 5519

0201

FRI - 23 MAR 3:00P
STANDARD OVERNIGHT

AG FTCA

80524
CO-US DEN



1803434



10-N

ORIGIN ID: SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

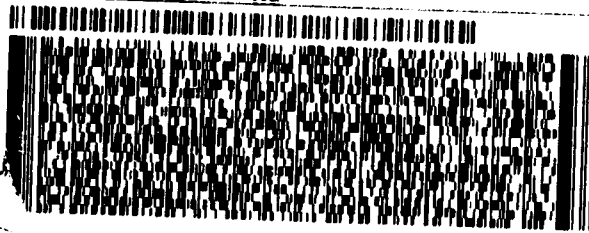
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ACTWGT: 49.10 LB
CAD: 300130/CAFE3111
DIMS: 26x14x14 IN
BILL SENDER

TO **SAMPLE RECEIVING**
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524

(970) 480-1511

REF: HS18031061 - NE



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Express



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5 A
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REC-11
0263
Mstr#

5 of 5
7376 9753 5552
7376 9753 5519

FRI - 23 MAR 3:00P
STANDARD OVERNIGHT

AG

FTCA

80524
CO-US DEN



617
16
15

1803434



ORIGIN ID:SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 22MAR18
ACTWGT: 49.10 LB
CAD: 300130/CAFE3111
DIMS: 26x14x14 IN

BILL SENDER

TO **SAMPLE RECEIVING**
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

SECRET/PPS/RSCT

FORT COLLINS CO 80524

(970) 490-1511

REF: HS18031061 - NE



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J1771016 11/20/01 BY

2 of 5

MPS# 7376 9753 5520
0263

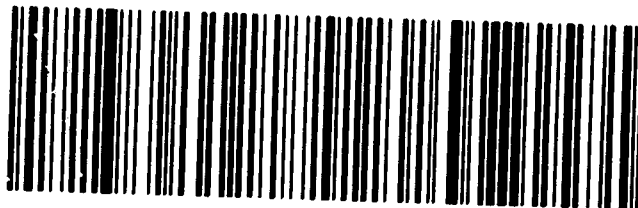
Mstr# 7376 9753 5519

0201

FRI - 23 MAR 3:00P
STANDARD OVERNIGHT

AG FTCA

80524
CO-US DEN



1803434



q-2

ORIGIN: SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 22MAR18
ACTWT: 49.10 LB
CAD: 300130/CAFE3111
DIMS: 26x14x14 IN

BILL SENDER

SAMPLE RECEIVING
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524

(970) 490-1511

REF: HS18031061 - NE



FedEx
Express



3 of 5

MPS# 7376 9753 5530
0263

Mstr# 7376 9753 5519

0201

FRI - 23 MAR 3:00P
STANDARD OVERNIGHT

AG FTCA

80524

CO-US DEN



Client: ALS Environmental
Project: HS18031061
Sample ID: Equipment Blank
Legal Location:
Collection Date: 3/19/2018 12:35

Date: 30-Apr-18
Work Order: 1803434
Lab ID: 1803434-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/25/2018	PrepBy: ARS
Ra-226	ND (+/- 0.14)	U	0.24	pCi/l	NA	4/30/2018 11:22
Carr: BARIUM	92.9		40-110	%REC	DL = NA	4/30/2018 11:22
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
Ra-228	ND (+/- 0.41)	U	1	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	99.9		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: AP-31

Lab ID: 1803434-2

Legal Location:

Matrix: WATER

Collection Date: 3/19/2018 13:13

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/25/2018 PrepBy: ARS	
Ra-226	0.44 (+/- 0.25)	LT	0.25	pCi/l	NA	4/30/2018 11:22
Carr: BARIUM	94.3		40-110	%REC	DL = NA	4/30/2018 11:22
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/19/2018 PrepBy: ARS	
Ra-228	1.13 (+/- 0.54)	Y1	0.95	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	100	Y1	40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: MW-3

Lab ID: 1803434-3

Legal Location:

Matrix: WATER

Collection Date: 3/19/2018 14:25

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.44 (+/- 0.27)	LT	0.32	pCi/l	NA	4/30/2018 11:22
Carr: BARIUM	92.8		40-110	%REC	DL = NA	4/30/2018 11:22
Radium-228 Analysis by GFPC						
Ra-228	5 (+/- 1.3)	M3	1	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	96.9		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: AP-32

Lab ID: 1803434-4

Legal Location:

Matrix: WATER

Collection Date: 3/19/2018 15:08

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.29 (+/- 0.52)		SOP 783		Prep Date: 4/25/2018	PrepBy: ARS
<i>Carr: BARIUM</i>	91.7			0.34 pCi/l	NA	4/30/2018 11:22
				40-110 %REC	DL = NA	4/30/2018 11:22
Radium-228 Analysis by GFPC						
Ra-228	9.6 (+/- 2.4)		SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
<i>Carr: BARIUM</i>	99.8			1 pCi/l	NA	4/24/2018 08:37
				40-110 %REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: AP-33

Lab ID: 1803434-5

Legal Location:

Matrix: WATER

Collection Date: 3/19/2018 15:46

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.93 (+/- 0.33)	LT	0.11	pCi/l	NA	4/10/2018 11:09
Carr: BARIUM	99.8		40-110	%REC	DL = NA	4/10/2018 11:09
Radium-228 Analysis by GFPC						
Ra-228	8.5 (+/- 2.1)	M3	1	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	99.4		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: PZ-5

Lab ID: 1803434-6

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 10:50

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.2)	U	0.28	pCi/l	NA	4/10/2018 11:09
Carr: BARIUM	96.3		40-110	%REC	DL = NA	4/10/2018 11:09
Radium-228 Analysis by GFPC						
Ra-228	3.3 (+/- 0.94)		0.83	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	97.4		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: Field Blank 1

Lab ID: 1803434-7

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 10:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
Ra-226	ND (+/- 0.13)	U	0.18	pCi/l	NA	4/10/2018 11:09
Carr: BARIUM	97.5		40-110	%REC	DL = NA	4/10/2018 11:09
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
Ra-228	ND (+/- 0.37)	U	0.87	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	99.6		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: AP-34

Lab ID: 1803434-8

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 11:36

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.18)	U	0.24	pCi/l	NA	4/10/2018 11:09
Carr: BARIUM	98.7		40-110	%REC	DL = NA	4/10/2018 11:09
Radium-228 Analysis by GFPC						
Ra-228	2.87 (+/- 0.86)		0.87	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	97.8		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: AP-36

Lab ID: 1803434-9

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 12:28

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.81 (+/- 0.33)	LT	0.25	pCi/l	NA	4/10/2018 11:09
Carr: BARIUM	97.4		40-110	%REC	DL = NA	4/10/2018 11:09
Radium-228 Analysis by GFPC						
Ra-228	3.41 (+/- 0.97)		0.86	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	97.9		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: PZ-6

Lab ID: 1803434-10

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 13:05

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
Ra-226	0.47 (+/- 0.21)	Y1,LT	0.14	pCi/l	NA	4/10/2018 12:03
Carr: BARIUM	104	Y1	40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
Ra-228	1.93 (+/- 0.68)		0.9	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	96.7		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-38

Lab ID: 1803434-11

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 14:45

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
Ra-226	0.53 (+/- 0.24)	LT	0.21	pCi/l	NA	4/10/2018 12:03
Carr: BARIUM	97.2		40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
Ra-228	ND (+/- 0.52)	U	0.94	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	99		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: MW-4

Lab ID: 1803434-12

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 15:21

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.34 (+/- 0.23)	LT	0.29	pCi/l	NA	4/10/2018 12:03
Carr: BARIUM	97.6		40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
Ra-228	1.84 (+/- 0.66)		0.9	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	98.2		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: AP-35

Lab ID: 1803434-13

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 16:01

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
Ra-226	5.1 (+/- 1.4)		0.2	pCi/l	NA	4/10/2018 12:03
<i>Carr: BARIUM</i>	95.7		40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC			SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
Ra-228	31.2 (+/- 7.3)		0.9	pCi/l	NA	4/24/2018 08:37
<i>Carr: BARIUM</i>	97.8		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-32

Lab ID: 1803434-14

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 16:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.09 (+/- 0.4)		SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
<i>Carr: BARIUM</i>	93.1		0.24	pCi/l	NA	4/10/2018 12:03
			40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
Ra-228	3.49 (+/- 0.99)		SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
<i>Carr: BARIUM</i>	96.7		0.88	pCi/l	NA	4/24/2018 08:37
			40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-33

Lab ID: 1803434-15

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 17:32

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.37 (+/- 0.22)	LT	0.25	pCi/l	NA	4/10/2018 12:03
Carr: BARIUM	98.1		40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
Ra-228	1.18 (+/- 0.55)		0.92	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	97.9		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-34

Lab ID: 1803434-16

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018 18:03

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.5 (+/- 0.5)		SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
<i>Carr: BARIUM</i>	97.4		0.26	pCi/l	NA	4/10/2018 12:03
			40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
Ra-228	4.9 (+/- 1.3)		SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
<i>Carr: BARIUM</i>	96.3		0.9	pCi/l	NA	4/24/2018 08:37
			40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-35

Lab ID: 1803434-17

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 08:56

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
Ra-226	0.63 (+/- 0.27)	LT	0.22	pCi/l	NA	4/10/2018 12:03
Carr: BARIUM	95.2		40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/19/2018	PrepBy: ARS
Ra-228	ND (+/- 0.46)	U	0.92	pCi/l	NA	4/24/2018 08:37
Carr: BARIUM	99.1		40-110	%REC	DL = NA	4/24/2018 08:37

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-36

Lab ID: 1803434-18

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 09:35

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.89 (+/- 0.36)	LT	0.25	pCi/l	NA	4/10/2018 12:03
Carr: BARIUM	98.5		40-110	%REC	DL = NA	4/10/2018 12:03
Radium-228 Analysis by GFPC						
Ra-228	2.3 (+/- 0.79)	M3	1.04	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	95.7		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-37

Lab ID: 1803434-19

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 10:07

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
Ra-226	0.63 (+/- 0.28)	LT	0.2	pCi/l	NA	4/10/2018 12:43
Carr: BARIUM	84.1		40-110	%REC	DL = NA	4/10/2018 12:43
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/23/2018	PrepBy: ARS
Ra-228	2.81 (+/- 0.89)	M3	1.03	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	91.4		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: EP-31

Lab ID: 1803434-20

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 10:58

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 3/28/2018	PrepBy: ARS
Ra-226	ND (+/- 0.17)	U	0.23	pCi/l	NA	4/10/2018 12:43
Carr: BARIUM	97.3		40-110	%REC	DL = NA	4/10/2018 12:43
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/23/2018	PrepBy: ARS
Ra-228	ND (+/- 0.48)	U,M	1.04	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	95.3		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: Field Bank 2

Lab ID: 1803434-21

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 11:10

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/11/2018	PrepBy: SKC
Ra-226	ND (+/- 0.12)	Y1,U	0.15	pCi/l	NA	4/23/2018 13:13
Carr: BARIUM	100	Y1	40-110	%REC	DL = NA	4/23/2018 13:13
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/23/2018	PrepBy: ARS
Ra-228	ND (+/- 0.44)	U,M	1.03	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	95.1		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: SP-3

Lab ID: 1803434-22

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 11:54

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.58 (+/- 0.52)		SOP 783		Prep Date: 4/11/2018	PrepBy: SKC
<i>Carr: BARIUM</i>	93.8		0.24	pCi/l	NA	4/23/2018 13:13
			40-110	%REC	DL = NA	4/23/2018 13:13
Radium-228 Analysis by GFPC						
Ra-228	7.6 (+/- 1.9)	M3	SOP 724		Prep Date: 4/23/2018	PrepBy: ARS
<i>Carr: BARIUM</i>	95.4		1	pCi/l	NA	4/26/2018 09:05
			40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: SP-32

Lab ID: 1803434-23

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 12:47

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/11/2018	PrepBy: SKC
Ra-226	0.43 (+/- 0.25)	LT	0.27	pCi/l	NA	4/23/2018 13:13
Carr: BARIUM	99.4		40-110	%REC	DL = NA	4/23/2018 13:13
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/23/2018	PrepBy: ARS
Ra-228	1.86 (+/- 0.72)	M3	1.07	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	95.1		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: SP-1

Lab ID: 1803434-24

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 13:39

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.65 (+/- 0.3)	LT	0.27	pCi/l	NA	4/23/2018 13:13
Carr: BARIUM	95.1		40-110	%REC	DL = NA	4/23/2018 13:13
Radium-228 Analysis by GFPC						
Ra-228	1.85 (+/- 0.67)		0.92	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	94		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: SP-34

Lab ID: 1803434-25

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 14:43

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.65 (+/- 0.31)	LT	0.28	pCi/l	NA	4/16/2018 11:30
Carr: BARIUM	96.3		40-110	%REC	DL = NA	4/16/2018 11:30
Radium-228 Analysis by GFPC						
Ra-228	6.1 (+/- 1.6)		0.9	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	93.4		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: SP-2

Lab ID: 1803434-26

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 15:29

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.44)	U	0.63	pCi/l	NA	4/16/2018 11:30
Carr: BARIUM	99.4		40-110	%REC	DL = NA	4/16/2018 11:30
Radium-228 Analysis by GFPC						
Ra-228	4 (+/- 1.1)		0.9	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	96.2		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: PZ-3

Lab ID: 1803434-27

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 16:24

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.54 (+/- 0.28)	LT	0.27	pCi/l	NA	4/16/2018 11:30
Carr: BARIUM	96.4		40-110	%REC	DL = NA	4/16/2018 11:30
Radium-228 Analysis by GFPC						
Ra-228	3.7 (+/- 1.1)		0.9	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	94.6		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: PZ-1

Lab ID: 1803434-28

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018 17:14

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.16)	U	0.34	pCi/l	NA	4/16/2018 11:30
Carr: BARIUM	96.5		40-110	%REC	DL = NA	4/16/2018 11:30
Radium-228 Analysis by GFPC						
Ra-228	1.11 (+/- 0.56)		0.99	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	94.4		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: DUP-1

Lab ID: 1803434-29

Legal Location:

Matrix: WATER

Collection Date: 3/19/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.62 (+/- 0.28)	LT	0.16	pCi/l	NA	4/16/2018 12:03
Carr: BARIUM	99.8		40-110	%REC	DL = NA	4/16/2018 12:03
Radium-228 Analysis by GFPC						
Ra-228	3.5 (+/- 1)		0.9	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	95.2		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: DUP-2

Lab ID: 1803434-30

Legal Location:

Matrix: WATER

Collection Date: 3/20/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.4 (+/- 0.23)	LT	0.18	pCi/l	NA	4/16/2018 12:03
Carr: BARIUM	97.6		40-110	%REC	DL = NA	4/16/2018 12:03
Radium-228 Analysis by GFPC						
Ra-228	1.24 (+/- 0.58)		0.97	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	93.2		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: DUP-3

Lab ID: 1803434-31

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/11/2018	PrepBy: SKC
Ra-226	0.28 (+/- 0.19)	LT	0.21	pCi/l	NA	4/16/2018 12:03
Carr: BARIUM	99.6		40-110	%REC	DL = NA	4/16/2018 12:03
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/23/2018	PrepBy: ARS
Ra-228	ND (+/- 0.45)	U	0.92	pCi/l	NA	4/26/2018 09:05
Carr: BARIUM	94.3		40-110	%REC	DL = NA	4/26/2018 09:05

Client: ALS Environmental

Date: 30-Apr-18

Project: HS18031061

Work Order: 1803434

Sample ID: DUP-3

Lab ID: 1803434-31

Legal Location:

Matrix: WATER

Collection Date: 3/21/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC
- U or ND - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- W - DER is greater than Warning Limit of 1.42
- * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
- # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
- G - Sample density differs by more than 15% of LCS density.
- D - DER is greater than Control Limit
- M - Requested MDC not met.
- LT - Result is less than requested MDC but greater than achieved MDC.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- * - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- * - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

ALS -- Fort Collins

Date: 4/30/2018 1:03:

Client: ALS Environmental
 Work Order: 1803434
 Project: HS18031061

QC BATCH REPORT

Batch ID: RE180328-1-1 Instrument ID Alpha Scin Method: Radium-226 by Radon Emanation

DUP Sample ID: 1803434-17 Units: pCi/l Analysis Date: 4/10/2018 12:03
 Client ID: EP-35 Run ID: RE180328-1A Prep Date: 3/28/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	0.42 (+/- 0.21)	0.13						0.63	0.6	2.1	LT
Carr: BARIUM	15960		16880		94.6	40-110		15660			

LCS Sample ID: RE180328-1 Units: pCi/l Analysis Date: 4/10/2018 12:43
 Client ID: Run ID: RE180328-1A Prep Date: 3/28/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	52 (+/- 13)	0	46.33		113	67-120					P
Carr: BARIUM	16260		16430		99	40-110					

MB Sample ID: RE180328-1 Units: pCi/l Analysis Date: 4/10/2018 12:43
 Client ID: Run ID: RE180328-1A Prep Date: 3/28/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.15									U
Carr: BARIUM	16080		16430		97.8	40-110					

The following samples were analyzed in this batch:

1803434-1	1803434-2	1803434-3
1803434-4	1803434-5	1803434-6
1803434-7	1803434-8	1803434-9
1803434-10	1803434-11	1803434-12
1803434-13	1803434-14	1803434-15
1803434-16	1803434-17	1803434-18
1803434-19	1803434-20	

Client: ALS Environmental
 Work Order: 1803434
 Project: HS18031061

QC BATCH REPORT

Batch ID: RE180411-1-3 Instrument ID Alpha Scin Method: Radium-226 by Radon Emanation

DUP Sample ID: 1803434-28 Units: pCi/l Analysis Date: 4/16/2018 11:30
 Client ID: PZ-1 Run ID: RE180411-1A Prep Date: 4/11/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	0.66 (+/- 0.37)	0.4						-0.02	1.7	2.1	LT
Carr: BARIUM	14610		16270		89.8	40-110		15710			

DUP Sample ID: 1803434-29 Units: pCi/l Analysis Date: 4/16/2018 12:03
 Client ID: DUP-1 Run ID: RE180411-1A Prep Date: 4/11/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.33						0.62	0.9	2.1	Y1,U
Carr: BARIUM	16770		16250		103	40-110		16220			Y1

LCS Sample ID: RE180411-1 Units: pCi/l Analysis Date: 4/16/2018 12:03
 Client ID: Run ID: RE180411-1A Prep Date: 4/11/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	46 (+/- 11)	0	46.33		99.4	67-120					P,Y1
Carr: BARIUM	16310		16240		100	40-110					Y1

MB Sample ID: RE180411-1 Units: pCi/l Analysis Date: 4/16/2018 12:03
 Client ID: Run ID: RE180411-1A Prep Date: 4/11/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.32									Y1,U
Carr: BARIUM	16420		16240		101	40-110					Y1

The following samples were analyzed in this batch:

1803434-21	1803434-22	1803434-23
1803434-24	1803434-25	1803434-26
1803434-27	1803434-28	1803434-29
1803434-30	1803434-31	

Client: ALS Environmental
 Work Order: 1803434
 Project: HS18031061

QC BATCH REPORT

Batch ID: RE180425-3-1 Instrument ID Alpha Scin Method: Radium-226 by Radon Emanation

DUP		Sample ID: 1803434-2		Units: pCi/l			Analysis Date: 4/30/2018 11:22				
Client ID: AP-31		Run ID: RE180425-3A			Prep Date: 4/25/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	0.43 (+/- 0.28)	0.31						0.44	0.01	2.1	LT
Carr: BARIUM	31210		33480		93.2	40-110		31560			

LCS		Sample ID: RE180425-3		Units: pCi/l			Analysis Date: 4/30/2018 11:22				
Client ID:		Run ID: RE180425-3A			Prep Date: 4/25/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	30.7 (+/- 7.6)	0.2	30.89		99.4	67-120					P
Carr: BARIUM	30910		33490		92.3	40-110					

MB		Sample ID: RE180425-3		Units: pCi/l			Analysis Date: 4/30/2018 11:22				
Client ID:		Run ID: RE180425-3A			Prep Date: 4/25/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.24									U
Carr: BARIUM	30630		33470		91.5	40-110					

The following samples were analyzed in this batch:

1803434-1	1803434-2	1803434-3
1803434-4		

Client: ALS Environmental
 Work Order: 1803434
 Project: HS18031061

QC BATCH REPORT

Batch ID: RA180419-1-1 Instrument ID LB4100-C Method: Radium-228 Analysis by GFPC

DUP Sample ID: 1803434-17 Units: pCi/l Analysis Date: 4/24/2018 08:37
 Client ID: EP-35 Run ID: RA180419-1A Prep Date: 4/19/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.92						0.57	0.5	2.1	U
Carr: BARIUM	31640		33200		95.3	40-110		32910			

DUP Sample ID: 1803434-2 Units: pCi/l Analysis Date: 4/24/2018 08:37
 Client ID: AP-31 Run ID: RA180419-1A Prep Date: 4/19/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.99						1.13	0.2	2.1	Y1,U
Carr: BARIUM	33420		33190		101	40-110		33320			Y1

LCS Sample ID: RA180419-1 Units: pCi/l Analysis Date: 4/24/2018 08:37
 Client ID: Run ID: RA180419-1A Prep Date: 4/19/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	5.4 (+/- 1.4)	0.7	6.176		87.5	70-130					P
Carr: BARIUM	32270		33200		97.2	40-110					

MB Sample ID: RA180419-1 Units: pCi/l Analysis Date: 4/24/2018 08:37
 Client ID: Run ID: RA180419-1A Prep Date: 4/19/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.6									U
Carr: BARIUM	32600		33170		98.3	40-110					

The following samples were analyzed in this batch:

1803434-1	1803434-2	1803434-3
1803434-4	1803434-5	1803434-6
1803434-7	1803434-8	1803434-9
1803434-10	1803434-11	1803434-12
1803434-13	1803434-14	1803434-15
1803434-16	1803434-17	

Client: ALS Environmental
 Work Order: 1803434
 Project: HS18031061

QC BATCH REPORT

Batch ID: RA180423-1-2 Instrument ID LB4100-C Method: Radium-228 Analysis by GFPC

DUP Sample ID: 1803434-28 Units: pCi/l Analysis Date: 4/26/2018 09:05
 Client ID: PZ-1 Run ID: RA180423-1A Prep Date: 4/23/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	0.93 (+/- 0.5)	0.9						1.11	0.2	2.1	LT
Carr: BARIUM	33950		34590		98.1	40-110		32670			

DUP Sample ID: 1803434-29 Units: pCi/l Analysis Date: 4/26/2018 09:05
 Client ID: DUP-1 Run ID: RA180423-1A Prep Date: 4/23/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	1.49 (+/- 0.59)	0.89						3.5	1.7	2.1	
Carr: BARIUM	32930		34570		95.2	40-110		32920			

LCS Sample ID: RA180423-1 Units: pCi/l Analysis Date: 4/26/2018 10:45
 Client ID: Run ID: RA180423-1A Prep Date: 4/23/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	7.7 (+/- 1.9)	0.7	6.172		125	70-130					P
Carr: BARIUM	29850		34570		86.4	40-110					

MB Sample ID: RA180423-1 Units: pCi/l Analysis Date: 4/26/2018 10:45
 Client ID: Run ID: RA180423-1A Prep Date: 4/23/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.66									U
Carr: BARIUM	30840		34570		89.2	40-110					

The following samples were analyzed in this batch:

1803434-18	1803434-19	1803434-20
1803434-21	1803434-22	1803434-23
1803434-24	1803434-25	1803434-26
1803434-27	1803434-28	1803434-29
1803434-30	1803434-31	

APPENDIX C.2

Data Usability Summary – June 2018 Sampling Event

This Data Usability Summary (DUS) continues the format established in previous summaries completed by AECOM (AECOM, 2017). The DUS may be modified going forward, according to project needs. The laboratory report and field notes for the June 2018 sampling event were reviewed, and the data usability was evaluated following the Draft Groundwater Sampling and Analysis Plan (ERM, 2016) and using the National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017 for metals.

Sample collection was performed by Source Environmental Sciences Inc. (Source) on 5 – 7 June 2018.

Sample Collection and Field Documentation: Sample collection and field documentation were performed in general accordance with the Draft Sampling and Analysis Plan (SAP) (ERM, 2016) with the following variances:

- Field Recording - Field notes were not on waterproof paper and/or waterproof ink, pages were not sequentially numbered and signed by field personnel. Weather conditions were not noted. Written errors were not corrected according to the SAP.
- Field Instrument Calibration - The time, date, and location were not specified for instrument calibration.
- Monitor Well Inspection – No documentation of monitoring well inspection was provided by Source.
- Water Level and Total Depth Information – Depth to water and total depth measurements were not consistently recorded to 0.01-foot precision.
- Quality Control Sampling – No field blank was collected in the Ash Pile area in June 2018.

ALS Environmental located in Houston, Texas was contracted by Source Environmental Sciences Inc. to analyze groundwater samples from the June 2018 monitoring event. The radionuclide analyses were subcontracted to ALS Environmental in Fort Collins, Colorado. The prepared lab report was reviewed for data usability.

ALS Environmental is a National Environmental Laboratory Accreditation Program (NELAP) accredited lab with the following applicable NELAP certification:

- ALS Environmental in Houston, Texas - Texas certification No. T10470231-18-21
- ALS Environmental in Fort Collins, Colorado – Texas certification No. T104704241

A total of 32 groundwater samples were analyzed during the June 2018 semiannual groundwater monitoring program. Samples SP-1 -2, -3, -32, -34, and DUP-3 were analyzed for boron and calcium (SW6020A), anions (E300.0), total dissolved solids (SM2540C), pH (SM 4500-H+ B). All remaining samples were analyzed for metals (SW6020A), mercury (SW7470A), anions (E300.0), total dissolved solids (SM2540C), pH (SM 4500-H+ B), Radium-226 (Method 903.1) and Radium-

228 by Gas Flow Proportional Counting (GFPC). The samples, corresponding laboratory IDs, and analytical methods are listed in Table C.2.1.

The data package issued by the lab contained most of the information required to perform the data validation as specified in the SAP, with several variances as noted below. In addition, only the reporting limits were provided for each method and no data was flagged with a “J”-flag by the laboratory.

Preservation and Holding Times: Samples were received under chain-of-custody, in acceptable physical condition, and within the acceptable temperature limits. Analyses were completed within the required holding time as specified by the method for both semiannual events except for pH, which is an immediate test.

Initial Calibration and Continuing Calibration Verification (ICV and CCV): As per the NFG (USEPA, 2017), the acceptance criteria specified in the following table were used to qualify the data:

Criteria	Action	
	Detection	Non-Detect
ICV/CCV Recovery		
<75%	J- or R	R
75 – 89%	J	UJ
90 – 110%	None	None
111 – 125%	J+	None
>125%	J+ or R	None

The provided laboratory report did not contain information on ICV or CCV. Therefore, this quality control metric cannot be evaluated. No data were qualified due to calibration issues.

Blanks: As specified in the NFG (USEPA, 2017), results were qualified as non-detect (“U”-flag) if the sample concentrations were <10x the method blank concentration. No analytes were detected above the reporting limit (RL) in method blanks during the 2018 sampling events, therefore no data were qualified due to detections in method blanks.

The NFG (USEPA, 2017) do not specify procedures for the qualification of constituents detected in field or equipment blanks. Following AECOM (2017), sample concentrations that were <5x the field or equipment blank concentrations were qualified with a “U”-flag. Isotope analyses (Radium-226 and -228) were qualified with a “U”-flag if sample concentrations were within the field or equipment blank concentrations plus the reported error.

Total dissolved solids were detected at 10 mg/L in the field blank sample collected on 7 June 2018, Field Blank 3. All sample concentrations were higher than this blank detection. No data were qualified. Radium-226 was detected at 0.59 ± 0.37 pCi/L in the field blank sample collected on 6 June 2018, Field Blank 2. Samples with Radium-226 concentrations below 0.96 pCi/L were qualified with a “U”-flag.

Data qualified are summarized in Table C.2.2.

Laboratory Control Samples: Following the approach used by AECOM (2017), laboratory control samples (LCS) and laboratory control sample duplicated (LCSD) were qualified according to the following NFG criteria:

Criteria	Action		
	LCS/LCSD Recovery	Detection	Non-Detect
< 40%		J-	R
40 – 69%		J-	UJ
70 – 130%		None	None
>130%		J+	None
>150%		R	None

The LCS/LCSD recoveries were averaged for comparison to the above criteria. The LCS/LCSD variability was evaluated using the NFG duplicate sample acceptance criteria of 20% relative percent difference (RPD).

All LCS/LCSD recoveries were within 70 – 130% and the %RPD between LCS and LCSD were within 20% for June 2018 sampling events. No data were qualified.

Matrix Spike/Matrix Spike Duplicate and Post Digestion Spike: Matrix Spike (MS)/Matrix Spike Duplicate (MSD) and Post digestion spike (PDS) data were evaluated according to the acceptance criteria below:

Criteria		Action	
MS Recovery	PDS Recovery	Detection	Non-Detect
<30%	<75%	J-	R
<30%	≥75%	J	UJ
30-74%	<75%	J-	UJ
30-74%	≥75%	J	UJ
>125%	>125%	J+	None
>125%	≤125%	J	None
<30%	Not performed*	J-	R
30-74%	Not performed*	J-	UJ
75-125	Not required	None	None
>125	Not performed*	J+	None

MS/MSD recoveries were averaged for the evaluation. Per the NFG (USEPA, 2017), MS/MSDs were not qualified if the parent sample concentration was greater than 4x the concentration of the spike added. The MS/MSD variability was evaluated using the NFG duplicate sample acceptance criteria of 20% relative percent difference (RPD).

The MS/MSD and PDS analysis is detailed in Table C.2.3. Data qualified due to MS/MSD recoveries or variability or PDS recoveries are summarized in Table C.2.2.

Serial Dilution: Per the NFG (USEPA, 2017), the acceptance criteria specified in the following table are recommended to evaluate Serial Dilution (SD):

Criteria	Action	
	Detection	Non-Detect
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D > 10%	J	UJ
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D ≤ 10% ≥ 75%	None	None
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D ≥ 100% < 75%	Professional Judgement	
Sample concentration > 5x CRQL and serial dilution sample concentration < CRQL ≥ 75%	None	None
Interferences present	Professional Judgement	

The provided laboratory report did not specify the method detection limits (MDL). Therefore, this quality control metric cannot be evaluated. No data were qualified due to serial dilution issues.

Field Precision: For all analytes except Radium-226 and Radium-228, field duplicates were evaluated using the following acceptance criteria:

Criteria	Action	
	Detection	Non-Detect
Both sample and field duplicate sample results are >5x MQL and RPD >20%	J	UJ
Both sample and field duplicate sample results are >5x MQL and RPD <20%	None	None
RPD > 100%	Professional Judgement	
Sample result or field duplicate result <5x MQL and absolute difference >MQL	J	UJ
Sample result or field duplicate result <5x MQL and absolute difference <MQL	None	None

Radium-226 and Radium-228 results were qualified due to field duplicate variability if the sample result ranges did not overlap. Data qualified due to field precision variability are summarized on Tables C.2.2 and detailed in Table C.2.4.

Analytical Duplicate Evaluation: Six lab duplicate samples were analyzed for total dissolved solids (TDS). Analytical duplicate RPDs were within the NFG duplicate sample acceptance criteria of 20% RPD.

Summary: No June 2018 data were rejected due to this review and data validation. Variances from the SAP were noted; however these variances were not found to significantly impact the

data. All June 2018 data are considered usable, however, the limitations indicated by the data validation qualifiers should be considered.

References

AECOM 2017. Groundwater Sampling Report – Event 8 – August 2017, San Miguel Electric Cooperative, Inc., Atascosa County, Texas, October 2017.

ERM 2016. Draft Groundwater Sampling and Analysis Plan, San Miguel Electric Cooperative, Inc., June 2016.

USEPA 2017. National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017.

TABLE C.2.1
Field and Laboratory Sample Identification and Analyses Performed - June 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Sample ID	Lab ID	Anions by E300.0	Total Dissolved Solids by SM2540C	pH by SM4500H+ B	ICP-MS Metals by SW6020A	Mercury by SW7470A	Radium-226 by Radon Emission Method 903.1	Radium-228 Analysis by GFPC
Ash Pile								
Dup-3	--	HS18060413-32	A	A	A	A (Boron and Calcium only)	--	--
SP-1	--	HS18060413-28	A	A	A	A (Boron and Calcium only)	--	--
SP-2	--	HS18060413-31	A	A	A	A (Boron and Calcium only)	--	--
SP-3	--	HS18060413-30	A	A	A	A (Boron and Calcium only)	--	--
SP-32	--	HS18060413-29	A	A	A	A (Boron and Calcium only)	--	--
SP-34	--	HS18060413-27	A	A	A	A (Boron and Calcium only)	--	--
Ash Pond								
AP-31	1806189-1	HS18060413-01	A	A	A	A	B	B
AP-32	1806189-3	HS18060413-03	A	A	A	A	B	B
AP-33	1806189-5	HS18060413-05	A	A	A	A	B	B
AP-34	1806189-9	HS18060413-09	A	A	A	A	B	B
AP-35	1806189-10	HS18060413-10	A	A	A	A	B	B
AP-36	1806189-11	HS18060413-11	A	A	A	A	B	B
Dup-1	1806189-8	HS18060413-08	A	A	A	A	B	B
MW-3	1806189-2	HS18060413-02	A	A	A	A	B	B
PZ-2	1806189-15	HS18060413-15	A	A	A	A	B	B
PZ-3	1806189-26	HS18060413-26	A	A	A	A	B	B
PZ-5	1806189-6	HS18060413-06	A	A	A	A	B	B
PZ-6	1806189-13	HS18060413-13	A	A	A	A	B	B
Equalization Pond								
Dup-2	1806189-18	HS18060413-18	A	A	A	A	B	B
EP-31	1806189-16	HS18060413-16	A	A	A	A	B	B
EP-32	1806189-17	HS18060413-17	A	A	A	A	B	B
EP-33	1806189-20	HS18060413-20	A	A	A	A	B	B
EP-34	1806189-22	HS18060413-22	A	A	A	A	B	B
EP-35	1806189-23	HS18060413-23	A	A	A	A	B	B
EP-36	1806189-24	HS18060413-24	A	A	A	A	B	B
EP-37	1806189-25	HS18060413-25	A	A	A	A	B	B
EP-38	1806189-14	HS18060413-14	A	A	A	A	B	B
MW-4	1806189-19	HS18060413-19	A	A	A	A	B	B
QA/QC Samples								
Equipment Blank	1806189-7	HS18060413-07	A	A	A	A	B	B
Field Blank 1	1806189-4	HS18060413-04	A	A	A	A	B	B
Field Blank 2	1806189-12	HS18060413-12	A	A	A	A	B	B
Field Blank 3	1806189-21	HS18060413-21	A	A	A	A	B	B

Notes:

1. A = analyzed by ALS Environmental in Houston, Texas; B = analyzed by ALS Environmental in Fort Collins, Colorado.
2. '--' = not analyzed

TABLE C.2.2
Qualified Analytical Data - June 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Sample ID	Analyte	Result	Units	Qualification	Justification
AP-34	Mercury	0.00302	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
AP-34	Radium-226	0.35 ± 0.25	pCi/L	U	Sample concentration similar to corresponding field blank concentration.
AP-35	Mercury	0.00679	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
AP-36	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
DUP-1	Arsenic	<0.01	mg/L	UJ	Field duplicate variability exceeds acceptance criteria.
DUP-1	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
DUP-1	Radium-226 & Radium-228	2.03 ± 0.85	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-1	Radium-228	1.59 ± 0.53	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-2	Mercury	0.00181	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
DUP-2	Radium-226	0.51 ± 0.28	pCi/L	U	Sample concentration similar to corresponding field blank concentration.
DUP-2	Selenium	0.0109	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
DUP-2	Selenium	0.0109	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-3	Calcium	447	mg/L	J	Field duplicate variability exceeds acceptance criteria.
EP-31	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-32	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-33	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-34	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-35	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-36	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-37	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-38	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-38	Radium-226	0.71 ± 0.42	pCi/L	U	Sample concentration similar to corresponding field blank concentration.
Equipment Blank	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
FIELD BLANK 2	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
FIELD BLANK 3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
MW-3	Arsenic	0.0101	mg/L	J	Field duplicate variability exceeds acceptance criteria.
MW-3	Radium-226 & Radium-228	5.66 ± 1.5	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
MW-3	Radium-228	4.9 ± 1.2	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
MW-4	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
MW-4	Radium-226	0.44 ± 0.25	pCi/L	U	Sample concentration similar to corresponding field blank concentration.
MW-4	Selenium	<0.01	mg/L	UJ	Field duplicate variability exceeds acceptance criteria.
PZ-2	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
PZ-2	Radium-226	0.46 ± 0.25	pCi/L	U	Sample concentration similar to corresponding field blank concentration.
PZ-5	Mercury	0.000287	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
PZ-5	Radium-226	0.44 ± 0.26	pCi/L	U	Sample concentration similar to corresponding field blank concentration.
PZ-6	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-3	Calcium	761	mg/L	J	Field duplicate variability exceeds acceptance criteria.

Notes:

1. pCi/L = pico Curies per liter, mg/L = milligrams per liter.
2. MS = matrix spike; MSD = matrix spike duplicate.
3. J = Result is an estimated value, J- = result is an estimated value that is biased low; UJ = analyte was not detected and the reporting limit is an estimate.

TABLE C.2.3
MS/MSD and PDS Results Outside of Acceptance Criteria - June 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Batch	Method	Analyte	MS % Recovery	MSD %Recovery	MS/MSD RPD	PDS %Recovery	Qualified Samples	Qualification
129239	6020A - ICP-MS Metals	Calcium	-159	-238	0.605	4.12	AP-31, MW-3, AP-32, Field Blank 1, AP-33, PZ-5, Equipment Blank, AP-34, AP-35, AP-36, Field Blank 2, PZ-6, EP-38, PZ-2, EP-31, MW-4, EP-33, Field Blank 3, EP-34	No change - Parent Sample is \geq 4x spike amount
129239	6020A - ICP-MS Metals	Cobalt	91.2	73.5	1.44	85.1	AP-31, MW-3, AP-32, Field Blank 1, AP-33, PZ-5, Equipment Blank, AP-34, AP-35, AP-36, Field Blank 2, PZ-6, EP-38, PZ-2, EP-31, MW-4, EP-33, Field Blank 3, EP-34	No change - Parent Sample is \geq 4x spike amount
129239	6020A - ICP-MS Metals	Boron	76.3	-26.7	3.43	88.2	AP-31, MW-3, AP-32, Field Blank 1, AP-33, PZ-5, Equipment Blank, AP-34, AP-35, AP-36, Field Blank 2, PZ-6, EP-38, PZ-2, EP-31, MW-4, EP-33, Field Blank 3, EP-34	No change - Parent Sample is \geq 4x spike amount
129239	6020A - ICP-MS Metals	Lithium	125	119	0.41	90.8	AP-31, MW-3, AP-32, Field Blank 1, AP-33, PZ-5, Equipment Blank, AP-34, AP-35, AP-36, Field Blank 2, PZ-6, EP-38, PZ-2, EP-31, MW-4, EP-33, Field Blank 3, EP-34	No change - Parent Sample is \geq 4x spike amount
129291	6020A - ICP-MS Metals	Calcium	265	292	0.269	-16.3	DUP-1, EP-35, EP-36, EP-37, PZ-3, SP-34, SP-1, SP-32, SP-3, SP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
129291	6020A - ICP-MS Metals	Boron	58.6	303	7.52	107	DUP-1, EP-35, EP-36, EP-37, PZ-3, SP-34, SP-1, SP-32, SP-3, SP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
129291	6020A - ICP-MS Metals	Lithium	135	128	0.236	85.8	DUP-1, EP-35, EP-36, EP-37, PZ-3, SP-34, SP-1, SP-32, SP-3, SP-2, DUP-3	No change - Parent Sample is \geq 4x spike amount
129335	6020A - ICP-MS Metals	Calcium	-106	74.8	3.01	58.7	DUP-2	No change - Parent Sample is \geq 4x spike amount
129335	6020A - ICP-MS Metals	Lithium	123	127	0.588	121	DUP-2	No change - Parent Sample is \geq 4x spike amount
129335	6020A - ICP-MS Metals	Selenium	66.5	68.6	2.32	91.8	DUP-2	J or UJ
129335	6020A - ICP-MS Metals	Boron	-143	-62.1	5.55	96	DUP-2	No change - Parent Sample is \geq 4x spike amount
129344	6020A - ICP-MS Metals	Boron	-202	86.4	5.21	90.1	EP-32	No change - Parent Sample is \geq 4x spike amount
129344	6020A - ICP-MS Metals	Calcium	-775	-825	0.615	32.1	EP-32	No change - Parent Sample is \geq 4x spike amount
129344	6020A - ICP-MS Metals	Lead	77.9	79	1.31	87.7	EP-32	No change - Parent Sample is \geq 4x spike amount
129344	6020A - ICP-MS Metals	Lithium	17.7	39.1	2.04	114	EP-32	No change - Parent Sample is \geq 4x spike amount
129422	7470A Mercury	Mercury	74	71.4	3.55		PZ-5, Equipment Blank, DUP-1, AP-34, AP-35, AP-36, FIELD BLANK 2, PZ-6, EP-38, PZ-2, EP-31, EP-32, DUP-2, MW-4, EP-33, FIELD BLANK 3, EP-34, EP-35, EP-36, EP-37,	J- or UJ
129422	7470A Mercury	Mercury	73.8	71.6	3.01		PZ-5, Equipment Blank, DUP-1, AP-34, AP-35, AP-36, FIELD BLANK 2, PZ-6, EP-38, PZ-2, EP-31, EP-32, DUP-2, MW-4, EP-33, FIELD BLANK 3, EP-34, EP-35, EP-36, EP-37,	J- or UJ

Notes:

1. MS = matrix spike; MSD = matrix spike duplicate; RPD = relative percent difference; PDS = post digestion spike.

TABLE C.2.4
Field Precision Evaluation - June 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Location ID	Analyte	N Sample Result	FD Sample Result	RL	Units	Both N and FD Sample Results $\geq 5x$ RL	RPD (%)	Absolute Difference >RL?	Qualification
MW-03	Arsenic	0.0101	<0.01	0.01	mg/L	No	--	Yes	J or UJ
	Beryllium	0.0379	<0.1	0.1	mg/L	No	--	No	none
	Boron	17	15.3	1	mg/L	Yes	11%	--	none
	Cadmium	0.0633	0.0541	0.01	mg/L	Yes	16%	--	none
	Calcium	528	489	2.5	mg/L	Yes	8%	--	none
	Cobalt	0.37	0.332	0.025	mg/L	Yes	11%	--	none
	Lithium	1.64	1.58	0.25	mg/L	Yes	4%	--	none
	Selenium	0.0321	0.0347	0.01	mg/L	No	--	No	none
	Chloride	1790	1870	50	mg/L	Yes	4%	--	none
	Fluoride	0.481	0.411	0.1	mg/L	No	--	No	none
	Sulfate	4180	4310	50	mg/L	Yes	3%	--	none
	Total Dissolved Solids	9220	9940	10	mg/L	Yes	8%	--	none
	Radium-226	0.76 ± 0.33	0.44 ± 0.32	--	pCi/L	Result ranges overlap.			none
	Radium-228	4.9 ± 1.2	1.59 ± 0.53	--	pCi/L	Result ranges do not overlap.			J
Radium-226 & Radium-228	5.66 ± 1.5	2.03 ± 0.85	--	pCi/L	Result ranges do not overlap.			J	
MW-04	Boron	8.17	7.82	1	mg/L	Yes	4%	--	none
	Calcium	297	301	2.5	mg/L	Yes	1%	--	none
	Lithium	0.619	0.632	0.025	mg/L	No	--	No	none
	Mercury	<0.0002	0.00181	0.0002	mg/L	--	--	--	none
	Selenium	<0.01	0.0109	0.01	mg/L	No	--	Yes	J or UJ
	Chloride	1830	1780	50	mg/L	Yes	3%	--	none
	Fluoride	0.132	0.128	0.1	mg/L	No	--	No	none
	Sulfate	2440	2380	50	mg/L	Yes	2%	--	none
	Total Dissolved Solids	6150	6120	10	mg/L	Yes	0.5%	--	none
	Radium-226	0.44 ± 0.25	0.51 ± 0.28	--	pCi/L	Result ranges overlap.			none
Radium-228	2.9 ± 0.8	3.8 ± 1	--	pCi/L	Result ranges overlap.			none	
Radium-226 & Radium-228	3.34 ± 1.1	4.31 ± 1.28	--	pCi/L	Result ranges overlap.			none	
SP-03	Boron	7.34	6.78	1	mg/L	Yes	8%	--	none
	Calcium	761	447	2.5	mg/L	Yes	52%	--	J or UJ
	Chloride	4760	4810	50	mg/L	Yes	1%	--	none
	Fluoride	0.901	0.854	0.1	mg/L	Yes	5%	--	none
	Sulfate	2930	2920	50	mg/L	Yes	0.3%	--	none
	Total Dissolved Solids	11900	11400	10	mg/L	Yes	4%	--	none

Notes:

1. N = normal sample; FD = field duplicate sample; RL = reporting limit; RPD = relative percent difference.
2. mg/L = milligrams per liter; pCi/L = pico Curies per liter.



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July 27, 2018

Josh Mitchell
Source Environmental Sciences Inc.
2060 North Loop West, Suite 140
Houston, TX 77018

Work Order: **HS18060413**

Laboratory Results for: **San Miguel Electric CCR Well Monitoring**

Dear Josh,

ALS Environmental received 32 sample(s) on Jun 08, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Nicole Edwards
Project Manager

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18060413

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18060413-01	AP-31	Water		05-Jun-2018 10:55	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-02	MW-3	Water		05-Jun-2018 11:40	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-03	AP-32	Water		05-Jun-2018 12:20	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-04	Field Blank 1	Water		05-Jun-2018 12:35	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-05	AP-33	Water		06-Jun-2018 10:33	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-06	PZ-5	Water		06-Jun-2018 11:18	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-07	Equipment Blank	Water		05-Jun-2018 10:28	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-08	DUP-1	Water		05-Jun-2018 00:00	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-09	AP-34	Water		06-Jun-2018 11:55	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-10	AP-35	Water		06-Jun-2018 12:30	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-11	AP-36	Water		06-Jun-2018 13:09	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-12	Field Blank 2	Water		06-Jun-2018 13:00	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-13	PZ-6	Water		06-Jun-2018 14:15	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-14	EP-38	Water		06-Jun-2018 14:55	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-15	PZ-2	Water		06-Jun-2018 16:20	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-16	EP-31	Water		07-Jun-2018 08:41	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-17	EP-32	Water		07-Jun-2018 09:20	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-18	DUP-2	Water		05-Jun-2018 00:00	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-19	MW-4	Water		06-Jun-2018 15:25	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-20	EP-33	Water		07-Jun-2018 09:58	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-21	Field Blank 3	Water		07-Jun-2018 09:50	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-22	EP-34	Water		07-Jun-2018 10:30	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-23	EP-35	Water		07-Jun-2018 11:00	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-24	EP-36	Water		07-Jun-2018 11:32	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-25	EP-37	Water		07-Jun-2018 12:06	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-26	PZ-3	Water		07-Jun-2018 16:30	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-27	SP-34	Water		07-Jun-2018 13:15	08-Jun-2018 10:15	<input type="checkbox"/>

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18060413

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18060413-28	SP-1	Water		07-Jun-2018 13:50	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-29	SP-32	Water		07-Jun-2018 14:33	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-30	SP-3	Water		07-Jun-2018 15:07	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-31	SP-2	Water		07-Jun-2018 15:50	08-Jun-2018 10:15	<input type="checkbox"/>
HS18060413-32	DUP-3	Water		05-Jun-2018 00:00	08-Jun-2018 10:15	<input type="checkbox"/>

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18060413

CASE NARRATIVE**Work Order Comments**

- The analyses for Radium-226 and Radium-228 were subcontracted to ALS Environmental in Fort Collins, CO. Final report attached.
- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

Metals by Method SW7470**Batch ID: 129310,129423**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: 129422**Sample ID: DUP-1 (HS18060413-08MS)**

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: DUP-1 (HS18060413-08MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Sample ID: EP-32 (HS18060413-17MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: EP-32 (HS18060413-17MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Metals by Method SW6020**Batch ID: 129335**

- Samples ran at a 5x due to high Sodium concentration.
- Samples ran at a 50x due to internal standard 6 (Beryllium) failure. High Sodium concentration.

Sample ID: DUP-2 (HS18060413-18MS)

- Selenium and Beryllium failed in the MS/MSD but passed in the PDS.

Thallium failed in the MS but passed in the MSD and PDS.

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Boron, Calcium and Lithium.

Sample ID: DUP-2 (HS18060413-18PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium.

Batch ID: 129344

- Samples ran at a 5x due to high Sodium concentration.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18060413

CASE NARRATIVE**Metals by Method SW6020****Batch ID: 129344****Sample ID: EP-32 (HS18060413-17MS)**

- Lead failed in the MS/MSD but passed in the PDS.
- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Boron, Calcium, Lithium,

Sample ID: EP-32 (HS18060413-17PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium.

Batch ID: 129291

- Samples ran at a 50x due to internal standard 6 (Beryllium, Boron, and Lithium) failure. High Sodium concentration.
- Samples ran at a 5x due to high Sodium concentration.

Sample ID: DUP-1 (HS18060413-08MS)

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Boron, Lithium

Sample ID: DUP-1 (HS18060413-08PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium

Batch ID: 129239

- Samples ran at a 5x due to high Sodium concentration.
- Samples ran at a 50x due to internal standard 6 (Beryllium) failure. High Sodium concentration.
- Samples ran at a 50x due to internal standard 6 (Lithium) failure. High Sodium concentration.

Sample ID: AP-32 (HS18060413-03MS)

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Boron, Lithium, Cobalt

Sample ID: AP-32 (HS18060413-03PDS)

- The PDS recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Boron, Lithium, Cobalt

Sample ID: AP-32 (HS18060413-03SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10% for Boron

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18060413

CASE NARRATIVE

WetChemistry by Method E300

Batch ID: R318062

Sample ID: DUP-2 (HS18060413-18MS)

- The matrix spike recovery was outside of the control limits. However, the matrix spike duplicate recovery and the RPD between the MS and MSD were in control. (Chloride,Sulfate)

Sample ID: HS18060592-01MS

- MS and MSD are for an unrelated sample (Sulfate)

Batch ID: R318147

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R318340

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method M2540C

Batch ID: R317834,R317983,R318046,R318137

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

WetChemistry by Method SM4500H+ B

Batch ID: R317778,R317829

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-31
 Collection Date: 05-Jun-2018 10:55

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-01
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Jun-2018 23:53
Arsenic	ND		0.0100	mg/L	5	13-Jun-2018 23:53
Barium	ND		0.0200	mg/L	5	13-Jun-2018 23:53
Beryllium	0.0123		0.0100	mg/L	5	13-Jun-2018 23:53
Boron	43.1		1.00	mg/L	50	14-Jun-2018 13:52
Cadmium	ND		0.0100	mg/L	5	13-Jun-2018 23:53
Calcium	562		2.50	mg/L	5	13-Jun-2018 23:53
Cobalt	0.234		0.0250	mg/L	5	13-Jun-2018 23:53
Lead	ND		0.0100	mg/L	5	13-Jun-2018 23:53
Lithium	0.771		0.250	mg/L	50	14-Jun-2018 13:52
Molybdenum	ND		0.0250	mg/L	5	13-Jun-2018 23:53
Selenium	0.0329		0.0100	mg/L	5	13-Jun-2018 23:53
Thallium	ND		0.0100	mg/L	5	13-Jun-2018 23:53
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 12-Jun-2018		Analyst: JBA
Mercury	0.000457		0.000200	mg/L	1	13-Jun-2018 13:37
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,620		50.0	mg/L	100	13-Jun-2018 18:56
Fluoride	0.308		0.100	mg/L	1	13-Jun-2018 16:18
Sulfate	3,220		50.0	mg/L	100	13-Jun-2018 18:56
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,740		10.0	mg/L	1	11-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.81	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.8	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MW-3
 Collection Date: 05-Jun-2018 11:40

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-02
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Jun-2018 23:55
Arsenic	0.0101		0.0100	mg/L	5	13-Jun-2018 23:55
Barium	ND		0.0200	mg/L	5	13-Jun-2018 23:55
Beryllium	0.0379		0.0100	mg/L	5	13-Jun-2018 23:55
Boron	17.0		1.00	mg/L	50	14-Jun-2018 13:54
Cadmium	0.0633		0.0100	mg/L	5	13-Jun-2018 23:55
Calcium	528		2.50	mg/L	5	13-Jun-2018 23:55
Cobalt	0.370		0.0250	mg/L	5	13-Jun-2018 23:55
Lead	ND		0.0100	mg/L	5	13-Jun-2018 23:55
Lithium	1.64		0.250	mg/L	50	14-Jun-2018 13:54
Molybdenum	ND		0.0250	mg/L	5	13-Jun-2018 23:55
Selenium	0.0321		0.0100	mg/L	5	13-Jun-2018 23:55
Thallium	ND		0.0100	mg/L	5	13-Jun-2018 23:55
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 12-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	13-Jun-2018 13:39
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,790		50.0	mg/L	100	13-Jun-2018 19:18
Fluoride	0.481		0.100	mg/L	1	13-Jun-2018 16:40
Sulfate	4,180		50.0	mg/L	100	13-Jun-2018 19:18
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,220		10.0	mg/L	1	11-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.53	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	23.2	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-32
 Collection Date: 05-Jun-2018 12:20

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-03
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Jun-2018 23:57
Arsenic	0.0191		0.0100	mg/L	5	13-Jun-2018 23:57
Barium	ND		0.0200	mg/L	5	13-Jun-2018 23:57
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 01:20
Boron	14.9		1.00	mg/L	50	14-Jun-2018 16:13
Cadmium	0.0862		0.0100	mg/L	5	13-Jun-2018 23:57
Calcium	670		2.50	mg/L	5	13-Jun-2018 23:57
Cobalt	0.573		0.0250	mg/L	5	13-Jun-2018 23:57
Lead	ND		0.0100	mg/L	5	13-Jun-2018 23:57
Lithium	1.36		0.250	mg/L	50	14-Jun-2018 14:02
Molybdenum	ND		0.0250	mg/L	5	13-Jun-2018 23:57
Selenium	0.0746		0.0100	mg/L	5	13-Jun-2018 23:57
Thallium	ND		0.0100	mg/L	5	13-Jun-2018 23:57
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 12-Jun-2018		Analyst: JBA
Mercury	0.00181		0.000200	mg/L	1	13-Jun-2018 13:03
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,870		50.0	mg/L	100	13-Jun-2018 21:06
Fluoride	0.383		0.100	mg/L	1	13-Jun-2018 20:44
Sulfate	3,350		50.0	mg/L	100	13-Jun-2018 21:06
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,720		10.0	mg/L	1	11-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.44	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.4	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 1
 Collection Date: 05-Jun-2018 12:35

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-04
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	14-Jun-2018 13:44
Arsenic	ND		0.00200	mg/L	1	14-Jun-2018 13:44
Barium	ND		0.00400	mg/L	1	14-Jun-2018 13:44
Beryllium	ND		0.00200	mg/L	1	14-Jun-2018 13:44
Boron	ND		0.0200	mg/L	1	14-Jun-2018 13:44
Cadmium	ND		0.00200	mg/L	1	14-Jun-2018 13:44
Calcium	ND		0.500	mg/L	1	14-Jun-2018 13:44
Cobalt	ND		0.00500	mg/L	1	14-Jun-2018 13:44
Lead	ND		0.00200	mg/L	1	14-Jun-2018 13:44
Lithium	ND		0.00500	mg/L	1	14-Jun-2018 13:44
Molybdenum	ND		0.00500	mg/L	1	14-Jun-2018 13:44
Selenium	ND		0.00200	mg/L	1	14-Jun-2018 13:44
Thallium	ND		0.00200	mg/L	1	14-Jun-2018 13:44
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 12-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	13-Jun-2018 13:41
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	ND		0.500	mg/L	1	13-Jun-2018 21:05
Fluoride	ND		0.100	mg/L	1	13-Jun-2018 21:05
Sulfate	ND		0.500	mg/L	1	13-Jun-2018 21:05
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	11-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	6.14	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.8	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-33
 Collection Date: 06-Jun-2018 10:33

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-05
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:12
Arsenic	0.0355		0.0100	mg/L	5	14-Jun-2018 00:12
Barium	0.0212		0.0200	mg/L	5	14-Jun-2018 00:12
Beryllium	0.311		0.100	mg/L	50	14-Jun-2018 01:32
Boron	59.2		1.00	mg/L	50	14-Jun-2018 16:29
Cadmium	0.141		0.0100	mg/L	5	14-Jun-2018 00:12
Calcium	770		2.50	mg/L	5	14-Jun-2018 00:12
Cobalt	1.31		0.0250	mg/L	5	14-Jun-2018 00:12
Lead	ND		0.0100	mg/L	5	14-Jun-2018 17:31
Lithium	1.13		0.250	mg/L	50	14-Jun-2018 14:12
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:12
Selenium	0.144		0.0100	mg/L	5	14-Jun-2018 00:12
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:12
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 12-Jun-2018		Analyst: JBA
Mercury	0.00398		0.000200	mg/L	1	13-Jun-2018 13:42
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,840		50.0	mg/L	100	13-Jun-2018 22:55
Fluoride	0.853		0.100	mg/L	1	13-Jun-2018 22:33
Sulfate	3,520		50.0	mg/L	100	13-Jun-2018 22:55
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	13,000		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.21	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.6	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-5
 Collection Date: 06-Jun-2018 11:18

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-06
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:14
Arsenic	0.0197		0.0100	mg/L	5	14-Jun-2018 00:14
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:14
Beryllium	0.246		0.100	mg/L	50	14-Jun-2018 01:38
Boron	41.7		1.00	mg/L	50	14-Jun-2018 16:31
Cadmium	0.0496		0.0100	mg/L	5	14-Jun-2018 00:14
Calcium	695		2.50	mg/L	5	14-Jun-2018 00:14
Cobalt	0.718		0.0250	mg/L	5	14-Jun-2018 00:14
Lead	ND		0.0100	mg/L	5	14-Jun-2018 17:33
Lithium	0.708		0.250	mg/L	50	14-Jun-2018 14:14
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:14
Selenium	0.0722		0.0100	mg/L	5	14-Jun-2018 00:14
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:14
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	0.000287		0.000200	mg/L	1	15-Jun-2018 11:41
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,910		50.0	mg/L	100	13-Jun-2018 23:38
Fluoride	0.891		0.100	mg/L	1	13-Jun-2018 23:16
Sulfate	2,980		50.0	mg/L	100	13-Jun-2018 23:38
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,620		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.40	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.1	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Equipment Blank
 Collection Date: 05-Jun-2018 10:28

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-07
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	14-Jun-2018 13:46
Arsenic	ND		0.00200	mg/L	1	14-Jun-2018 13:46
Barium	ND		0.00400	mg/L	1	14-Jun-2018 13:46
Beryllium	ND		0.00200	mg/L	1	14-Jun-2018 13:46
Boron	ND		0.0200	mg/L	1	14-Jun-2018 13:46
Cadmium	ND		0.00200	mg/L	1	14-Jun-2018 13:46
Calcium	ND		0.500	mg/L	1	14-Jun-2018 13:46
Cobalt	ND		0.00500	mg/L	1	14-Jun-2018 13:46
Lead	ND		0.00200	mg/L	1	14-Jun-2018 13:46
Lithium	ND		0.00500	mg/L	1	14-Jun-2018 13:46
Molybdenum	ND		0.00500	mg/L	1	14-Jun-2018 13:46
Selenium	ND		0.00200	mg/L	1	14-Jun-2018 13:46
Thallium	ND		0.00200	mg/L	1	14-Jun-2018 13:46
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 11:43
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	ND		0.500	mg/L	1	13-Jun-2018 21:19
Fluoride	ND		0.100	mg/L	1	13-Jun-2018 21:19
Sulfate	ND		0.500	mg/L	1	13-Jun-2018 21:19
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	11-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.76	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.4	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: DUP-1
 Collection Date: 05-Jun-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-08
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	12-Jun-2018 18:09
Arsenic	ND		0.0100	mg/L	5	12-Jun-2018 18:09
Barium	ND		0.0200	mg/L	5	12-Jun-2018 18:09
Beryllium	ND		0.100	mg/L	50	13-Jun-2018 22:14
Boron	15.3		1.00	mg/L	50	13-Jun-2018 22:14
Cadmium	0.0541		0.0100	mg/L	5	12-Jun-2018 18:09
Calcium	489		2.50	mg/L	5	12-Jun-2018 18:09
Cobalt	0.332		0.0250	mg/L	5	12-Jun-2018 18:09
Lead	ND		0.0100	mg/L	5	13-Jun-2018 12:39
Lithium	1.58		0.250	mg/L	50	13-Jun-2018 22:14
Molybdenum	ND		0.0250	mg/L	5	12-Jun-2018 18:09
Selenium	0.0347		0.0100	mg/L	5	12-Jun-2018 18:09
Thallium	ND		0.0100	mg/L	5	12-Jun-2018 18:09
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 11:45
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,870		50.0	mg/L	100	14-Jun-2018 01:26
Fluoride	0.411		0.100	mg/L	1	14-Jun-2018 01:05
Sulfate	4,310		50.0	mg/L	100	14-Jun-2018 01:26
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,940		10.0	mg/L	1	11-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.58	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.6	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-34
 Collection Date: 06-Jun-2018 11:55

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-09
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:18
Arsenic	0.0205		0.0100	mg/L	5	14-Jun-2018 00:18
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:18
Beryllium	0.242		0.100	mg/L	50	14-Jun-2018 01:42
Boron	27.7		1.00	mg/L	50	14-Jun-2018 16:33
Cadmium	0.0399		0.0100	mg/L	5	14-Jun-2018 00:18
Calcium	608		2.50	mg/L	5	14-Jun-2018 00:18
Cobalt	1.09		0.0250	mg/L	5	14-Jun-2018 00:18
Lead	ND		0.0100	mg/L	5	14-Jun-2018 17:35
Lithium	1.13		0.250	mg/L	50	14-Jun-2018 14:16
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:18
Selenium	0.0715		0.0100	mg/L	5	14-Jun-2018 00:18
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:18
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	0.00302		0.000200	mg/L	1	15-Jun-2018 11:50
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,960		50.0	mg/L	100	14-Jun-2018 03:15
Fluoride	1.04		0.100	mg/L	1	14-Jun-2018 02:53
Sulfate	3,990		50.0	mg/L	100	14-Jun-2018 03:15
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,620		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.34	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.4	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-35
 Collection Date: 06-Jun-2018 12:30

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-10
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:20
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:20
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:20
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 01:44
Boron	47.1		1.00	mg/L	50	14-Jun-2018 16:35
Cadmium	0.0219		0.0100	mg/L	5	14-Jun-2018 00:20
Calcium	631		2.50	mg/L	5	14-Jun-2018 00:20
Cobalt	0.149		0.0250	mg/L	5	14-Jun-2018 00:20
Lead	ND		0.0100	mg/L	5	14-Jun-2018 17:36
Lithium	0.906		0.250	mg/L	50	14-Jun-2018 14:18
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:20
Selenium	0.0306		0.0100	mg/L	5	14-Jun-2018 00:20
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:20
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	0.00679		0.000200	mg/L	1	15-Jun-2018 11:51
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,280		50.0	mg/L	100	14-Jun-2018 03:58
Fluoride	1.26		0.100	mg/L	1	14-Jun-2018 03:37
Sulfate	2,970		50.0	mg/L	100	14-Jun-2018 03:58
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,300		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.59	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.6	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-36
 Collection Date: 06-Jun-2018 13:09

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-11
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:22
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:22
Barium	0.0217		0.0200	mg/L	5	14-Jun-2018 00:22
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 01:46
Boron	3.23		1.00	mg/L	50	14-Jun-2018 16:37
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 00:22
Calcium	678		2.50	mg/L	5	14-Jun-2018 00:22
Cobalt	0.0665		0.0250	mg/L	5	14-Jun-2018 00:22
Lead	ND		0.0100	mg/L	5	14-Jun-2018 17:38
Lithium	0.888		0.250	mg/L	50	14-Jun-2018 14:25
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:22
Selenium	0.0119		0.0100	mg/L	5	14-Jun-2018 00:22
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:22
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 11:53
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,970		50.0	mg/L	100	14-Jun-2018 05:47
Fluoride	0.681		0.100	mg/L	1	14-Jun-2018 05:25
Sulfate	2,700		50.0	mg/L	100	14-Jun-2018 05:47
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	6,780		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	4.00	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.3	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 2
 Collection Date: 06-Jun-2018 13:00

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-12
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	14-Jun-2018 13:48
Arsenic	ND		0.00200	mg/L	1	14-Jun-2018 13:48
Barium	ND		0.00400	mg/L	1	14-Jun-2018 13:48
Beryllium	ND		0.00200	mg/L	1	14-Jun-2018 13:48
Boron	ND		0.0200	mg/L	1	14-Jun-2018 13:48
Cadmium	ND		0.00200	mg/L	1	14-Jun-2018 13:48
Calcium	ND		0.500	mg/L	1	14-Jun-2018 13:48
Cobalt	ND		0.00500	mg/L	1	14-Jun-2018 13:48
Lead	ND		0.00200	mg/L	1	14-Jun-2018 13:48
Lithium	ND		0.00500	mg/L	1	14-Jun-2018 13:48
Molybdenum	ND		0.00500	mg/L	1	14-Jun-2018 13:48
Selenium	ND		0.00200	mg/L	1	14-Jun-2018 13:48
Thallium	ND		0.00200	mg/L	1	14-Jun-2018 13:48
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 11:55
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	ND		0.500	mg/L	1	13-Jun-2018 21:34
Fluoride	ND		0.100	mg/L	1	13-Jun-2018 21:34
Sulfate	ND		0.500	mg/L	1	13-Jun-2018 21:34
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.77	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	22.0	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-6
 Collection Date: 06-Jun-2018 14:15

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-13
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:26
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:26
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:26
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 01:50
Boron	3.38		1.00	mg/L	50	14-Jun-2018 16:39
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 00:26
Calcium	569		2.50	mg/L	5	14-Jun-2018 00:26
Cobalt	ND		0.0250	mg/L	5	14-Jun-2018 00:26
Lead	ND		0.0100	mg/L	5	14-Jun-2018 22:12
Lithium	0.842		0.250	mg/L	50	14-Jun-2018 14:27
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:26
Selenium	ND		0.0100	mg/L	5	14-Jun-2018 00:26
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:26
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:00
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	1,620		50.0	mg/L	100	14-Jun-2018 07:35
Fluoride	0.468		0.100	mg/L	1	14-Jun-2018 07:14
Sulfate	3,390		50.0	mg/L	100	14-Jun-2018 07:35
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	6,820		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.71	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.3	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-38
 Collection Date: 06-Jun-2018 14:55

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-14
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:28
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:28
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:28
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 01:52
Boron	2.50		1.00	mg/L	50	14-Jun-2018 16:41
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 00:28
Calcium	302		2.50	mg/L	5	14-Jun-2018 00:28
Cobalt	ND		0.0250	mg/L	5	14-Jun-2018 00:28
Lead	ND		0.0100	mg/L	5	14-Jun-2018 22:15
Lithium	0.573		0.250	mg/L	50	14-Jun-2018 14:29
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:28
Selenium	ND		0.0100	mg/L	5	14-Jun-2018 00:28
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:28
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:02
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	1,170		50.0	mg/L	100	14-Jun-2018 08:19
Fluoride	0.235		0.100	mg/L	1	14-Jun-2018 07:57
Sulfate	1,920		50.0	mg/L	100	14-Jun-2018 08:19
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	4,780		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.74	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.4	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-2
 Collection Date: 06-Jun-2018 16:20

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-15
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:34
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:34
Barium	0.0266		0.0200	mg/L	5	14-Jun-2018 00:34
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 01:54
Boron	5.23		1.00	mg/L	50	14-Jun-2018 16:49
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 00:34
Calcium	715		2.50	mg/L	5	14-Jun-2018 00:34
Cobalt	ND		0.0250	mg/L	5	14-Jun-2018 00:34
Lead	ND		0.0100	mg/L	5	14-Jun-2018 22:17
Lithium	1.59		0.250	mg/L	50	14-Jun-2018 14:31
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:34
Selenium	ND		0.0100	mg/L	5	14-Jun-2018 00:34
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:34
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:03
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,790		50.0	mg/L	100	14-Jun-2018 10:07
Fluoride	0.260		0.100	mg/L	1	14-Jun-2018 09:46
Sulfate	2,880		50.0	mg/L	100	14-Jun-2018 10:07
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,200		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.75	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.8	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-31
 Collection Date: 07-Jun-2018 08:41

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-16
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:36
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:36
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:36
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 01:56
Boron	4.25		1.00	mg/L	50	14-Jun-2018 16:51
Cadmium	0.0162		0.0100	mg/L	5	14-Jun-2018 00:36
Calcium	439		2.50	mg/L	5	14-Jun-2018 00:36
Cobalt	0.100		0.0250	mg/L	5	14-Jun-2018 00:36
Lead	ND		0.0100	mg/L	5	14-Jun-2018 22:24
Lithium	0.517		0.250	mg/L	50	14-Jun-2018 14:33
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:36
Selenium	0.0183		0.0100	mg/L	5	14-Jun-2018 00:36
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:36
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:05
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	172		50.0	mg/L	100	14-Jun-2018 10:51
Fluoride	1.60		0.100	mg/L	1	14-Jun-2018 10:29
Sulfate	3,520		50.0	mg/L	100	14-Jun-2018 10:51
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	4,990		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.95	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	21.7	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-32
 Collection Date: 07-Jun-2018 09:20

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-17
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 13-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 13:04
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 13:04
Barium	ND		0.0200	mg/L	5	14-Jun-2018 13:04
Beryllium	ND		0.0100	mg/L	5	14-Jun-2018 13:04
Boron	25.4		1.00	mg/L	50	15-Jun-2018 12:39
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 13:04
Calcium	450		2.50	mg/L	5	14-Jun-2018 13:04
Cobalt	ND		0.0250	mg/L	5	14-Jun-2018 13:04
Lead	ND		0.0100	mg/L	5	14-Jun-2018 13:04
Lithium	1.02		0.0250	mg/L	5	14-Jun-2018 13:04
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 13:04
Selenium	ND		0.0100	mg/L	5	14-Jun-2018 13:04
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 13:04
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:07
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	2,420		50.0	mg/L	100	14-Jun-2018 12:03
Fluoride	0.442		0.100	mg/L	1	14-Jun-2018 11:34
Sulfate	4,220		50.0	mg/L	100	14-Jun-2018 12:03
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	10,000		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	6.58	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	22.1	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: DUP-2
 Collection Date: 05-Jun-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-18
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 13-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	15-Jun-2018 17:24
Arsenic	ND		0.0100	mg/L	5	15-Jun-2018 17:24
Barium	ND		0.0200	mg/L	5	15-Jun-2018 17:24
Beryllium	ND		0.100	mg/L	50	18-Jun-2018 12:42
Boron	7.82		1.00	mg/L	50	18-Jun-2018 12:42
Cadmium	ND		0.0100	mg/L	5	15-Jun-2018 17:24
Calcium	301		2.50	mg/L	5	15-Jun-2018 17:24
Cobalt	ND		0.0250	mg/L	5	15-Jun-2018 17:24
Lead	ND		0.0100	mg/L	5	15-Jun-2018 17:24
Lithium	0.632		0.0250	mg/L	5	15-Jun-2018 17:24
Molybdenum	ND		0.0250	mg/L	5	15-Jun-2018 17:24
Selenium	0.0109		0.0100	mg/L	5	15-Jun-2018 17:24
Thallium	ND		0.0100	mg/L	5	15-Jun-2018 17:24
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	0.00181		0.000200	mg/L	1	15-Jun-2018 12:12
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,780		50.0	mg/L	100	14-Jun-2018 11:37
Fluoride	0.128		0.100	mg/L	1	14-Jun-2018 14:13
Sulfate	2,380		50.0	mg/L	100	14-Jun-2018 11:37
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	6,120		10.0	mg/L	1	12-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.57	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	22.1	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MW-4
 Collection Date: 06-Jun-2018 15:25

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-19
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:38
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:38
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:38
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 02:02
Boron	8.17		1.00	mg/L	50	14-Jun-2018 16:53
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 00:38
Calcium	297		2.50	mg/L	5	14-Jun-2018 00:38
Cobalt	ND		0.0250	mg/L	5	14-Jun-2018 00:38
Lead	ND		0.0100	mg/L	5	14-Jun-2018 22:26
Lithium	0.619		0.250	mg/L	50	14-Jun-2018 14:35
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:38
Selenium	ND		0.0100	mg/L	5	14-Jun-2018 00:38
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:38
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:21
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,830		50.0	mg/L	100	14-Jun-2018 14:56
Fluoride	0.132		0.100	mg/L	1	14-Jun-2018 14:35
Sulfate	2,440		50.0	mg/L	100	14-Jun-2018 14:56
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	6,150		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.55	H	0.100	pH Units	1	11-Jun-2018 18:00
Temp Deg C @pH	22.1	H	0	°C	1	11-Jun-2018 18:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-33
 Collection Date: 07-Jun-2018 09:58

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-20
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:40
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:40
Barium	ND		0.0200	mg/L	5	14-Jun-2018 00:40
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 02:04
Boron	72.4		1.00	mg/L	50	14-Jun-2018 16:55
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 00:40
Calcium	596		2.50	mg/L	5	14-Jun-2018 00:40
Cobalt	ND		0.0250	mg/L	5	14-Jun-2018 00:40
Lead	ND		0.0100	mg/L	5	14-Jun-2018 22:28
Lithium	0.613		0.250	mg/L	50	14-Jun-2018 14:37
Molybdenum	0.0427		0.0250	mg/L	5	14-Jun-2018 00:40
Selenium	0.0161		0.0100	mg/L	5	14-Jun-2018 00:40
Thallium	ND		0.0100	mg/L	5	14-Jun-2018 00:40
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:22
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,250		50.0	mg/L	100	14-Jun-2018 15:40
Fluoride	0.442		0.100	mg/L	1	14-Jun-2018 15:18
Sulfate	3,180		50.0	mg/L	100	14-Jun-2018 15:40
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,820		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.34	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.8	H	0	°C	1	12-Jun-2018 16:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 3
 Collection Date: 07-Jun-2018 09:50

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-21
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	14-Jun-2018 13:50
Arsenic	ND		0.00200	mg/L	1	14-Jun-2018 13:50
Barium	ND		0.00400	mg/L	1	14-Jun-2018 13:50
Beryllium	ND		0.00200	mg/L	1	14-Jun-2018 13:50
Boron	ND		0.0200	mg/L	1	14-Jun-2018 13:50
Cadmium	ND		0.00200	mg/L	1	14-Jun-2018 13:50
Calcium	ND		0.500	mg/L	1	14-Jun-2018 13:50
Cobalt	ND		0.00500	mg/L	1	14-Jun-2018 13:50
Lead	ND		0.00200	mg/L	1	14-Jun-2018 13:50
Lithium	ND		0.00500	mg/L	1	14-Jun-2018 13:50
Molybdenum	ND		0.00500	mg/L	1	14-Jun-2018 13:50
Selenium	ND		0.00200	mg/L	1	14-Jun-2018 13:50
Thallium	ND		0.00200	mg/L	1	14-Jun-2018 13:50
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:24
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	ND		0.500	mg/L	1	13-Jun-2018 21:48
Fluoride	ND		0.100	mg/L	1	13-Jun-2018 21:48
Sulfate	ND		0.500	mg/L	1	13-Jun-2018 21:48
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	10.0		10.0	mg/L	1	13-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.52	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.2	H	0	°C	1	12-Jun-2018 16:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-34
 Collection Date: 07-Jun-2018 10:30

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-22
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	14-Jun-2018 00:44
Arsenic	ND		0.0100	mg/L	5	14-Jun-2018 00:44
Barium	0.0203		0.0200	mg/L	5	14-Jun-2018 00:44
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 02:08
Boron	48.5		1.00	mg/L	50	14-Jun-2018 16:57
Cadmium	ND		0.0100	mg/L	5	14-Jun-2018 00:44
Calcium	484		2.50	mg/L	5	14-Jun-2018 00:44
Cobalt	ND		0.0250	mg/L	5	14-Jun-2018 00:44
Lead	ND		0.100	mg/L	50	14-Jun-2018 02:08
Lithium	0.813		0.250	mg/L	50	14-Jun-2018 14:39
Molybdenum	ND		0.0250	mg/L	5	14-Jun-2018 00:44
Selenium	0.0126		0.0100	mg/L	5	14-Jun-2018 00:44
Thallium	ND		0.100	mg/L	50	14-Jun-2018 02:08
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:26
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,130		50.0	mg/L	100	14-Jun-2018 16:23
Fluoride	0.169		0.100	mg/L	1	14-Jun-2018 16:01
Sulfate	3,780		50.0	mg/L	100	14-Jun-2018 16:23
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,500		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.29	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.1	H	0	°C	1	12-Jun-2018 16:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-35
 Collection Date: 07-Jun-2018 11:00

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-23
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Jun-2018 22:32
Arsenic	ND		0.0100	mg/L	5	13-Jun-2018 22:32
Barium	0.0248		0.0200	mg/L	5	13-Jun-2018 22:32
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 02:12
Boron	34.5		1.00	mg/L	50	14-Jun-2018 16:59
Cadmium	ND		0.0100	mg/L	5	13-Jun-2018 22:32
Calcium	272		2.50	mg/L	5	13-Jun-2018 22:32
Cobalt	ND		0.0250	mg/L	5	13-Jun-2018 22:32
Lead	ND		0.0100	mg/L	5	13-Jun-2018 22:32
Lithium	1.01		0.250	mg/L	50	14-Jun-2018 14:41
Molybdenum	ND		0.0250	mg/L	5	13-Jun-2018 22:32
Selenium	0.0130		0.0100	mg/L	5	13-Jun-2018 22:32
Thallium	ND		0.0100	mg/L	5	13-Jun-2018 22:32
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:27
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,000		50.0	mg/L	100	14-Jun-2018 17:07
Fluoride	0.174		0.100	mg/L	1	14-Jun-2018 16:45
Sulfate	3,370		50.0	mg/L	100	14-Jun-2018 17:07
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,200		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.11	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	21.8	H	0	°C	1	12-Jun-2018 16:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-36
 Collection Date: 07-Jun-2018 11:32

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-24
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Jun-2018 22:34
Arsenic	ND		0.0100	mg/L	5	13-Jun-2018 22:34
Barium	0.0251		0.0200	mg/L	5	13-Jun-2018 22:34
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 02:14
Boron	21.5		1.00	mg/L	50	14-Jun-2018 14:50
Cadmium	ND		0.0100	mg/L	5	13-Jun-2018 22:34
Calcium	435		2.50	mg/L	5	13-Jun-2018 22:34
Cobalt	ND		0.0250	mg/L	5	13-Jun-2018 22:34
Lead	ND		0.0100	mg/L	5	13-Jun-2018 22:34
Lithium	1.07		0.250	mg/L	50	14-Jun-2018 14:50
Molybdenum	ND		0.0250	mg/L	5	13-Jun-2018 22:34
Selenium	ND		0.0100	mg/L	5	13-Jun-2018 22:34
Thallium	ND		0.0100	mg/L	5	13-Jun-2018 22:34
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:29
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,620		50.0	mg/L	100	14-Jun-2018 06:30
Fluoride	0.176		0.100	mg/L	1	14-Jun-2018 06:09
Sulfate	2,580		50.0	mg/L	100	14-Jun-2018 06:30
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,100		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.12	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	21.9	H	0	°C	1	12-Jun-2018 16:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-37
 Collection Date: 07-Jun-2018 12:06

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-25
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Jun-2018 22:36
Arsenic	ND		0.0100	mg/L	5	13-Jun-2018 22:36
Barium	0.0238		0.0200	mg/L	5	13-Jun-2018 22:36
Beryllium	ND		0.100	mg/L	50	14-Jun-2018 02:16
Boron	8.94		1.00	mg/L	50	14-Jun-2018 14:52
Cadmium	ND		0.0100	mg/L	5	13-Jun-2018 22:36
Calcium	495		2.50	mg/L	5	13-Jun-2018 22:36
Cobalt	ND		0.0250	mg/L	5	13-Jun-2018 22:36
Lead	ND		0.0100	mg/L	5	13-Jun-2018 22:36
Lithium	1.32		0.250	mg/L	50	14-Jun-2018 14:52
Molybdenum	ND		0.0250	mg/L	5	13-Jun-2018 22:36
Selenium	ND		0.0100	mg/L	5	13-Jun-2018 22:36
Thallium	ND		0.0100	mg/L	5	13-Jun-2018 22:36
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 14-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 12:31
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,280		50.0	mg/L	100	15-Jun-2018 06:15
Fluoride	0.188		0.100	mg/L	1	15-Jun-2018 05:53
Sulfate	3,090		50.0	mg/L	100	15-Jun-2018 06:15
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,900		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.24	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.0	H	0	°C	1	12-Jun-2018 16:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-3
 Collection Date: 07-Jun-2018 16:30

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-26
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Jun-2018 22:38
Arsenic	0.0838		0.0100	mg/L	5	13-Jun-2018 22:38
Barium	0.399		0.0200	mg/L	5	13-Jun-2018 22:38
Beryllium	0.289		0.100	mg/L	50	14-Jun-2018 02:18
Boron	10.6		1.00	mg/L	50	14-Jun-2018 14:54
Cadmium	0.501		0.0100	mg/L	5	13-Jun-2018 22:38
Calcium	686		2.50	mg/L	5	13-Jun-2018 22:38
Cobalt	1.78		0.0250	mg/L	5	13-Jun-2018 22:38
Lead	0.109		0.0100	mg/L	5	13-Jun-2018 22:38
Lithium	2.41		0.250	mg/L	50	14-Jun-2018 14:54
Molybdenum	ND		0.0250	mg/L	5	13-Jun-2018 22:38
Selenium	0.146		0.0100	mg/L	5	13-Jun-2018 22:38
Thallium	ND		0.0100	mg/L	5	13-Jun-2018 22:38
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 15-Jun-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	15-Jun-2018 13:02
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	5,050		50.0	mg/L	100	15-Jun-2018 06:58
Fluoride	1.44		0.100	mg/L	1	15-Jun-2018 06:36
Sulfate	4,610		50.0	mg/L	100	15-Jun-2018 06:58
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	14,100		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.21	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	21.9	H	0	°C	1	12-Jun-2018 16:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUB		
Subcontract Analysis	See Attached			NA	1	27-Jul-2018 17:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-34
 Collection Date: 07-Jun-2018 13:15

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-27
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Boron	12.9		1.00	mg/L	50	14-Jun-2018 14:56
Calcium	651		2.50	mg/L	5	13-Jun-2018 22:40
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	2,350		50.0	mg/L	100	15-Jun-2018 07:41
Fluoride	1.09		0.100	mg/L	1	15-Jun-2018 07:20
Sulfate	3,210		50.0	mg/L	100	15-Jun-2018 07:41
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	7,960		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	3.20	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.0	H	0	°C	1	12-Jun-2018 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-1
 Collection Date: 07-Jun-2018 13:50

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-28
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Boron	7.96		1.00	mg/L	50	14-Jun-2018 14:58
Calcium	545		2.50	mg/L	5	13-Jun-2018 22:42
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	3,690		50.0	mg/L	100	15-Jun-2018 09:30
Fluoride	1.25		0.100	mg/L	1	15-Jun-2018 09:08
Sulfate	7,330		50.0	mg/L	100	15-Jun-2018 09:30
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	14,500		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	3.16	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.1	H	0	°C	1	12-Jun-2018 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-32
 Collection Date: 07-Jun-2018 14:33

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-29
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Boron	9.20		1.00	mg/L	50	14-Jun-2018 14:59
Calcium	422		2.50	mg/L	5	13-Jun-2018 22:44
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	1,720		50.0	mg/L	100	15-Jun-2018 10:57
Fluoride	0.890		0.100	mg/L	1	15-Jun-2018 10:35
Sulfate	10,100		100	mg/L	200	19-Jun-2018 05:30
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	16,600		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	3.41	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.1	H	0	°C	1	12-Jun-2018 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-3
 Collection Date: 07-Jun-2018 15:07

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-30
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Boron	7.34		1.00	mg/L	50	14-Jun-2018 15:01
Calcium	761		2.50	mg/L	5	13-Jun-2018 22:46
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	4,760		50.0	mg/L	100	15-Jun-2018 11:40
Fluoride	0.901		0.100	mg/L	1	15-Jun-2018 11:18
Sulfate	2,930		50.0	mg/L	100	15-Jun-2018 11:40
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	11,900		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	3.70	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.8	H	0	°C	1	12-Jun-2018 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-2
 Collection Date: 07-Jun-2018 15:50

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-31
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Boron	10.6		1.00	mg/L	50	14-Jun-2018 15:03
Calcium	1,220		25.0	mg/L	50	14-Jun-2018 02:32
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	4,980		50.0	mg/L	100	15-Jun-2018 13:50
Fluoride	0.163		0.100	mg/L	1	15-Jun-2018 13:29
Sulfate	1,790		50.0	mg/L	100	15-Jun-2018 13:50
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	13,100		10.0	mg/L	1	14-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.55	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.1	H	0	°C	1	12-Jun-2018 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: DUP-3
 Collection Date: 05-Jun-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18060413
 Lab ID:HS18060413-32
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Jun-2018		Analyst: JDE
Boron	6.78		1.00	mg/L	50	14-Jun-2018 15:05
Calcium	447		2.50	mg/L	5	13-Jun-2018 22:49
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	4,810		50.0	mg/L	100	15-Jun-2018 14:34
Fluoride	0.854		0.100	mg/L	1	15-Jun-2018 14:12
Sulfate	2,920		50.0	mg/L	100	15-Jun-2018 14:34
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	11,400		10.0	mg/L	1	12-Jun-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	3.32	H	0.100	pH Units	1	12-Jun-2018 16:20
Temp Deg C @pH	22.8	H	0	°C	1	12-Jun-2018 16:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

Batch ID: 129239 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060413-01	1	10	10 (mL)	1
HS18060413-02	1	10	10 (mL)	1
HS18060413-03	1	10	10 (mL)	1
HS18060413-04	1	10	10 (mL)	1
HS18060413-05	1	10	10 (mL)	1
HS18060413-06	1	10	10 (mL)	1
HS18060413-07	1	10	10 (mL)	1
HS18060413-09	1	10	10 (mL)	1
HS18060413-10	1	10	10 (mL)	1
HS18060413-11	1	10	10 (mL)	1
HS18060413-12	1	10	10 (mL)	1
HS18060413-13	1	10	10 (mL)	1
HS18060413-14	1	10	10 (mL)	1
HS18060413-15	1	10	10 (mL)	1
HS18060413-16	1	10	10 (mL)	1
HS18060413-19	1	10	10 (mL)	1
HS18060413-20	1	10	10 (mL)	1
HS18060413-21	1	10	10 (mL)	1
HS18060413-22	1	10	10 (mL)	1

Batch ID: 129291 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060413-08	1	10	10 (mL)	1
HS18060413-23	1	10	10 (mL)	1
HS18060413-24	1	10	10 (mL)	1
HS18060413-25	1	10	10 (mL)	1
HS18060413-26	1	10	10 (mL)	1
HS18060413-27	1	10	10 (mL)	1
HS18060413-28	1	10	10 (mL)	1
HS18060413-29	1	10	10 (mL)	1
HS18060413-30	1	10	10 (mL)	1
HS18060413-31	1	10	10 (mL)	1
HS18060413-32	1	10	10 (mL)	1

Batch ID: 129310 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060413-01	1	10 (mL)	10 (mL)	1
HS18060413-02	1	10 (mL)	10 (mL)	1
HS18060413-03	1	10 (mL)	10 (mL)	1
HS18060413-04	1	10 (mL)	10 (mL)	1
HS18060413-05	1	10 (mL)	10 (mL)	1

Batch ID: 129335 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060413-18	1	10	10 (mL)	1

WEIGHT LOG

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

Batch ID: 129344 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060413-17	1	10	10 (mL)	1

Batch ID: 129422 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060413-06	1	10 (mL)	10 (mL)	1
HS18060413-07	1	10 (mL)	10 (mL)	1
HS18060413-08	1	10 (mL)	10 (mL)	1
HS18060413-09	1	10 (mL)	10 (mL)	1
HS18060413-10	1	10 (mL)	10 (mL)	1
HS18060413-11	1	10 (mL)	10 (mL)	1
HS18060413-12	1	10 (mL)	10 (mL)	1
HS18060413-13	1	10 (mL)	10 (mL)	1
HS18060413-14	1	10 (mL)	10 (mL)	1
HS18060413-15	1	10 (mL)	10 (mL)	1
HS18060413-16	1	10 (mL)	10 (mL)	1
HS18060413-17	1	10 (mL)	10 (mL)	1
HS18060413-18	1	10 (mL)	10 (mL)	1
HS18060413-19	1	10 (mL)	10 (mL)	1
HS18060413-20	1	10 (mL)	10 (mL)	1
HS18060413-21	1	10 (mL)	10 (mL)	1
HS18060413-22	1	10 (mL)	10 (mL)	1
HS18060413-23	1	10 (mL)	10 (mL)	1
HS18060413-24	1	10 (mL)	10 (mL)	1
HS18060413-25	1	10 (mL)	10 (mL)	1

Batch ID: 129423 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060413-26	1	10 (mL)	10 (mL)	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
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Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 129239		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS18060413-01	AP-31	05 Jun 2018 10:55		11 Jun 2018 10:14	14 Jun 2018 13:52	50
HS18060413-01	AP-31	05 Jun 2018 10:55		11 Jun 2018 10:14	13 Jun 2018 23:53	5
HS18060413-02	MW-3	05 Jun 2018 11:40		11 Jun 2018 10:14	14 Jun 2018 13:54	50
HS18060413-02	MW-3	05 Jun 2018 11:40		11 Jun 2018 10:14	13 Jun 2018 23:55	5
HS18060413-03	AP-32	05 Jun 2018 12:20		11 Jun 2018 10:14	14 Jun 2018 14:02	50
HS18060413-03	AP-32	05 Jun 2018 12:20		11 Jun 2018 10:14	14 Jun 2018 16:13	50
HS18060413-03	AP-32	05 Jun 2018 12:20		11 Jun 2018 10:14	14 Jun 2018 01:20	50
HS18060413-03	AP-32	05 Jun 2018 12:20		11 Jun 2018 10:14	13 Jun 2018 23:57	5
HS18060413-04	Field Blank 1	05 Jun 2018 12:35		11 Jun 2018 10:14	14 Jun 2018 13:44	1
HS18060413-05	AP-33	06 Jun 2018 10:33		11 Jun 2018 10:14	14 Jun 2018 17:31	5
HS18060413-05	AP-33	06 Jun 2018 10:33		11 Jun 2018 10:14	14 Jun 2018 14:12	50
HS18060413-05	AP-33	06 Jun 2018 10:33		11 Jun 2018 10:14	14 Jun 2018 16:29	50
HS18060413-05	AP-33	06 Jun 2018 10:33		11 Jun 2018 10:14	14 Jun 2018 01:32	50
HS18060413-05	AP-33	06 Jun 2018 10:33		11 Jun 2018 10:14	14 Jun 2018 00:12	5
HS18060413-06	PZ-5	06 Jun 2018 11:18		11 Jun 2018 10:14	14 Jun 2018 16:31	50
HS18060413-06	PZ-5	06 Jun 2018 11:18		11 Jun 2018 10:14	14 Jun 2018 17:33	5
HS18060413-06	PZ-5	06 Jun 2018 11:18		11 Jun 2018 10:14	14 Jun 2018 14:14	50
HS18060413-06	PZ-5	06 Jun 2018 11:18		11 Jun 2018 10:14	14 Jun 2018 01:38	50
HS18060413-06	PZ-5	06 Jun 2018 11:18		11 Jun 2018 10:14	14 Jun 2018 00:14	5
HS18060413-07	Equipment Blank	05 Jun 2018 10:28		11 Jun 2018 10:14	14 Jun 2018 13:46	1
HS18060413-09	AP-34	06 Jun 2018 11:55		11 Jun 2018 10:14	14 Jun 2018 17:35	5
HS18060413-09	AP-34	06 Jun 2018 11:55		11 Jun 2018 10:14	14 Jun 2018 16:33	50
HS18060413-09	AP-34	06 Jun 2018 11:55		11 Jun 2018 10:14	14 Jun 2018 14:16	50
HS18060413-09	AP-34	06 Jun 2018 11:55		11 Jun 2018 10:14	14 Jun 2018 01:42	50
HS18060413-09	AP-34	06 Jun 2018 11:55		11 Jun 2018 10:14	14 Jun 2018 00:18	5
HS18060413-10	AP-35	06 Jun 2018 12:30		11 Jun 2018 10:14	14 Jun 2018 17:36	5
HS18060413-10	AP-35	06 Jun 2018 12:30		11 Jun 2018 10:14	14 Jun 2018 14:18	50
HS18060413-10	AP-35	06 Jun 2018 12:30		11 Jun 2018 10:14	14 Jun 2018 16:35	50
HS18060413-10	AP-35	06 Jun 2018 12:30		11 Jun 2018 10:14	14 Jun 2018 01:44	50
HS18060413-10	AP-35	06 Jun 2018 12:30		11 Jun 2018 10:14	14 Jun 2018 00:20	5
HS18060413-11	AP-36	06 Jun 2018 13:09		11 Jun 2018 10:14	14 Jun 2018 16:37	50
HS18060413-11	AP-36	06 Jun 2018 13:09		11 Jun 2018 10:14	14 Jun 2018 17:38	5
HS18060413-11	AP-36	06 Jun 2018 13:09		11 Jun 2018 10:14	14 Jun 2018 14:25	50
HS18060413-11	AP-36	06 Jun 2018 13:09		11 Jun 2018 10:14	14 Jun 2018 01:46	50
HS18060413-11	AP-36	06 Jun 2018 13:09		11 Jun 2018 10:14	14 Jun 2018 00:22	5
HS18060413-12	Field Blank 2	06 Jun 2018 13:00		11 Jun 2018 10:14	14 Jun 2018 13:48	1
HS18060413-13	PZ-6	06 Jun 2018 14:15		11 Jun 2018 10:14	14 Jun 2018 16:39	50
HS18060413-13	PZ-6	06 Jun 2018 14:15		11 Jun 2018 10:14	14 Jun 2018 22:12	5
HS18060413-13	PZ-6	06 Jun 2018 14:15		11 Jun 2018 10:14	14 Jun 2018 14:27	50
HS18060413-13	PZ-6	06 Jun 2018 14:15		11 Jun 2018 10:14	14 Jun 2018 01:50	50

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
HS18060413-13	PZ-6	06 Jun 2018 14:15		11 Jun 2018 10:14	14 Jun 2018 00:26	5
HS18060413-14	EP-38	06 Jun 2018 14:55		11 Jun 2018 10:14	14 Jun 2018 16:41	50
HS18060413-14	EP-38	06 Jun 2018 14:55		11 Jun 2018 10:14	14 Jun 2018 22:15	5
HS18060413-14	EP-38	06 Jun 2018 14:55		11 Jun 2018 10:14	14 Jun 2018 14:29	50
HS18060413-14	EP-38	06 Jun 2018 14:55		11 Jun 2018 10:14	14 Jun 2018 01:52	50
HS18060413-14	EP-38	06 Jun 2018 14:55		11 Jun 2018 10:14	14 Jun 2018 00:28	5
HS18060413-15	PZ-2	06 Jun 2018 16:20		11 Jun 2018 10:14	14 Jun 2018 22:17	5
HS18060413-15	PZ-2	06 Jun 2018 16:20		11 Jun 2018 10:14	14 Jun 2018 14:31	50
HS18060413-15	PZ-2	06 Jun 2018 16:20		11 Jun 2018 10:14	14 Jun 2018 16:49	50
HS18060413-15	PZ-2	06 Jun 2018 16:20		11 Jun 2018 10:14	14 Jun 2018 01:54	50
HS18060413-15	PZ-2	06 Jun 2018 16:20		11 Jun 2018 10:14	14 Jun 2018 00:34	5
HS18060413-16	EP-31	07 Jun 2018 08:41		11 Jun 2018 10:14	14 Jun 2018 22:24	5
HS18060413-16	EP-31	07 Jun 2018 08:41		11 Jun 2018 10:14	14 Jun 2018 14:33	50
HS18060413-16	EP-31	07 Jun 2018 08:41		11 Jun 2018 10:14	14 Jun 2018 16:51	50
HS18060413-16	EP-31	07 Jun 2018 08:41		11 Jun 2018 10:14	14 Jun 2018 01:56	50
HS18060413-16	EP-31	07 Jun 2018 08:41		11 Jun 2018 10:14	14 Jun 2018 00:36	5
HS18060413-19	MW-4	06 Jun 2018 15:25		11 Jun 2018 10:14	14 Jun 2018 22:26	5
HS18060413-19	MW-4	06 Jun 2018 15:25		11 Jun 2018 10:14	14 Jun 2018 14:35	50
HS18060413-19	MW-4	06 Jun 2018 15:25		11 Jun 2018 10:14	14 Jun 2018 16:53	50
HS18060413-19	MW-4	06 Jun 2018 15:25		11 Jun 2018 10:14	14 Jun 2018 02:02	50
HS18060413-19	MW-4	06 Jun 2018 15:25		11 Jun 2018 10:14	14 Jun 2018 00:38	5
HS18060413-20	EP-33	07 Jun 2018 09:58		11 Jun 2018 10:14	14 Jun 2018 16:55	50
HS18060413-20	EP-33	07 Jun 2018 09:58		11 Jun 2018 10:14	14 Jun 2018 22:28	5
HS18060413-20	EP-33	07 Jun 2018 09:58		11 Jun 2018 10:14	14 Jun 2018 14:37	50
HS18060413-20	EP-33	07 Jun 2018 09:58		11 Jun 2018 10:14	14 Jun 2018 02:04	50
HS18060413-20	EP-33	07 Jun 2018 09:58		11 Jun 2018 10:14	14 Jun 2018 00:40	5
HS18060413-21	Field Blank 3	07 Jun 2018 09:50		11 Jun 2018 10:14	14 Jun 2018 13:50	1
HS18060413-22	EP-34	07 Jun 2018 10:30		11 Jun 2018 10:14	14 Jun 2018 16:57	50
HS18060413-22	EP-34	07 Jun 2018 10:30		11 Jun 2018 10:14	14 Jun 2018 14:39	50
HS18060413-22	EP-34	07 Jun 2018 10:30		11 Jun 2018 10:14	14 Jun 2018 02:08	50
HS18060413-22	EP-34	07 Jun 2018 10:30		11 Jun 2018 10:14	14 Jun 2018 00:44	5

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 129291		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18060413-08	DUP-1	05 Jun 2018 00:00		12 Jun 2018 11:00	13 Jun 2018 22:14	50
HS18060413-08	DUP-1	05 Jun 2018 00:00		12 Jun 2018 11:00	13 Jun 2018 12:39	5
HS18060413-08	DUP-1	05 Jun 2018 00:00		12 Jun 2018 11:00	12 Jun 2018 18:09	5
HS18060413-23	EP-35	07 Jun 2018 11:00		12 Jun 2018 11:00	14 Jun 2018 16:59	50
HS18060413-23	EP-35	07 Jun 2018 11:00		12 Jun 2018 11:00	14 Jun 2018 14:41	50
HS18060413-23	EP-35	07 Jun 2018 11:00		12 Jun 2018 11:00	14 Jun 2018 02:12	50
HS18060413-23	EP-35	07 Jun 2018 11:00		12 Jun 2018 11:00	13 Jun 2018 22:32	5
HS18060413-24	EP-36	07 Jun 2018 11:32		12 Jun 2018 11:00	14 Jun 2018 14:50	50
HS18060413-24	EP-36	07 Jun 2018 11:32		12 Jun 2018 11:00	14 Jun 2018 02:14	50
HS18060413-24	EP-36	07 Jun 2018 11:32		12 Jun 2018 11:00	13 Jun 2018 22:34	5
HS18060413-25	EP-37	07 Jun 2018 12:06		12 Jun 2018 11:00	14 Jun 2018 14:52	50
HS18060413-25	EP-37	07 Jun 2018 12:06		12 Jun 2018 11:00	14 Jun 2018 02:16	50
HS18060413-25	EP-37	07 Jun 2018 12:06		12 Jun 2018 11:00	13 Jun 2018 22:36	5
HS18060413-26	PZ-3	07 Jun 2018 16:30		12 Jun 2018 11:00	14 Jun 2018 14:54	50
HS18060413-26	PZ-3	07 Jun 2018 16:30		12 Jun 2018 11:00	14 Jun 2018 02:18	50
HS18060413-26	PZ-3	07 Jun 2018 16:30		12 Jun 2018 11:00	13 Jun 2018 22:38	5
HS18060413-27	SP-34	07 Jun 2018 13:15		12 Jun 2018 11:00	14 Jun 2018 14:56	50
HS18060413-27	SP-34	07 Jun 2018 13:15		12 Jun 2018 11:00	13 Jun 2018 22:40	5
HS18060413-28	SP-1	07 Jun 2018 13:50		12 Jun 2018 11:00	14 Jun 2018 14:58	50
HS18060413-28	SP-1	07 Jun 2018 13:50		12 Jun 2018 11:00	13 Jun 2018 22:42	5
HS18060413-29	SP-32	07 Jun 2018 14:33		12 Jun 2018 11:00	14 Jun 2018 14:59	50
HS18060413-29	SP-32	07 Jun 2018 14:33		12 Jun 2018 11:00	13 Jun 2018 22:44	5
HS18060413-30	SP-3	07 Jun 2018 15:07		12 Jun 2018 11:00	14 Jun 2018 15:01	50
HS18060413-30	SP-3	07 Jun 2018 15:07		12 Jun 2018 11:00	13 Jun 2018 22:46	5
HS18060413-31	SP-2	07 Jun 2018 15:50		12 Jun 2018 11:00	14 Jun 2018 15:03	50
HS18060413-31	SP-2	07 Jun 2018 15:50		12 Jun 2018 11:00	14 Jun 2018 02:32	50
HS18060413-32	DUP-3	05 Jun 2018 00:00		12 Jun 2018 11:00	14 Jun 2018 15:05	50
HS18060413-32	DUP-3	05 Jun 2018 00:00		12 Jun 2018 11:00	13 Jun 2018 22:49	5
Batch ID 129310		Test Name : MERCURY BY SW7470A		Matrix: Water		
HS18060413-01	AP-31	05 Jun 2018 10:55		12 Jun 2018 12:58	13 Jun 2018 13:37	1
HS18060413-02	MW-3	05 Jun 2018 11:40		12 Jun 2018 12:58	13 Jun 2018 13:39	1
HS18060413-03	AP-32	05 Jun 2018 12:20		12 Jun 2018 12:58	13 Jun 2018 13:03	1
HS18060413-04	Field Blank 1	05 Jun 2018 12:35		12 Jun 2018 12:58	13 Jun 2018 13:41	1
HS18060413-05	AP-33	06 Jun 2018 10:33		12 Jun 2018 12:58	13 Jun 2018 13:42	1
Batch ID 129335		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18060413-18	DUP-2	05 Jun 2018 00:00		13 Jun 2018 13:00	18 Jun 2018 12:42	50
HS18060413-18	DUP-2	05 Jun 2018 00:00		13 Jun 2018 13:00	15 Jun 2018 17:24	5

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 129344		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18060413-17	EP-32	07 Jun 2018 09:20		13 Jun 2018 13:00	15 Jun 2018 12:39	50
HS18060413-17	EP-32	07 Jun 2018 09:20		13 Jun 2018 13:00	14 Jun 2018 13:04	5
Batch ID 129422		Test Name : MERCURY BY SW7470A		Matrix: Water		
HS18060413-06	PZ-5	06 Jun 2018 11:18		14 Jun 2018 15:10	15 Jun 2018 11:41	1
HS18060413-07	Equipment Blank	05 Jun 2018 10:28		14 Jun 2018 15:10	15 Jun 2018 11:43	1
HS18060413-08	DUP-1	05 Jun 2018 00:00		14 Jun 2018 15:10	15 Jun 2018 11:45	1
HS18060413-09	AP-34	06 Jun 2018 11:55		14 Jun 2018 15:10	15 Jun 2018 11:50	1
HS18060413-10	AP-35	06 Jun 2018 12:30		14 Jun 2018 15:10	15 Jun 2018 11:51	1
HS18060413-11	AP-36	06 Jun 2018 13:09		14 Jun 2018 15:10	15 Jun 2018 11:53	1
HS18060413-12	Field Blank 2	06 Jun 2018 13:00		14 Jun 2018 15:10	15 Jun 2018 11:55	1
HS18060413-13	PZ-6	06 Jun 2018 14:15		14 Jun 2018 15:10	15 Jun 2018 12:00	1
HS18060413-14	EP-38	06 Jun 2018 14:55		14 Jun 2018 15:10	15 Jun 2018 12:02	1
HS18060413-15	PZ-2	06 Jun 2018 16:20		14 Jun 2018 15:10	15 Jun 2018 12:03	1
HS18060413-16	EP-31	07 Jun 2018 08:41		14 Jun 2018 15:10	15 Jun 2018 12:05	1
HS18060413-17	EP-32	07 Jun 2018 09:20		14 Jun 2018 15:10	15 Jun 2018 12:07	1
HS18060413-18	DUP-2	05 Jun 2018 00:00		14 Jun 2018 15:10	15 Jun 2018 12:12	1
HS18060413-19	MW-4	06 Jun 2018 15:25		14 Jun 2018 15:10	15 Jun 2018 12:21	1
HS18060413-20	EP-33	07 Jun 2018 09:58		14 Jun 2018 15:10	15 Jun 2018 12:22	1
HS18060413-21	Field Blank 3	07 Jun 2018 09:50		14 Jun 2018 15:10	15 Jun 2018 12:24	1
HS18060413-22	EP-34	07 Jun 2018 10:30		14 Jun 2018 15:10	15 Jun 2018 12:26	1
HS18060413-23	EP-35	07 Jun 2018 11:00		14 Jun 2018 15:10	15 Jun 2018 12:27	1
HS18060413-24	EP-36	07 Jun 2018 11:32		14 Jun 2018 15:10	15 Jun 2018 12:29	1
HS18060413-25	EP-37	07 Jun 2018 12:06		14 Jun 2018 15:10	15 Jun 2018 12:31	1
Batch ID 129423		Test Name : MERCURY BY SW7470A		Matrix: Water		
HS18060413-26	PZ-3	07 Jun 2018 16:30		15 Jun 2018 08:36	15 Jun 2018 13:02	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R317778		Test Name : PH BY SM4500H+ B		Matrix: Water		
HS18060413-01	AP-31	05 Jun 2018 10:55			11 Jun 2018 18:00	1
HS18060413-02	MW-3	05 Jun 2018 11:40			11 Jun 2018 18:00	1
HS18060413-03	AP-32	05 Jun 2018 12:20			11 Jun 2018 18:00	1
HS18060413-04	Field Blank 1	05 Jun 2018 12:35			11 Jun 2018 18:00	1
HS18060413-05	AP-33	06 Jun 2018 10:33			11 Jun 2018 18:00	1
HS18060413-06	PZ-5	06 Jun 2018 11:18			11 Jun 2018 18:00	1
HS18060413-07	Equipment Blank	05 Jun 2018 10:28			11 Jun 2018 18:00	1
HS18060413-08	DUP-1	05 Jun 2018 00:00			11 Jun 2018 18:00	1
HS18060413-09	AP-34	06 Jun 2018 11:55			11 Jun 2018 18:00	1
HS18060413-10	AP-35	06 Jun 2018 12:30			11 Jun 2018 18:00	1
HS18060413-11	AP-36	06 Jun 2018 13:09			11 Jun 2018 18:00	1
HS18060413-12	Field Blank 2	06 Jun 2018 13:00			11 Jun 2018 18:00	1
HS18060413-13	PZ-6	06 Jun 2018 14:15			11 Jun 2018 18:00	1
HS18060413-14	EP-38	06 Jun 2018 14:55			11 Jun 2018 18:00	1
HS18060413-15	PZ-2	06 Jun 2018 16:20			11 Jun 2018 18:00	1
HS18060413-16	EP-31	07 Jun 2018 08:41			11 Jun 2018 18:00	1
HS18060413-17	EP-32	07 Jun 2018 09:20			11 Jun 2018 18:00	1
HS18060413-18	DUP-2	05 Jun 2018 00:00			11 Jun 2018 18:00	1
HS18060413-19	MW-4	06 Jun 2018 15:25			11 Jun 2018 18:00	1
Batch ID R317829		Test Name : PH BY SM4500H+ B		Matrix: Water		
HS18060413-20	EP-33	07 Jun 2018 09:58			12 Jun 2018 16:20	1
HS18060413-21	Field Blank 3	07 Jun 2018 09:50			12 Jun 2018 16:20	1
HS18060413-22	EP-34	07 Jun 2018 10:30			12 Jun 2018 16:20	1
HS18060413-23	EP-35	07 Jun 2018 11:00			12 Jun 2018 16:20	1
HS18060413-24	EP-36	07 Jun 2018 11:32			12 Jun 2018 16:20	1
HS18060413-25	EP-37	07 Jun 2018 12:06			12 Jun 2018 16:20	1
HS18060413-26	PZ-3	07 Jun 2018 16:30			12 Jun 2018 16:20	1
HS18060413-27	SP-34	07 Jun 2018 13:15			12 Jun 2018 16:20	1
HS18060413-28	SP-1	07 Jun 2018 13:50			12 Jun 2018 16:20	1
HS18060413-29	SP-32	07 Jun 2018 14:33			12 Jun 2018 16:20	1
HS18060413-30	SP-3	07 Jun 2018 15:07			12 Jun 2018 16:20	1
HS18060413-31	SP-2	07 Jun 2018 15:50			12 Jun 2018 16:20	1
HS18060413-32	DUP-3	05 Jun 2018 00:00			12 Jun 2018 16:20	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R317834		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C		Matrix: Water		
HS18060413-01	AP-31	05 Jun 2018 10:55			11 Jun 2018 16:50	1
HS18060413-02	MW-3	05 Jun 2018 11:40			11 Jun 2018 16:50	1
HS18060413-03	AP-32	05 Jun 2018 12:20			11 Jun 2018 16:50	1
HS18060413-04	Field Blank 1	05 Jun 2018 12:35			11 Jun 2018 16:50	1
HS18060413-07	Equipment Blank	05 Jun 2018 10:28			11 Jun 2018 16:50	1
HS18060413-08	DUP-1	05 Jun 2018 00:00			11 Jun 2018 16:50	1
Batch ID R317983		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C		Matrix: Water		
HS18060413-18	DUP-2	05 Jun 2018 00:00			12 Jun 2018 16:50	1
HS18060413-32	DUP-3	05 Jun 2018 00:00			12 Jun 2018 16:50	1
Batch ID R318046		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C		Matrix: Water		
HS18060413-05	AP-33	06 Jun 2018 10:33			13 Jun 2018 16:50	1
HS18060413-06	PZ-5	06 Jun 2018 11:18			13 Jun 2018 16:50	1
HS18060413-09	AP-34	06 Jun 2018 11:55			13 Jun 2018 16:50	1
HS18060413-10	AP-35	06 Jun 2018 12:30			13 Jun 2018 16:50	1
HS18060413-11	AP-36	06 Jun 2018 13:09			13 Jun 2018 16:50	1
HS18060413-12	Field Blank 2	06 Jun 2018 13:00			13 Jun 2018 16:50	1
HS18060413-13	PZ-6	06 Jun 2018 14:15			13 Jun 2018 16:50	1
HS18060413-14	EP-38	06 Jun 2018 14:55			13 Jun 2018 16:50	1
HS18060413-15	PZ-2	06 Jun 2018 16:20			13 Jun 2018 16:50	1
HS18060413-16	EP-31	07 Jun 2018 08:41			13 Jun 2018 16:50	1
HS18060413-17	EP-32	07 Jun 2018 09:20			13 Jun 2018 16:50	1
HS18060413-19	MW-4	06 Jun 2018 15:25			13 Jun 2018 16:50	1
HS18060413-20	EP-33	07 Jun 2018 09:58			13 Jun 2018 16:50	1
HS18060413-21	Field Blank 3	07 Jun 2018 09:50			13 Jun 2018 16:50	1
Batch ID R318062		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18060413-04	Field Blank 1	05 Jun 2018 12:35			13 Jun 2018 21:05	1
HS18060413-07	Equipment Blank	05 Jun 2018 10:28			13 Jun 2018 21:19	1
HS18060413-12	Field Blank 2	06 Jun 2018 13:00			13 Jun 2018 21:34	1
HS18060413-18	DUP-2	05 Jun 2018 00:00			14 Jun 2018 11:37	100
HS18060413-21	Field Blank 3	07 Jun 2018 09:50			13 Jun 2018 21:48	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R318137		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C		Matrix: Water		
HS18060413-22	EP-34	07 Jun 2018 10:30			14 Jun 2018 16:50	1
HS18060413-23	EP-35	07 Jun 2018 11:00			14 Jun 2018 16:50	1
HS18060413-24	EP-36	07 Jun 2018 11:32			14 Jun 2018 16:50	1
HS18060413-25	EP-37	07 Jun 2018 12:06			14 Jun 2018 16:50	1
HS18060413-26	PZ-3	07 Jun 2018 16:30			14 Jun 2018 16:50	1
HS18060413-27	SP-34	07 Jun 2018 13:15			14 Jun 2018 16:50	1
HS18060413-28	SP-1	07 Jun 2018 13:50			14 Jun 2018 16:50	1
HS18060413-29	SP-32	07 Jun 2018 14:33			14 Jun 2018 16:50	1
HS18060413-30	SP-3	07 Jun 2018 15:07			14 Jun 2018 16:50	1
HS18060413-31	SP-2	07 Jun 2018 15:50			14 Jun 2018 16:50	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R318147		Test Name : ANIONS BY E300.0			Matrix: Water	
HS18060413-01	AP-31	05 Jun 2018 10:55			13 Jun 2018 18:56	100
HS18060413-01	AP-31	05 Jun 2018 10:55			13 Jun 2018 16:18	1
HS18060413-02	MW-3	05 Jun 2018 11:40			13 Jun 2018 19:18	100
HS18060413-02	MW-3	05 Jun 2018 11:40			13 Jun 2018 16:40	1
HS18060413-03	AP-32	05 Jun 2018 12:20			13 Jun 2018 21:06	100
HS18060413-03	AP-32	05 Jun 2018 12:20			13 Jun 2018 20:44	1
HS18060413-05	AP-33	06 Jun 2018 10:33			13 Jun 2018 22:55	100
HS18060413-05	AP-33	06 Jun 2018 10:33			13 Jun 2018 22:33	1
HS18060413-06	PZ-5	06 Jun 2018 11:18			13 Jun 2018 23:38	100
HS18060413-06	PZ-5	06 Jun 2018 11:18			13 Jun 2018 23:16	1
HS18060413-08	DUP-1	05 Jun 2018 00:00			14 Jun 2018 01:26	100
HS18060413-08	DUP-1	05 Jun 2018 00:00			14 Jun 2018 01:05	1
HS18060413-09	AP-34	06 Jun 2018 11:55			14 Jun 2018 03:15	100
HS18060413-09	AP-34	06 Jun 2018 11:55			14 Jun 2018 02:53	1
HS18060413-10	AP-35	06 Jun 2018 12:30			14 Jun 2018 03:58	100
HS18060413-10	AP-35	06 Jun 2018 12:30			14 Jun 2018 03:37	1
HS18060413-11	AP-36	06 Jun 2018 13:09			14 Jun 2018 05:47	100
HS18060413-11	AP-36	06 Jun 2018 13:09			14 Jun 2018 05:25	1
HS18060413-13	PZ-6	06 Jun 2018 14:15			14 Jun 2018 07:35	100
HS18060413-13	PZ-6	06 Jun 2018 14:15			14 Jun 2018 07:14	1
HS18060413-14	EP-38	06 Jun 2018 14:55			14 Jun 2018 08:19	100
HS18060413-14	EP-38	06 Jun 2018 14:55			14 Jun 2018 07:57	1
HS18060413-15	PZ-2	06 Jun 2018 16:20			14 Jun 2018 10:07	100
HS18060413-15	PZ-2	06 Jun 2018 16:20			14 Jun 2018 09:46	1
HS18060413-16	EP-31	07 Jun 2018 08:41			14 Jun 2018 10:51	100
HS18060413-16	EP-31	07 Jun 2018 08:41			14 Jun 2018 10:29	1
HS18060413-17	EP-32	07 Jun 2018 09:20			14 Jun 2018 12:03	100
HS18060413-17	EP-32	07 Jun 2018 09:20			14 Jun 2018 11:34	1
HS18060413-18	DUP-2	05 Jun 2018 00:00			14 Jun 2018 14:13	1
HS18060413-19	MW-4	06 Jun 2018 15:25			14 Jun 2018 14:56	100
HS18060413-19	MW-4	06 Jun 2018 15:25			14 Jun 2018 14:35	1
HS18060413-20	EP-33	07 Jun 2018 09:58			14 Jun 2018 15:40	100
HS18060413-20	EP-33	07 Jun 2018 09:58			14 Jun 2018 15:18	1
HS18060413-22	EP-34	07 Jun 2018 10:30			14 Jun 2018 16:23	100
HS18060413-22	EP-34	07 Jun 2018 10:30			14 Jun 2018 16:01	1
HS18060413-23	EP-35	07 Jun 2018 11:00			14 Jun 2018 17:07	100
HS18060413-23	EP-35	07 Jun 2018 11:00			14 Jun 2018 16:45	1
HS18060413-24	EP-36	07 Jun 2018 11:32			14 Jun 2018 06:30	100
HS18060413-24	EP-36	07 Jun 2018 11:32			14 Jun 2018 06:09	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R318337		Test Name : ANIONS BY E300.0			Matrix: Water	
HS18060413-25	EP-37	07 Jun 2018 12:06			15 Jun 2018 06:15	100
HS18060413-25	EP-37	07 Jun 2018 12:06			15 Jun 2018 05:53	1
HS18060413-26	PZ-3	07 Jun 2018 16:30			15 Jun 2018 06:58	100
HS18060413-26	PZ-3	07 Jun 2018 16:30			15 Jun 2018 06:36	1
HS18060413-27	SP-34	07 Jun 2018 13:15			15 Jun 2018 07:41	100
HS18060413-27	SP-34	07 Jun 2018 13:15			15 Jun 2018 07:20	1
HS18060413-28	SP-1	07 Jun 2018 13:50			15 Jun 2018 09:30	100
HS18060413-28	SP-1	07 Jun 2018 13:50			15 Jun 2018 09:08	1
HS18060413-29	SP-32	07 Jun 2018 14:33			15 Jun 2018 10:57	100
HS18060413-29	SP-32	07 Jun 2018 14:33			15 Jun 2018 10:35	1
HS18060413-30	SP-3	07 Jun 2018 15:07			15 Jun 2018 11:40	100
HS18060413-30	SP-3	07 Jun 2018 15:07			15 Jun 2018 11:18	1
HS18060413-31	SP-2	07 Jun 2018 15:50			15 Jun 2018 13:50	100
HS18060413-31	SP-2	07 Jun 2018 15:50			15 Jun 2018 13:29	1
HS18060413-32	DUP-3	05 Jun 2018 00:00			15 Jun 2018 14:34	100
HS18060413-32	DUP-3	05 Jun 2018 00:00			15 Jun 2018 14:12	1
Batch ID R318340		Test Name : ANIONS BY E300.0			Matrix: Water	
HS18060413-29	SP-32	07 Jun 2018 14:33			19 Jun 2018 05:30	200

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R320612		Test Name : SUBCONTRACT ANALYSIS - RADIUM 228		Matrix: Water		
HS18060413-01	AP-31	05 Jun 2018 10:55			27 Jul 2018 17:17	1
HS18060413-01	AP-31	05 Jun 2018 10:55			27 Jul 2018 17:17	1
HS18060413-02	MW-3	05 Jun 2018 11:40			27 Jul 2018 17:17	1
HS18060413-02	MW-3	05 Jun 2018 11:40			27 Jul 2018 17:17	1
HS18060413-03	AP-32	05 Jun 2018 12:20			27 Jul 2018 17:17	1
HS18060413-03	AP-32	05 Jun 2018 12:20			27 Jul 2018 17:17	1
HS18060413-04	Field Blank 1	05 Jun 2018 12:35			27 Jul 2018 17:17	1
HS18060413-04	Field Blank 1	05 Jun 2018 12:35			27 Jul 2018 17:17	1
HS18060413-05	AP-33	06 Jun 2018 10:33			27 Jul 2018 17:17	1
HS18060413-05	AP-33	06 Jun 2018 10:33			27 Jul 2018 17:17	1
HS18060413-06	PZ-5	06 Jun 2018 11:18			27 Jul 2018 17:17	1
HS18060413-06	PZ-5	06 Jun 2018 11:18			27 Jul 2018 17:17	1
HS18060413-07	Equipment Blank	05 Jun 2018 10:28			27 Jul 2018 17:17	1
HS18060413-07	Equipment Blank	05 Jun 2018 10:28			27 Jul 2018 17:17	1
HS18060413-08	DUP-1	05 Jun 2018 00:00			27 Jul 2018 17:17	1
HS18060413-08	DUP-1	05 Jun 2018 00:00			27 Jul 2018 17:17	1
HS18060413-09	AP-34	06 Jun 2018 11:55			27 Jul 2018 17:17	1
HS18060413-09	AP-34	06 Jun 2018 11:55			27 Jul 2018 17:17	1
HS18060413-10	AP-35	06 Jun 2018 12:30			27 Jul 2018 17:17	1
HS18060413-10	AP-35	06 Jun 2018 12:30			27 Jul 2018 17:17	1
HS18060413-11	AP-36	06 Jun 2018 13:09			27 Jul 2018 17:17	1
HS18060413-11	AP-36	06 Jun 2018 13:09			27 Jul 2018 17:17	1
HS18060413-12	Field Blank 2	06 Jun 2018 13:00			27 Jul 2018 17:17	1
HS18060413-12	Field Blank 2	06 Jun 2018 13:00			27 Jul 2018 17:17	1
HS18060413-13	PZ-6	06 Jun 2018 14:15			27 Jul 2018 17:17	1
HS18060413-13	PZ-6	06 Jun 2018 14:15			27 Jul 2018 17:17	1
HS18060413-14	EP-38	06 Jun 2018 14:55			27 Jul 2018 17:17	1
HS18060413-14	EP-38	06 Jun 2018 14:55			27 Jul 2018 17:17	1
HS18060413-15	PZ-2	06 Jun 2018 16:20			27 Jul 2018 17:17	1
HS18060413-15	PZ-2	06 Jun 2018 16:20			27 Jul 2018 17:17	1
HS18060413-16	EP-31	07 Jun 2018 08:41			27 Jul 2018 17:17	1
HS18060413-16	EP-31	07 Jun 2018 08:41			27 Jul 2018 17:17	1
HS18060413-17	EP-32	07 Jun 2018 09:20			27 Jul 2018 17:17	1
HS18060413-17	EP-32	07 Jun 2018 09:20			27 Jul 2018 17:17	1
HS18060413-18	DUP-2	05 Jun 2018 00:00			27 Jul 2018 17:17	1
HS18060413-18	DUP-2	05 Jun 2018 00:00			27 Jul 2018 17:17	1
HS18060413-19	MW-4	06 Jun 2018 15:25			27 Jul 2018 17:17	1
HS18060413-19	MW-4	06 Jun 2018 15:25			27 Jul 2018 17:17	1
HS18060413-20	EP-33	07 Jun 2018 09:58			27 Jul 2018 17:17	1
HS18060413-20	EP-33	07 Jun 2018 09:58			27 Jul 2018 17:17	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
HS18060413-21	Field Blank 3	07 Jun 2018 09:50			27 Jul 2018 17:17	1
HS18060413-21	Field Blank 3	07 Jun 2018 09:50			27 Jul 2018 17:17	1
HS18060413-22	EP-34	07 Jun 2018 10:30			27 Jul 2018 17:17	1
HS18060413-22	EP-34	07 Jun 2018 10:30			27 Jul 2018 17:17	1
HS18060413-23	EP-35	07 Jun 2018 11:00			27 Jul 2018 17:17	1
HS18060413-23	EP-35	07 Jun 2018 11:00			27 Jul 2018 17:17	1
HS18060413-24	EP-36	07 Jun 2018 11:32			27 Jul 2018 17:17	1
HS18060413-24	EP-36	07 Jun 2018 11:32			27 Jul 2018 17:17	1
HS18060413-25	EP-37	07 Jun 2018 12:06			27 Jul 2018 17:17	1
HS18060413-25	EP-37	07 Jun 2018 12:06			27 Jul 2018 17:17	1
HS18060413-26	PZ-3	07 Jun 2018 16:30			27 Jul 2018 17:17	1
HS18060413-26	PZ-3	07 Jun 2018 16:30			27 Jul 2018 17:17	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129239	Instrument: ICPMS05	Method: SW6020
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MBLK	Sample ID: MBLK-129239	Units: mg/L	Analysis Date: 13-Jun-2018 23:47							
Client ID:	Run ID: ICPMS05_317864	SeqNo: 4608127	PrepDate: 11-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

MBLK	Sample ID: MBLK-129239	Units: mg/L	Analysis Date: 14-Jun-2018 15:23							
Client ID:	Run ID: ICPMS05_317974	SeqNo: 4609960	PrepDate: 11-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	ND	0.0200								
Lithium	ND	0.00500								

LCS	Sample ID: LCS-129239	Units: mg/L	Analysis Date: 13-Jun-2018 23:49							
Client ID:	Run ID: ICPMS05_317864	SeqNo: 4608128	PrepDate: 11-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04803	0.00200	0.05	0	96.1	80 - 120				
Arsenic	0.04776	0.00200	0.05	0	95.5	80 - 120				
Barium	0.04619	0.00400	0.05	0	92.4	80 - 120				
Beryllium	0.05226	0.00200	0.05	0	105	80 - 120				
Cadmium	0.04731	0.00200	0.05	0	94.6	80 - 120				
Calcium	4.791	0.500	5	0	95.8	80 - 120				
Cobalt	0.04723	0.00500	0.05	0	94.5	80 - 120				
Lead	0.05278	0.00200	0.05	0	106	80 - 120				
Molybdenum	0.04615	0.00500	0.05	0	92.3	80 - 120				
Selenium	0.04862	0.00200	0.05	0	97.2	80 - 120				
Thallium	0.04261	0.00200	0.05	0	85.2	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129239		Instrument: ICPMS05			Method: SW6020					
LCS		Sample ID: LCS-129239			Units: mg/L		Analysis Date: 14-Jun-2018 13:40			
Client ID:		Run ID: ICPMS05_317974			SeqNo: 4609801		PrepDate: 11-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4965	0.0200	0.5	0	99.3	80 - 120				
Lithium	0.08867	0.00500	0.1	0	88.7	80 - 120				
MS		Sample ID: HS18060413-03MS			Units: mg/L		Analysis Date: 14-Jun-2018 00:01			
Client ID: AP-32		Run ID: ICPMS05_317864			SeqNo: 4608134		PrepDate: 11-Jun-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04731	0.0100	0.05	-0.000288	95.2	80 - 120				
Arsenic	0.06918	0.0100	0.05	0.01907	100	80 - 120				
Barium	0.06452	0.0200	0.05	0.01874	91.6	80 - 120				
Cadmium	0.1334	0.0100	0.05	0.08617	94.5	80 - 120				
Calcium	662.4	2.50	5	670.3	-159	80 - 120				SO
Cobalt	0.6182	0.0250	0.05	0.5726	91.2	80 - 120				O
Lead	0.04354	0.0100	0.05	0.000431	86.2	80 - 120				
Molybdenum	0.04821	0.0250	0.05	0.00028	95.9	80 - 120				
Selenium	0.1172	0.0100	0.05	0.07457	85.3	80 - 120				
Thallium	0.04831	0.0100	0.05	0.004156	88.3	80 - 120				
MS		Sample ID: HS18060413-03MS			Units: mg/L		Analysis Date: 14-Jun-2018 01:24			
Client ID: AP-32		Run ID: ICPMS05_317864			SeqNo: 4608173		PrepDate: 11-Jun-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.1142	0.100	0.05	0.05492	119	80 - 120				
MS		Sample ID: HS18060413-03MS			Units: mg/L		Analysis Date: 14-Jun-2018 16:17			
Client ID: AP-32		Run ID: ICPMS05_317974			SeqNo: 4610058		PrepDate: 11-Jun-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	15.28	1.00	0.5	14.9	76.3	80 - 120				SO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129239	Instrument: ICPMS05	Method: SW6020								
MS	Sample ID: HS18060413-03MS	Units: mg/L	Analysis Date: 14-Jun-2018 14:06							
Client ID: AP-32	Run ID: ICPMS05_317974	SeqNo: 4609814	PrepDate: 11-Jun-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Lithium	1.482	0.250	0.1	1.357	125	80 - 120				SO
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MSD	Sample ID: HS18060413-03MSD	Units: mg/L	Analysis Date: 14-Jun-2018 00:02							
Client ID: AP-32	Run ID: ICPMS05_317864	SeqNo: 4608135	PrepDate: 11-Jun-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Antimony	0.04675	0.0100	0.05	-0.000288	94.1	80 - 120	0.04731	1.19	20	
Arsenic	0.06961	0.0100	0.05	0.01907	101	80 - 120	0.06918	0.62	20	
Barium	0.06474	0.0200	0.05	0.01874	92.0	80 - 120	0.06452	0.34	20	
Cadmium	0.1338	0.0100	0.05	0.08617	95.2	80 - 120	0.1334	0.281	20	
Calcium	658.4	2.50	5	670.3	-238	80 - 120	662.4	0.605	20	SO
Cobalt	0.6093	0.0250	0.05	0.5726	73.5	80 - 120	0.6182	1.44	20	SO
Lead	0.04279	0.0100	0.05	0.000431	84.7	80 - 120	0.04354	1.74	20	
Molybdenum	0.04665	0.0250	0.05	0.00028	92.7	80 - 120	0.04821	3.28	20	
Selenium	0.1157	0.0100	0.05	0.07457	82.3	80 - 120	0.1172	1.3	20	
Thallium	0.04969	0.0100	0.05	0.004156	91.1	80 - 120	0.04831	2.81	20	

MSD	Sample ID: HS18060413-03MSD	Units: mg/L	Analysis Date: 14-Jun-2018 01:26							
Client ID: AP-32	Run ID: ICPMS05_317864	SeqNo: 4608174	PrepDate: 11-Jun-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Beryllium	0.09738	0.100	0.05	0.05492	84.9	80 - 120	0.1142	0	20	J
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MSD	Sample ID: HS18060413-03MSD	Units: mg/L	Analysis Date: 14-Jun-2018 16:19							
Client ID: AP-32	Run ID: ICPMS05_317974	SeqNo: 4610059	PrepDate: 11-Jun-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Boron	14.77	1.00	0.5	14.9	-26.7	80 - 120	15.28	3.43	20	SO
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MSD	Sample ID: HS18060413-03MSD	Units: mg/L	Analysis Date: 14-Jun-2018 14:08							
Client ID: AP-32	Run ID: ICPMS05_317974	SeqNo: 4609815	PrepDate: 11-Jun-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Lithium	1.476	0.250	0.1	1.357	119	80 - 120	1.482	0.41	20	O
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129239		Instrument: ICPMS05			Method: SW6020					
PDS		Sample ID: HS18060413-03PDS			Units: mg/L		Analysis Date: 14-Jun-2018 00:04			
Client ID: AP-32		Run ID: ICPMS05_317864			SeqNo: 4608136		PrepDate: 11-Jun-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4414	0.0100	0.5	-0.000288	88.3	75 - 125				
Arsenic	0.5144	0.0100	0.5	0.01907	99.1	75 - 125				
Barium	0.4879	0.0200	0.5	0.01874	93.8	75 - 125				
Cadmium	0.5689	0.0100	0.5	0.08617	96.5	75 - 125				
Calcium	672.3	2.50	50	670.3	4.12	75 - 125				SO
Cobalt	0.9978	0.0250	0.5	0.5726	85.1	75 - 125				
Lead	0.4291	0.0100	0.5	0.000431	85.7	75 - 125				
Molybdenum	0.4662	0.0250	0.5	0.00028	93.2	75 - 125				
Selenium	0.5652	0.0100	0.5	0.07457	98.1	75 - 125				
Thallium	0.4263	0.0100	0.5	0.004156	84.4	75 - 125				
PDS		Sample ID: HS18060413-03PDS			Units: mg/L		Analysis Date: 14-Jun-2018 01:28			
Client ID: AP-32		Run ID: ICPMS05_317864			SeqNo: 4608175		PrepDate: 11-Jun-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	4.83	0.100	5	0.05492	95.5	75 - 125				
PDS		Sample ID: HS18060413-03PDS			Units: mg/L		Analysis Date: 14-Jun-2018 16:21			
Client ID: AP-32		Run ID: ICPMS05_317974			SeqNo: 4610060		PrepDate: 11-Jun-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	59.01	1.00	50	14.9	88.2	75 - 125				
PDS		Sample ID: HS18060413-03PDS			Units: mg/L		Analysis Date: 14-Jun-2018 14:10			
Client ID: AP-32		Run ID: ICPMS05_317974			SeqNo: 4609816		PrepDate: 11-Jun-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lithium	5.899	0.250	5	1.357	90.8	70 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129239		Instrument: ICPMS05		Method: SW6020						
SD	Sample ID: HS18060413-03SD	Units: mg/L		Analysis Date: 13-Jun-2018 23:59						
Client ID: AP-32	Run ID: ICPMS05_317864	SeqNo: 4608133	PrepDate: 11-Jun-2018	DF: 25						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Antimony	ND	0.0500					-0.000288	0	10	
Arsenic	0.01983	0.0500					0.01907	0	10	J
Barium	ND	0.100					0.01874	0	10	
Cadmium	0.08238	0.0500					0.08617	4.4	10	
Calcium	675.2	12.5					670.3	0.735	10	
Cobalt	0.5892	0.125					0.5726	2.9	10	
Lead	ND	0.0500					0.000431	0	10	
Molybdenum	ND	0.125					0.00028	0	10	
Selenium	0.06731	0.0500					0.07457	9.74	10	
Thallium	ND	0.0500					0.004156	0	10	
SD	Sample ID: HS18060413-03SD	Units: mg/L		Analysis Date: 14-Jun-2018 01:22						
Client ID: AP-32	Run ID: ICPMS05_317864	SeqNo: 4608172	PrepDate: 11-Jun-2018	DF: 250						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Beryllium	0.05033	0.500					0.05492	0	10	J
SD	Sample ID: HS18060413-03SD	Units: mg/L		Analysis Date: 14-Jun-2018 16:15						
Client ID: AP-32	Run ID: ICPMS05_317974	SeqNo: 4610057	PrepDate: 11-Jun-2018	DF: 250						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Boron	13.32	5.00					14.9	10.6	10	R
SD	Sample ID: HS18060413-03SD	Units: mg/L		Analysis Date: 14-Jun-2018 14:04						
Client ID: AP-32	Run ID: ICPMS05_317974	SeqNo: 4609813	PrepDate: 11-Jun-2018	DF: 250						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Lithium	1.313	1.25					1.357	3.21	10	

The following samples were analyzed in this batch:

HS18060413-01	HS18060413-02	HS18060413-03	HS18060413-04
HS18060413-05	HS18060413-06	HS18060413-07	HS18060413-09
HS18060413-10	HS18060413-11	HS18060413-12	HS18060413-13
HS18060413-14	HS18060413-15	HS18060413-16	HS18060413-19
HS18060413-20	HS18060413-21	HS18060413-22	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129291	Instrument: ICPMS05	Method: SW6020								
MBLK	Sample ID: MBLK-129291	Units: mg/L	Analysis Date: 12-Jun-2018 17:53							
Client ID:	Run ID: ICPMS05_317775	SeqNo: 4598064	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

MBLK	Sample ID: MBLK-129291	Units: mg/L	Analysis Date: 13-Jun-2018 11:35							
Client ID:	Run ID: ICPMS05_317864	SeqNo: 4598583	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	ND	0.0200								
Lead	ND	0.00200								

LCS	Sample ID: LCS-129291	Units: mg/L	Analysis Date: 12-Jun-2018 17:55							
Client ID:	Run ID: ICPMS05_317775	SeqNo: 4598065	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.0432	0.00200	0.05	0	86.4	80 - 120				
Arsenic	0.04462	0.00200	0.05	0	89.2	80 - 120				
Barium	0.04585	0.00400	0.05	0	91.7	80 - 120				
Beryllium	0.04546	0.00200	0.05	0	90.9	80 - 120				
Cadmium	0.04675	0.00200	0.05	0	93.5	80 - 120				
Calcium	4.781	0.500	5	0	95.6	80 - 120				
Cobalt	0.0452	0.00500	0.05	0	90.4	80 - 120				
Lithium	0.08702	0.00500	0.1	0	87.0	80 - 120				
Molybdenum	0.04442	0.00500	0.05	0	88.8	80 - 120				
Selenium	0.04858	0.00200	0.05	0	97.2	80 - 120				
Thallium	0.04384	0.00200	0.05	0	87.7	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129291		Instrument: ICPMS05			Method: SW6020				
LCS	Sample ID: LCS-129291	Units: mg/L			Analysis Date: 13-Jun-2018 11:37				
Client ID:		Run ID: ICPMS05_317864	SeqNo: 4598584	PrepDate: 12-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Boron	0.4863	0.0200	0.5	0	97.3	80 - 120			
Lead	0.04805	0.00200	0.05	0	96.1	80 - 120			
MS	Sample ID: HS18060413-08MS	Units: mg/L			Analysis Date: 12-Jun-2018 18:13				
Client ID: DUP-1		Run ID: ICPMS05_317775	SeqNo: 4598074	PrepDate: 12-Jun-2018	DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Antimony	0.04282	0.0100	0.05	0	85.6	80 - 120			
Arsenic	0.05351	0.0100	0.05	0.008761	89.5	80 - 120			
Barium	0.05419	0.0200	0.05	0	108	80 - 120			
Cadmium	0.09963	0.0100	0.05	0.05407	91.1	80 - 120			
Calcium	502.5	2.50	5	489.3	265	80 - 120			SO
Cobalt	0.3744	0.0250	0.05	0.3318	85.3	80 - 120			O
Molybdenum	0.04275	0.0250	0.05	0	85.5	80 - 120			
Selenium	0.08318	0.0100	0.05	0.0347	97.0	80 - 120			
Thallium	0.04607	0.0100	0.05	0.001901	88.3	80 - 120			
MS	Sample ID: HS18060413-08MS	Units: mg/L			Analysis Date: 13-Jun-2018 22:18				
Client ID: DUP-1		Run ID: ICPMS05_317864	SeqNo: 4607888	PrepDate: 12-Jun-2018	DF: 50				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Beryllium	0.07189	0.100	0.05	0.02452	94.7	80 - 120			J
Boron	15.61	1.00	0.5	15.32	58.6	80 - 120			SO
Lithium	1.648	0.250	0.05	1.58	135	80 - 120			SO
MS	Sample ID: HS18060413-08MS	Units: mg/L			Analysis Date: 13-Jun-2018 12:43				
Client ID: DUP-1		Run ID: ICPMS05_317864	SeqNo: 4599049	PrepDate: 12-Jun-2018	DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Lead	0.04382	0.0100	0.05	0.000217	87.2	80 - 120			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129291	Instrument: ICPMS05	Method: SW6020
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MSD		Sample ID: HS18060413-08MSD			Units: mg/L		Analysis Date: 12-Jun-2018 18:15				
Client ID:	DUP-1	Run ID:	ICPMS05_317775		SeqNo:	4598075	PrepDate:	12-Jun-2018		DF:	5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Antimony	0.0428	0.0100	0.05	0	85.6	80 - 120	0.04282	0.0491	20		
Arsenic	0.05556	0.0100	0.05	0.008761	93.6	80 - 120	0.05351	3.77	20		
Barium	0.05612	0.0200	0.05	0	112	80 - 120	0.05419	3.5	20		
Cadmium	0.1017	0.0100	0.05	0.05407	95.2	80 - 120	0.09963	2.02	20		
Calcium	503.9	2.50	5	489.3	292	80 - 120	502.5	0.269	20	SO	
Cobalt	0.3887	0.0250	0.05	0.3318	114	80 - 120	0.3744	3.74	20	O	
Molybdenum	0.04575	0.0250	0.05	0	91.5	80 - 120	0.04275	6.76	20		
Selenium	0.08044	0.0100	0.05	0.0347	91.5	80 - 120	0.08318	3.35	20		
Thallium	0.04621	0.0100	0.05	0.001901	88.6	80 - 120	0.04607	0.312	20		

MSD		Sample ID: HS18060413-08MSD			Units: mg/L		Analysis Date: 13-Jun-2018 22:20				
Client ID:	DUP-1	Run ID:	ICPMS05_317864		SeqNo:	4607889	PrepDate:	12-Jun-2018		DF:	50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Beryllium	0.07446	0.100	0.05	0.02452	99.9	80 - 120	0.07189	0	20	J	
Boron	16.83	1.00	0.5	15.32	303	80 - 120	15.61	7.52	20	SO	
Lithium	1.644	0.250	0.05	1.58	128	80 - 120	1.648	0.236	20	SO	

MSD		Sample ID: HS18060413-08MSD			Units: mg/L		Analysis Date: 13-Jun-2018 12:45				
Client ID:	DUP-1	Run ID:	ICPMS05_317864		SeqNo:	4599050	PrepDate:	12-Jun-2018		DF:	5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Lead	0.04623	0.0100	0.05	0.000217	92.0	80 - 120	0.04382	5.36	20		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129291	Instrument: ICPMS05	Method: SW6020								
PDS	Sample ID: HS18060413-08PDS	Units: mg/L	Analysis Date: 12-Jun-2018 18:17							
Client ID: DUP-1	Run ID: ICPMS05_317775	SeqNo: 4598076	PrepDate: 12-Jun-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.3909	0.0100	0.5	0	78.2	75 - 125				
Arsenic	0.463	0.0100	0.5	0.008761	90.8	75 - 125				
Barium	0.4358	0.0200	0.5	0	87.2	75 - 125				
Cadmium	0.4928	0.0100	0.5	0.05407	87.8	75 - 125				
Calcium	481.1	2.50	50	489.3	-16.3	75 - 125				SO
Cobalt	0.7628	0.0250	0.5	0.3318	86.2	75 - 125				
Molybdenum	0.4292	0.0250	0.5	0	85.8	75 - 125				
Selenium	0.4753	0.0100	0.5	0.0347	88.1	75 - 125				
Thallium	0.4412	0.0100	0.5	0.001901	87.9	75 - 125				

PDS	Sample ID: HS18060413-08PDS	Units: mg/L	Analysis Date: 13-Jun-2018 22:22							
Client ID: DUP-1	Run ID: ICPMS05_317864	SeqNo: 4607890	PrepDate: 12-Jun-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Beryllium	4.888	0.100	5	0.02452	97.3	75 - 125				
Boron	68.68	1.00	50	15.32	107	75 - 125				
Lithium	5.872	0.250	5	1.58	85.8	70 - 125				

PDS	Sample ID: HS18060413-08PDS	Units: mg/L	Analysis Date: 13-Jun-2018 12:47							
Client ID: DUP-1	Run ID: ICPMS05_317864	SeqNo: 4599051	PrepDate: 12-Jun-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead	0.4491	0.0100	0.5	0	89.8	75 - 125				
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129291		Instrument: ICPMS05		Method: SW6020						
SD	Sample ID: HS18060413-08SD	Units: mg/L		Analysis Date: 12-Jun-2018 18:11						
Client ID: DUP-1	Run ID: ICPMS05_317775	SeqNo: 4598073		PrepDate: 12-Jun-2018		DF: 25				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Antimony	ND	0.0500					0.000154	0	10	
Arsenic	ND	0.0500					0.008761	0	10	
Barium	ND	0.100					0.008665	0	10	
Cadmium	0.05357	0.0500					0.05407	0.917	10	
Calcium	476.6	12.5					489.3	2.58	10	
Cobalt	0.3181	0.125					0.3318	4.13	10	
Molybdenum	ND	0.125					0.000338	0	10	
Selenium	0.04087	0.0500					0.0347	0	10	J
Thallium	ND	0.0500					0.001901	0	10	

SD	Sample ID: HS18060413-08SD	Units: mg/L		Analysis Date: 13-Jun-2018 22:16						
Client ID: DUP-1	Run ID: ICPMS05_317864	SeqNo: 4607887		PrepDate: 12-Jun-2018		DF: 250				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Beryllium	ND	0.500					0.02452	0	10	
Boron	15.12	5.00					15.32	1.31	10	
Lithium	1.501	1.25					1.58	5.03	10	

SD	Sample ID: HS18060413-08SD	Units: mg/L		Analysis Date: 13-Jun-2018 12:41						
Client ID: DUP-1	Run ID: ICPMS05_317864	SeqNo: 4599048		PrepDate: 12-Jun-2018		DF: 25				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Lead	ND	0.0500					0.000217	0	10	

The following samples were analyzed in this batch:

HS18060413-08	HS18060413-23	HS18060413-24	HS18060413-25
HS18060413-26	HS18060413-27	HS18060413-28	HS18060413-29
HS18060413-30	HS18060413-31	HS18060413-32	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129310	Instrument: HG03	Method: SW7470
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MBLK	Sample ID: MBLK-129310	Units: mg/L	Analysis Date: 13-Jun-2018 12:54							
Client ID:	Run ID: HG03_317876	SeqNo: 4601243	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury ND 0.000200

LCS	Sample ID: LCS-129310	Units: mg/L	Analysis Date: 13-Jun-2018 12:56							
Client ID:	Run ID: HG03_317876	SeqNo: 4601244	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00485 0.000200 0.005 0 97.0 80 - 120

MS	Sample ID: HS18060413-03MS	Units: mg/L	Analysis Date: 13-Jun-2018 13:05							
Client ID: AP-32	Run ID: HG03_317876	SeqNo: 4601249	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00659 0.000200 0.005 0.00181 95.6 75 - 125

MS	Sample ID: HS18060386-02MS	Units: mg/L	Analysis Date: 13-Jun-2018 13:00							
Client ID:	Run ID: HG03_317876	SeqNo: 4601246	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00482 0.000200 0.005 0.000012 96.2 75 - 125

MSD	Sample ID: HS18060413-03MSD	Units: mg/L	Analysis Date: 13-Jun-2018 13:06							
Client ID: AP-32	Run ID: HG03_317876	SeqNo: 4601250	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00668 0.000200 0.005 0.00181 97.4 75 - 125 0.00659 1.36 20

MSD	Sample ID: HS18060386-02MSD	Units: mg/L	Analysis Date: 13-Jun-2018 13:01							
Client ID:	Run ID: HG03_317876	SeqNo: 4601247	PrepDate: 12-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.0048 0.000200 0.005 0.000012 95.8 75 - 125 0.00482 0.416 20

The following samples were analyzed in this batch:	HS18060413-01	HS18060413-02	HS18060413-03	HS18060413-04
	HS18060413-05			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129335	Instrument: ICPMS05	Method: SW6020
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MBLK	Sample ID: MBLK-129335	Units: mg/L	Analysis Date: 15-Jun-2018 17:20							
Client ID:	Run ID: ICPMS05_318049	SeqNo: 4612093	PrepDate: 13-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

MBLK	Sample ID: MBLK-129335	Units: mg/L	Analysis Date: 18-Jun-2018 16:05							
Client ID:	Run ID: ICPMS05_318132	SeqNo: 4613541	PrepDate: 13-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	ND	0.0200								
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129335	Instrument: ICPMS05	Method: SW6020								
LCS	Sample ID: LCS-129335	Units: mg/L	Analysis Date: 15-Jun-2018 17:22							
Client ID:	Run ID: ICPMS05_318049	SeqNo: 4612094	PrepDate: 13-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.04875	0.00200	0.05	0	97.5	80 - 120				
Arsenic	0.04706	0.00200	0.05	0	94.1	80 - 120				
Barium	0.04761	0.00400	0.05	0	95.2	80 - 120				
Beryllium	0.05092	0.00200	0.05	0	102	80 - 120				
Cadmium	0.04784	0.00200	0.05	0	95.7	80 - 120				
Calcium	4.842	0.500	5	0	96.8	80 - 120				
Cobalt	0.04848	0.00500	0.05	0	97.0	80 - 120				
Lead	0.047	0.00200	0.05	0	94.0	80 - 120				
Lithium	0.08801	0.00500	0.1	0	88.0	80 - 120				
Molybdenum	0.04847	0.00500	0.05	0	96.9	80 - 120				
Selenium	0.04788	0.00200	0.05	0	95.8	80 - 120				
Thallium	0.04327	0.00200	0.05	0	86.5	80 - 120				

LCS	Sample ID: LCS-129335	Units: mg/L	Analysis Date: 18-Jun-2018 16:07							
Client ID:	Run ID: ICPMS05_318132	SeqNo: 4613542	PrepDate: 13-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	0.4655	0.0200	0.5	0	93.1	80 - 120				
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MS	Sample ID: HS18060413-18MS	Units: mg/L	Analysis Date: 15-Jun-2018 17:28							
Client ID: DUP-2	Run ID: ICPMS05_318049	SeqNo: 4612097	PrepDate: 13-Jun-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.04709	0.0100	0.05	0.002174	89.8	80 - 120				
Arsenic	0.04763	0.0100	0.05	0.002968	89.3	80 - 120				
Barium	0.056	0.0200	0.05	0.01243	87.1	80 - 120				
Cadmium	0.04753	0.0100	0.05	0	95.1	80 - 120				
Calcium	296.1	2.50	5	301.4	-106	80 - 120				SO
Cobalt	0.04707	0.0250	0.05	0.001366	91.4	80 - 120				
Lead	0.04128	0.0100	0.05	0	82.6	80 - 120				
Lithium	0.7547	0.0250	0.1	0.6321	123	80 - 120				SO
Molybdenum	0.04595	0.0250	0.05	0	91.9	80 - 120				
Selenium	0.04414	0.0100	0.05	0.01089	66.5	80 - 120				S
Thallium	0.04111	0.0100	0.05	0.002082	78.1	80 - 120				S

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129335		Instrument: ICPMS05			Method: SW6020					
MS		Sample ID: HS18060413-18MS			Units: mg/L		Analysis Date: 18-Jun-2018 15:54			
Client ID: DUP-2		Run ID: ICPMS05_318132			SeqNo: 4613536		PrepDate: 13-Jun-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.03629	0.100	0.05	0	72.6	80 - 120				JS
Boron	7.099	1.00	0.5	7.815	-143	80 - 120				SO
MSD		Sample ID: HS18060413-18MSD			Units: mg/L		Analysis Date: 15-Jun-2018 17:30			
Client ID: DUP-2		Run ID: ICPMS05_318049			SeqNo: 4612098		PrepDate: 13-Jun-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04738	0.0100	0.05	0.002174	90.4	80 - 120	0.04709	0.612	20	
Arsenic	0.04838	0.0100	0.05	0.002968	90.8	80 - 120	0.04763	1.56	20	
Barium	0.05682	0.0200	0.05	0.01243	88.8	80 - 120	0.056	1.44	20	
Cadmium	0.04805	0.0100	0.05	0	96.1	80 - 120	0.04753	1.08	20	
Calcium	305.2	2.50	5	301.4	74.8	80 - 120	296.1	3.01	20	SO
Cobalt	0.04755	0.0250	0.05	0.001366	92.4	80 - 120	0.04707	1.01	20	
Lead	0.04087	0.0100	0.05	0	81.7	80 - 120	0.04128	1.01	20	
Lithium	0.7592	0.0250	0.1	0.6321	127	80 - 120	0.7547	0.588	20	SO
Molybdenum	0.0495	0.0250	0.05	0	99.0	80 - 120	0.04595	7.44	20	
Selenium	0.04517	0.0100	0.05	0.01089	68.6	80 - 120	0.04414	2.32	20	S
Thallium	0.04323	0.0100	0.05	0.002082	82.3	80 - 120	0.04111	5.03	20	
MSD		Sample ID: HS18060413-18MSD			Units: mg/L		Analysis Date: 18-Jun-2018 15:56			
Client ID: DUP-2		Run ID: ICPMS05_318132			SeqNo: 4613537		PrepDate: 13-Jun-2018		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.0411	0.100	0.05	0	82.2	80 - 120	0.03629	0	20	J
Boron	7.505	1.00	0.5	7.815	-62.1	80 - 120	7.099	5.55	20	SO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129335	Instrument: ICPMS05	Method: SW6020
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PDS		Sample ID: HS18060413-18PDS			Units: mg/L		Analysis Date: 15-Jun-2018 17:32				
Client ID:	DUP-2	Run ID:	ICPMS05_318049		SeqNo:	4612099	PrepDate:	13-Jun-2018		DF:	5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Antimony	0.445	0.0100	0.5	0.002174	88.6	75 - 125					
Arsenic	0.4812	0.0100	0.5	0.002968	95.6	75 - 125					
Barium	0.4752	0.0200	0.5	0.01243	92.6	75 - 125					
Cadmium	0.4767	0.0100	0.5	0	95.3	75 - 125					
Calcium	330.8	2.50	50	301.4	58.7	75 - 125				SO	
Cobalt	0.4773	0.0250	0.5	0.001366	95.2	75 - 125					
Lead	0.4304	0.0100	0.5	0	86.1	75 - 125					
Lithium	1.237	0.0250	0.5	0.6321	121	70 - 125					
Molybdenum	0.493	0.0250	0.5	0	98.6	75 - 125					
Selenium	0.47	0.0100	0.5	0.01089	91.8	75 - 125					
Thallium	0.4415	0.0100	0.5	0.002082	87.9	75 - 125					

PDS		Sample ID: HS18060413-18PDS			Units: mg/L		Analysis Date: 18-Jun-2018 12:46				
Client ID:	DUP-2	Run ID:	ICPMS05_318132		SeqNo:	4613147	PrepDate:	13-Jun-2018		DF:	50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Beryllium	4.889	0.100	5	0	97.8	75 - 125					
Boron	55.8	1.00	50	7.815	96.0	75 - 125					

SD		Sample ID: HS18060413-18SD			Units: mg/L		Analysis Date: 15-Jun-2018 17:26				
Client ID:	DUP-2	Run ID:	ICPMS05_318049		SeqNo:	4612096	PrepDate:	13-Jun-2018		DF:	25
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual	
Antimony	ND	0.0500					0.002174		0	10	
Arsenic	ND	0.0500					0.002968		0	10	
Barium	ND	0.100					0.01243		0	10	
Cadmium	ND	0.0500					0.000234		0	10	
Calcium	301.8	12.5					301.4	0.109		10	
Cobalt	ND	0.125					0.001366		0	10	
Lead	ND	0.0500					0.000255		0	10	
Lithium	0.6246	0.125					0.6321	1.19		10	
Molybdenum	ND	0.125					0.002975		0	10	
Selenium	ND	0.0500					0.01089		0	10	
Thallium	ND	0.0500					0.002082		0	10	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129335	Instrument: ICPMS05	Method: SW6020								
SD	Sample ID: HS18060413-18SD	Units: mg/L	Analysis Date: 18-Jun-2018 12:44							
Client ID: DUP-2	Run ID: ICPMS05_318132	SeqNo: 4613146	PrepDate: 13-Jun-2018 DF: 250							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual

Beryllium	ND	0.500					0.000368	0	10
Boron	8.306	5.00					7.815	6.29	10

The following samples were analyzed in this batch: HS18060413-18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129344	Instrument: ICPMS05	Method: SW6020								
MBLK	Sample ID: MBLK-129344	Units: mg/L	Analysis Date: 14-Jun-2018 12:58							
Client ID:	Run ID: ICPMS05_317974	SeqNo: 4609676	PrepDate: 13-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Boron	ND	0.0200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

LCS	Sample ID: LCS-129344	Units: mg/L	Analysis Date: 14-Jun-2018 13:00							
Client ID:	Run ID: ICPMS05_317974	SeqNo: 4609677	PrepDate: 13-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04565	0.00200	0.05	0	91.3	80 - 120				
Arsenic	0.04547	0.00200	0.05	0	90.9	80 - 120				
Barium	0.04697	0.00400	0.05	0	93.9	80 - 120				
Beryllium	0.04775	0.00200	0.05	0	95.5	80 - 120				
Boron	0.4801	0.0200	0.5	0	96.0	80 - 120				
Cadmium	0.04825	0.00200	0.05	0	96.5	80 - 120				
Calcium	4.63	0.500	5	0	92.6	80 - 120				
Cobalt	0.04662	0.00500	0.05	0	93.2	80 - 120				
Lead	0.04655	0.00200	0.05	0	93.1	80 - 120				
Lithium	0.08701	0.00500	0.1	0	87.0	80 - 120				
Molybdenum	0.04528	0.00500	0.05	0	90.6	80 - 120				
Selenium	0.04748	0.00200	0.05	0	95.0	80 - 120				
Thallium	0.04382	0.00200	0.05	0	87.6	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129344		Instrument: ICPMS05		Method: SW6020						
MS		Sample ID: HS18060413-17MSD		Units: mg/L		Analysis Date: 14-Jun-2018 13:15				
Client ID: EP-32		Run ID: ICPMS05_317974		SeqNo: 4609684		PrepDate: 13-Jun-2018		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Antimony	0.04231	0.0100	0.05	0	84.6	80 - 120				
Arsenic	0.04519	0.0100	0.05	0	90.4	80 - 120				
Barium	0.06193	0.0200	0.05	0.01993	84.0	80 - 120				
Beryllium	0.04575	0.0100	0.05	0	91.5	80 - 120				
Boron	26.99	0.100	0.5	28	-202	80 - 120			SEO	
Cadmium	0.04539	0.0100	0.05	0	90.8	80 - 120				
Calcium	411.7	2.50	5	450.4	-775	80 - 120			SO	
Cobalt	0.04239	0.0250	0.05	0	84.8	80 - 120				
Lead	0.03896	0.0100	0.05	0	77.9	80 - 120			S	
Lithium	1.038	0.0250	0.1	1.02	17.7	80 - 120			SO	
Molybdenum	0.05492	0.0250	0.05	0.01177	86.3	80 - 120				
Selenium	0.04081	0.0100	0.05	0	81.6	80 - 120				
Thallium	0.04064	0.0100	0.05	0	81.3	80 - 120				

MSD		Sample ID: HS18060413-17MSD		Units: mg/L		Analysis Date: 14-Jun-2018 13:17			
Client ID: EP-32		Run ID: ICPMS05_317974		SeqNo: 4609685		PrepDate: 13-Jun-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Antimony	0.04294	0.0100	0.05	0	85.9	80 - 120	0.04231	1.5	20
Arsenic	0.04551	0.0100	0.05	0	91.0	80 - 120	0.04519	0.701	20
Barium	0.06238	0.0200	0.05	0.01993	84.9	80 - 120	0.06193	0.727	20
Beryllium	0.04802	0.0100	0.05	0	96.0	80 - 120	0.04575	4.85	20
Boron	28.43	0.100	0.5	28	86.4	80 - 120	26.99	5.21	20 EO
Cadmium	0.04474	0.0100	0.05	0	89.5	80 - 120	0.04539	1.44	20
Calcium	409.1	2.50	5	450.4	-825	80 - 120	411.7	0.615	20 SO
Cobalt	0.04201	0.0250	0.05	0	84.0	80 - 120	0.04239	0.898	20
Lead	0.03948	0.0100	0.05	0	79.0	80 - 120	0.03896	1.31	20 S
Lithium	1.059	0.0250	0.1	1.02	39.1	80 - 120	1.038	2.04	20 SO
Molybdenum	0.05418	0.0250	0.05	0.01177	84.8	80 - 120	0.05492	1.36	20
Selenium	0.04022	0.0100	0.05	0	80.4	80 - 120	0.04081	1.45	20
Thallium	0.04163	0.0100	0.05	0	83.3	80 - 120	0.04064	2.42	20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129344	Instrument: ICPMS05	Method: SW6020								
PDS	Sample ID: HS18060413-17PDS	Units: mg/L	Analysis Date: 14-Jun-2018 13:19							
Client ID: EP-32	Run ID: ICPMS05_317974	SeqNo: 4609686	PrepDate: 13-Jun-2018 DF: 5							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.4538	0.0100	0.5	0	90.8	75 - 125				
Arsenic	0.4568	0.0100	0.5	0	91.4	75 - 125				
Barium	0.4901	0.0200	0.5	0.01993	94.0	75 - 125				
Beryllium	0.5476	0.0100	0.5	0	110	75 - 125				
Cadmium	0.4801	0.0100	0.5	0	96.0	75 - 125				
Calcium	466.4	2.50	50	450.4	32.1	75 - 125				SO
Cobalt	0.446	0.0250	0.5	0	89.2	75 - 125				
Lead	0.4383	0.0100	0.5	0	87.7	75 - 125				
Lithium	1.588	0.0250	0.5	1.02	114	70 - 125				
Molybdenum	0.4751	0.0250	0.5	0.01177	92.7	75 - 125				
Selenium	0.4624	0.0100	0.5	0	92.5	75 - 125				
Thallium	0.4551	0.0100	0.5	0	91.0	75 - 125				

PDS	Sample ID: HS18060413-17PDS	Units: mg/L	Analysis Date: 15-Jun-2018 12:43							
Client ID: EP-32	Run ID: ICPMS05_318049	SeqNo: 4611488	PrepDate: 13-Jun-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	70.49	1.00	50	25.44	90.1	75 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129344 **Instrument:** ICPMS05 **Method:** SW6020

SD		Sample ID: HS18060413-17SD			Units: mg/L		Analysis Date: 14-Jun-2018 13:06			
Client ID: EP-32		Run ID: ICPMS05_317974			SeqNo: 4609680		PrepDate: 13-Jun-2018		DF: 25	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Antimony	ND	0.0500					0	0	10	
Arsenic	ND	0.0500					0.001907	0	10	
Barium	ND	0.100					0.01993	0	10	
Beryllium	ND	0.0500					0.000021	0	10	
Cadmium	ND	0.0500					0.000046	0	10	
Calcium	428.8	12.5					450.4	4.8	10	
Cobalt	ND	0.125					0.00029	0	10	
Lead	ND	0.0500					0.000365	0	10	
Lithium	0.9188	0.125					1.02	9.94	10	
Molybdenum	ND	0.125					0.01177	0	10	
Selenium	ND	0.0500					-0.000374	0	10	
Thallium	ND	0.0500					0.000167	0	10	

SD		Sample ID: HS18060413-17SD			Units: mg/L		Analysis Date: 15-Jun-2018 12:41			
Client ID: EP-32		Run ID: ICPMS05_318049			SeqNo: 4611487		PrepDate: 13-Jun-2018		DF: 250	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Boron	23.62	5.00					25.44	7.18	10	

The following samples were analyzed in this batch: HS18060413-17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129422		Instrument: HG03		Method: SW7470						
MBLK	Sample ID: MBLK-129422	Units: mg/L			Analysis Date: 15-Jun-2018 11:34					
Client ID:		Run ID: HG03_318037	SeqNo: 4611301	PrepDate: 14-Jun-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	ND	0.000200								
LCS	Sample ID: LCS-129422	Units: mg/L			Analysis Date: 15-Jun-2018 11:39					
Client ID:		Run ID: HG03_318037	SeqNo: 4611302	PrepDate: 14-Jun-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00478	0.000200	0.005	0	95.6	80 - 120				
MS	Sample ID: HS18060413-18MS	Units: mg/L			Analysis Date: 15-Jun-2018 12:14					
Client ID: DUP-2		Run ID: HG03_318037	SeqNo: 4611322	PrepDate: 14-Jun-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00642	0.000200	0.005	0.00181	92.2	75 - 125				
MS	Sample ID: HS18060413-17MS	Units: mg/L			Analysis Date: 15-Jun-2018 12:08					
Client ID: EP-32		Run ID: HG03_318037	SeqNo: 4611319	PrepDate: 14-Jun-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00373	0.000200	0.005	0.000031	74.0	75 - 125			S	
MS	Sample ID: HS18060413-08MS	Units: mg/L			Analysis Date: 15-Jun-2018 11:46					
Client ID: DUP-1		Run ID: HG03_318037	SeqNo: 4611306	PrepDate: 14-Jun-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00371	0.000200	0.005	0.000021	73.8	75 - 125			S	
MSD	Sample ID: HS18060413-18MSD	Units: mg/L			Analysis Date: 15-Jun-2018 12:15					
Client ID: DUP-2		Run ID: HG03_318037	SeqNo: 4611323	PrepDate: 14-Jun-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.0062	0.000200	0.005	0.00181	87.8	75 - 125	0.00642	3.49	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129422	Instrument: HG03	Method: SW7470
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MSD	Sample ID: HS18060413-17MSD	Units: mg/L	Analysis Date: 15-Jun-2018 12:10							
Client ID: EP-32	Run ID: HG03_318037	SeqNo: 4611320	PrepDate: 14-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury	0.0036	0.000200	0.005	0.000031	71.4	75 - 125	0.00373	3.55	20	S
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MSD	Sample ID: HS18060413-08MSD	Units: mg/L	Analysis Date: 15-Jun-2018 11:48							
Client ID: DUP-1	Run ID: HG03_318037	SeqNo: 4611307	PrepDate: 14-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury	0.0036	0.000200	0.005	0.000021	71.6	75 - 125	0.00371	3.01	20	S
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The following samples were analyzed in this batch:

HS18060413-06	HS18060413-07	HS18060413-08	HS18060413-09
HS18060413-10	HS18060413-11	HS18060413-12	HS18060413-13
HS18060413-14	HS18060413-15	HS18060413-16	HS18060413-17
HS18060413-18	HS18060413-19	HS18060413-20	HS18060413-21
HS18060413-22	HS18060413-23	HS18060413-24	HS18060413-25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: 129423	Instrument: HG03	Method: SW7470
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MBLK	Sample ID: MBLK-129423	Units: mg/L	Analysis Date: 15-Jun-2018 12:40							
Client ID:	Run ID: HG03_318037	SeqNo: 4611333	PrepDate: 15-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.000200

LCS	Sample ID: LCS-129423	Units: mg/L	Analysis Date: 15-Jun-2018 12:42							
Client ID:	Run ID: HG03_318037	SeqNo: 4611334	PrepDate: 15-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.00481 0.000200 0.005 0 96.2 80 - 120

MS	Sample ID: HS18060425-05MS	Units: mg/L	Analysis Date: 15-Jun-2018 12:50							
Client ID:	Run ID: HG03_318037	SeqNo: 4611339	PrepDate: 15-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.00465 0.000200 0.005 0.000005 92.9 75 - 125

MSD	Sample ID: HS18060425-05MSD	Units: mg/L	Analysis Date: 15-Jun-2018 12:52							
Client ID:	Run ID: HG03_318037	SeqNo: 4611340	PrepDate: 15-Jun-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.00465 0.000200 0.005 0.000005 92.9 75 - 125 0.00465 0 20

The following samples were analyzed in this batch: HS18060413-26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R317778	Instrument: WetChem_HS	Method: SM4500H+ B
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DUP	Sample ID: HS18060413-17DUP	Units: pH Units	Analysis Date: 11-Jun-2018 18:00							
Client ID: EP-32	Run ID: WetChem_HS_317778	SeqNo: 4596759	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
pH	6.59	0.100					6.58	0.152	10	
Temp Deg C @pH	21.9	0					22.1	0.909	10	

DUP	Sample ID: HS18060413-18DUP	Units: pH Units	Analysis Date: 11-Jun-2018 18:00							
Client ID: DUP-2	Run ID: WetChem_HS_317778	SeqNo: 4596915	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
pH	6.59	0.100					6.57	0.304	10	
Temp Deg C @pH	22.1	0					22.1	0	10	

DUP	Sample ID: HS18060413-08DUP	Units: pH Units	Analysis Date: 11-Jun-2018 18:00							
Client ID: DUP-1	Run ID: WetChem_HS_317778	SeqNo: 4596758	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
pH	6.61	0.100					6.58	0.455	10	
Temp Deg C @pH	21.9	0					21.6	1.38	10	

DUP	Sample ID: HS18060413-03DUP	Units: pH Units	Analysis Date: 11-Jun-2018 18:00							
Client ID: AP-32	Run ID: WetChem_HS_317778	SeqNo: 4596757	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
pH	3.42	0.100					3.44	0.583	10	
Temp Deg C @pH	21.1	0					21.4	1.41	10	

The following samples were analyzed in this batch:

HS18060413-01	HS18060413-02	HS18060413-03	HS18060413-04
HS18060413-05	HS18060413-06	HS18060413-07	HS18060413-08
HS18060413-09	HS18060413-10	HS18060413-11	HS18060413-12
HS18060413-13	HS18060413-14	HS18060413-15	HS18060413-16
HS18060413-17	HS18060413-18	HS18060413-19	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R317829	Instrument: WetChem_HS	Method: SM4500H+ B
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DUP	Sample ID: HS18060413-32DUP	Units: pH Units	Analysis Date: 12-Jun-2018 16:20							
Client ID: DUP-3	Run ID: WetChem_HS_317829	SeqNo: 4597728	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.34	0.100					3.32	0.601	10	
Temp Deg C @pH	22.9	0					22.8	0.438	10	

DUP	Sample ID: HS18060413-28DUP	Units: pH Units	Analysis Date: 12-Jun-2018 16:20							
Client ID: SP-1	Run ID: WetChem_HS_317829	SeqNo: 4597727	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.17	0.100					3.16	0.316	10	
Temp Deg C @pH	22.2	0					22.1	0.451	10	

The following samples were analyzed in this batch:

HS18060413-20	HS18060413-21	HS18060413-22	HS18060413-23
HS18060413-24	HS18060413-25	HS18060413-26	HS18060413-27
HS18060413-28	HS18060413-29	HS18060413-30	HS18060413-31
HS18060413-32			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R317834	Instrument: Balance1	Method: M2540C
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MBLK	Sample ID: WBLK-061118	Units: mg/L	Analysis Date: 11-Jun-2018 16:50							
Client ID:	Run ID: Balance1_317834	SeqNo: 4597788	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-061118	Units: mg/L	Analysis Date: 11-Jun-2018 16:50							
Client ID:	Run ID: Balance1_317834	SeqNo: 4597789	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1032 10.0 1000 0 103 85 - 115

DUP	Sample ID: HS18060413-08DUP	Units: mg/L	Analysis Date: 11-Jun-2018 16:50							
Client ID: DUP-1	Run ID: Balance1_317834	SeqNo: 4597786	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 10040 10.0 9940 1 5

DUP	Sample ID: HS18060413-03DUP	Units: mg/L	Analysis Date: 11-Jun-2018 16:50							
Client ID: AP-32	Run ID: Balance1_317834	SeqNo: 4597782	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 9840 10.0 9720 1.23 5

The following samples were analyzed in this batch:	HS18060413-01	HS18060413-02	HS18060413-03	HS18060413-04
	HS18060413-07	HS18060413-08		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R317983		Instrument: Balance1		Method: M2540C						
MBLK	Sample ID: WBLK-061218	Units: mg/L		Analysis Date: 12-Jun-2018 16:50						
Client ID:	Run ID: Balance1_317983	SeqNo: 4609563		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		ND	10.0							
LCS	Sample ID: WLCS-061218	Units: mg/L		Analysis Date: 12-Jun-2018 16:50						
Client ID:	Run ID: Balance1_317983	SeqNo: 4609564		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		1050	10.0	1000	0	105	85 - 115			
DUP	Sample ID: HS18060444-06DUP	Units: mg/L		Analysis Date: 12-Jun-2018 16:50						
Client ID:	Run ID: Balance1_317983	SeqNo: 4609562		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		2160	10.0				2172	0.554	5	
DUP	Sample ID: HS18060413-32DUP	Units: mg/L		Analysis Date: 12-Jun-2018 16:50						
Client ID: DUP-3	Run ID: Balance1_317983	SeqNo: 4609565		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		11580	10.0				11360	1.92	5	
DUP	Sample ID: HS18060413-18DUP	Units: mg/L		Analysis Date: 12-Jun-2018 16:50						
Client ID: DUP-2	Run ID: Balance1_317983	SeqNo: 4609555		PrepDate:			DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		6156	10.0				6124	0.521	5	
The following samples were analyzed in this batch:		HS18060413-18 HS18060413-32								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318046	Instrument: Balance1	Method: M2540C
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MBLK	Sample ID: WBLK-061318	Units: mg/L	Analysis Date: 13-Jun-2018 16:50							
Client ID:	Run ID: Balance1_318046	SeqNo: 4611054	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-061318	Units: mg/L	Analysis Date: 13-Jun-2018 16:50							
Client ID:	Run ID: Balance1_318046	SeqNo: 4611055	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1002 10.0 1000 0 100 85 - 115

DUP	Sample ID: HS18060413-17DUP	Units: mg/L	Analysis Date: 13-Jun-2018 16:50							
Client ID: EP-32	Run ID: Balance1_318046	SeqNo: 4611048	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 10140 10.0 10040 0.991 5

DUP	Sample ID: HS18060385-10DUP	Units: mg/L	Analysis Date: 13-Jun-2018 16:50							
Client ID:	Run ID: Balance1_318046	SeqNo: 4611034	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 8880 10.0 8760 1.36 5

The following samples were analyzed in this batch:	HS18060413-05	HS18060413-06	HS18060413-09	HS18060413-10
	HS18060413-11	HS18060413-12	HS18060413-13	HS18060413-14
	HS18060413-15	HS18060413-16	HS18060413-17	HS18060413-19
	HS18060413-20	HS18060413-21		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318062		Instrument: ICS2100			Method: E300					
MBLK	Sample ID: WBLKW1-061318	Units: mg/L			Analysis Date: 13-Jun-2018 19:38					
Client ID:	Run ID: ICS2100_318062	SeqNo: 4611245			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								
LCS	Sample ID: WLCSW1-061318	Units: mg/L			Analysis Date: 13-Jun-2018 19:52					
Client ID:	Run ID: ICS2100_318062	SeqNo: 4611246			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.57	0.500	20	0	103	90 - 110				
Fluoride	4.281	0.100	4	0	107	90 - 110				
Sulfate	20.71	0.500	20	0	104	90 - 110				
LCSD	Sample ID: WLCSDW1-061318	Units: mg/L			Analysis Date: 13-Jun-2018 20:07					
Client ID:	Run ID: ICS2100_318062	SeqNo: 4611247			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.62	0.500	20	0	103	90 - 110	20.57	0.253	20	
Fluoride	4.248	0.100	4	0	106	90 - 110	4.281	0.774	20	
Sulfate	20.66	0.500	20	0	103	90 - 110	20.71	0.237	20	
MS	Sample ID: HS18060592-01MS	Units: mg/L			Analysis Date: 14-Jun-2018 00:14					
Client ID:	Run ID: ICS2100_318062	SeqNo: 4611264			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	16.59	0.500	10	7	95.9	80 - 120				
Fluoride	2.123	0.100	2	0.274	92.4	80 - 120				
Sulfate	13.02	0.500	10	0.865	122	80 - 120				S

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318062	Instrument: ICS2100	Method: E300
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MS	Sample ID: HS18060413-18MS	Units: mg/L	Analysis Date: 14-Jun-2018 11:52							
Client ID: DUP-2	Run ID: ICS2100_318062	SeqNo: 4611282	PrepDate: DF: 100							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2577	50.0	1000	1778	79.9	80 - 120				S
Fluoride	193.6	10.0	200	0	96.8	80 - 120				
Sulfate	3176	50.0	1000	2381	79.5	80 - 120				S

MSD	Sample ID: HS18060592-01MSD	Units: mg/L	Analysis Date: 14-Jun-2018 00:28							
Client ID:	Run ID: ICS2100_318062	SeqNo: 4611265	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	16.48	0.500	10	7	94.8	80 - 120	16.59	0.665	20	
Fluoride	2.103	0.100	2	0.274	91.4	80 - 120	2.123	0.947	20	
Sulfate	12.85	0.500	10	0.865	120	80 - 120	13.02	1.33	20	

MSD	Sample ID: HS18060413-18MSD	Units: mg/L	Analysis Date: 14-Jun-2018 13:51							
Client ID: DUP-2	Run ID: ICS2100_318062	SeqNo: 4611283	PrepDate: DF: 100							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2818	50.0	1000	1778	104	80 - 120	2577	8.91	20	
Fluoride	212.7	10.0	200	0	106	80 - 120	193.6	9.41	20	
Sulfate	3456	50.0	1000	2381	108	80 - 120	3176	8.43	20	

The following samples were analyzed in this batch: HS18060413-04 HS18060413-07 HS18060413-12 HS18060413-18
 HS18060413-21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318137	Instrument: Balance1	Method: M2540C
--------------------------	-----------------------------	-----------------------

MBLK	Sample ID: WBLK-061418	Units: mg/L	Analysis Date: 14-Jun-2018 16:50							
Client ID:	Run ID: Balance1_318137	SeqNo: 4613071	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-061418	Units: mg/L	Analysis Date: 14-Jun-2018 16:50							
Client ID:	Run ID: Balance1_318137	SeqNo: 4613072	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1078 10.0 1000 0 108 85 - 115

DUP	Sample ID: HS18060432-09DUP	Units: mg/L	Analysis Date: 14-Jun-2018 16:50							
Client ID:	Run ID: Balance1_318137	SeqNo: 4613069	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1154 10.0 1130 2.1 5

DUP	Sample ID: HS18060413-28DUP	Units: mg/L	Analysis Date: 14-Jun-2018 16:50							
Client ID: SP-1	Run ID: Balance1_318137	SeqNo: 4613056	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 14940 10.0 14480 3.13 5

The following samples were analyzed in this batch:	HS18060413-22	HS18060413-23	HS18060413-24	HS18060413-25
	HS18060413-26	HS18060413-27	HS18060413-28	HS18060413-29
	HS18060413-30	HS18060413-31		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318147		Instrument: ICS3K2			Method: E300					
MBLK	Sample ID: WBLKW1-061318	Units: mg/L			Analysis Date: 13-Jun-2018 17:51					
Client ID:	Run ID: ICS3K2_318147	SeqNo: 4613284			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								
LCS	Sample ID: WLCSW1-061318	Units: mg/L			Analysis Date: 13-Jun-2018 18:12					
Client ID:	Run ID: ICS3K2_318147	SeqNo: 4613285			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.24	0.500	20	0	101	90 - 110				
Fluoride	4.166	0.100	4	0	104	90 - 110				
Sulfate	19.49	0.500	20	0	97.5	90 - 110				
LCSD	Sample ID: WLCSDW1-061318	Units: mg/L			Analysis Date: 13-Jun-2018 18:34					
Client ID:	Run ID: ICS3K2_318147	SeqNo: 4613286			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.47	0.500	20	0	102	90 - 110	20.24	1.15	20	
Fluoride	4.192	0.100	4	0	105	90 - 110	4.166	0.622	20	
Sulfate	20.12	0.500	20	0	101	90 - 110	19.49	3.15	20	
MS	Sample ID: HS18060413-17MS	Units: mg/L			Analysis Date: 14-Jun-2018 12:24					
Client ID: EP-32	Run ID: ICS3K2_318147	SeqNo: 4613327			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3449	50.0	1000	2417	103	80 - 120				
Fluoride	211.4	10.0	200	0	106	80 - 120				
Sulfate	5276	50.0	1000	4216	106	80 - 120				O

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318147		Instrument: ICS3K2			Method: E300					
MS		Sample ID: HS18060413-08MS			Units: mg/L		Analysis Date: 14-Jun-2018 01:48			
Client ID: DUP-1		Run ID: ICS3K2_318147			SeqNo: 4613303		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2866	50.0	1000	1874	99.2	80 - 120				
Fluoride	199	10.0	200	0	99.5	80 - 120				
Sulfate	5310	50.0	1000	4311	99.9	80 - 120				O
MS		Sample ID: HS18060413-03MS			Units: mg/L		Analysis Date: 13-Jun-2018 21:28			
Client ID: AP-32		Run ID: ICS3K2_318147			SeqNo: 4613293		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3840	50.0	1000	2870	97.1	80 - 120				
Fluoride	201.9	10.0	200	0	101	80 - 120				
Sulfate	4365	50.0	1000	3349	102	80 - 120				
MSD		Sample ID: HS18060413-17MSD			Units: mg/L		Analysis Date: 14-Jun-2018 12:46			
Client ID: EP-32		Run ID: ICS3K2_318147			SeqNo: 4613328		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3451	50.0	1000	2417	103	80 - 120	3449	0.0768	20	
Fluoride	212.2	10.0	200	0	106	80 - 120	211.4	0.397	20	
Sulfate	5266	50.0	1000	4216	105	80 - 120	5276	0.197	20	O
MSD		Sample ID: HS18060413-08MSD			Units: mg/L		Analysis Date: 14-Jun-2018 02:10			
Client ID: DUP-1		Run ID: ICS3K2_318147			SeqNo: 4613304		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2873	50.0	1000	1874	99.9	80 - 120	2866	0.244	20	
Fluoride	197.7	10.0	200	0	98.8	80 - 120	199	0.696	20	
Sulfate	5330	50.0	1000	4311	102	80 - 120	5310	0.368	20	O

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318147 **Instrument:** ICS3K2 **Method:** E300

MSD Sample ID: **HS18060413-03MSD** Units: **mg/L** Analysis Date: **13-Jun-2018 21:49**
Client ID: **AP-32** **Run ID:** **ICS3K2_318147** **SeqNo:** **4613294** **PrepDate:** **DF:** **100**
Analyte **Result** **PQL** **SPK Val** **SPK Ref Value** **%REC** **Control Limit** **RPD Ref Value** **%RPD** **RPD Limit** **Qual**

Chloride	3853	50.0	1000	2870	98.3	80 - 120	3840	0.327	20
Fluoride	199	10.0	200	0	99.5	80 - 120	201.9	1.45	20
Sulfate	4386	50.0	1000	3349	104	80 - 120	4365	0.484	20

The following samples were analyzed in this batch:

HS18060413-01	HS18060413-02	HS18060413-03	HS18060413-05
HS18060413-06	HS18060413-08	HS18060413-09	HS18060413-10
HS18060413-11	HS18060413-13	HS18060413-14	HS18060413-15
HS18060413-16	HS18060413-17	HS18060413-18	HS18060413-19
HS18060413-20	HS18060413-22	HS18060413-23	HS18060413-24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318337		Instrument: ICS3K2			Method: E300					
MBLK	Sample ID: WBLKW1-061418	Units: mg/L			Analysis Date: 15-Jun-2018 04:48					
Client ID:	Run ID: ICS3K2_318337	SeqNo: 4617446			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								
LCS	Sample ID: WLCSW1-061418	Units: mg/L			Analysis Date: 15-Jun-2018 05:10					
Client ID:	Run ID: ICS3K2_318337	SeqNo: 4617447			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.78	0.500	20	0	104	90 - 110				
Fluoride	4.359	0.100	4	0	109	90 - 110				
Sulfate	20.59	0.500	20	0	103	90 - 110				
LCSD	Sample ID: WLCSDW1-061418	Units: mg/L			Analysis Date: 15-Jun-2018 05:31					
Client ID:	Run ID: ICS3K2_318337	SeqNo: 4617448			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.94	0.500	20	0	105	90 - 110	20.78	0.738	20	
Fluoride	4.351	0.100	4	0	109	90 - 110	4.359	0.184	20	
Sulfate	20.69	0.500	20	0	103	90 - 110	20.59	0.509	20	
MS	Sample ID: HS18060413-32MS	Units: mg/L			Analysis Date: 15-Jun-2018 14:55					
Client ID: DUP-3	Run ID: ICS3K2_318337	SeqNo: 4617471			PrepDate:			DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	5768	50.0	1000	4807	96.1	80 - 120				O
Fluoride	201.4	10.0	200	0	101	80 - 120				
Sulfate	3952	50.0	1000	2918	103	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318337		Instrument: ICS3K2		Method: E300						
MS	Sample ID: HS18060413-28MS	Units: mg/L			Analysis Date: 15-Jun-2018 09:52					
Client ID: SP-1	Run ID: ICS3K2_318337	SeqNo: 4617459		PrepDate:			DF: 100			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	4728	50.0	1000	3690	104	80 - 120				
Fluoride	181	10.0	200	13.45	83.8	80 - 120				
Sulfate	8387	50.0	1000	7332	106	80 - 120				O

MSD	Sample ID: HS18060413-32MSD	Units: mg/L			Analysis Date: 15-Jun-2018 15:17					
Client ID: DUP-3	Run ID: ICS3K2_318337	SeqNo: 4617472		PrepDate:			DF: 100			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	5769	50.0	1000	4807	96.2	80 - 120	5768	0.0163	20	O
Fluoride	205.9	10.0	200	0	103	80 - 120	201.4	2.18	20	
Sulfate	3966	50.0	1000	2918	105	80 - 120	3952	0.36	20	

MSD	Sample ID: HS18060413-28MSD	Units: mg/L			Analysis Date: 15-Jun-2018 10:13					
Client ID: SP-1	Run ID: ICS3K2_318337	SeqNo: 4617460		PrepDate:			DF: 100			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	4747	50.0	1000	3690	106	80 - 120	4728	0.42	20	
Fluoride	199.3	10.0	200	13.45	92.9	80 - 120	181	9.63	20	
Sulfate	8481	50.0	1000	7332	115	80 - 120	8387	1.11	20	O

The following samples were analyzed in this batch:

HS18060413-25	HS18060413-26	HS18060413-27	HS18060413-28
HS18060413-29	HS18060413-30	HS18060413-31	HS18060413-32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318340		Instrument: ICS3K2			Method: E300					
MBLK	Sample ID: WBLKW1-061918	Units: mg/L			Analysis Date: 19-Jun-2018 04:03					
Client ID:	Run ID: ICS3K2_318340	SeqNo: 4617511			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	ND	0.500								
LCS	Sample ID: WLCSW1-061918	Units: mg/L			Analysis Date: 19-Jun-2018 04:25					
Client ID:	Run ID: ICS3K2_318340	SeqNo: 4617512			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	20.02	0.500	20	0	100	90 - 110				
LCSD	Sample ID: WLCSDW1-061918	Units: mg/L			Analysis Date: 19-Jun-2018 04:47					
Client ID:	Run ID: ICS3K2_318340	SeqNo: 4617513			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	20.1	0.500	20	0	101	90 - 110	20.02	0.399	20	
MS	Sample ID: HS18060635-11MS	Units: mg/L			Analysis Date: 19-Jun-2018 17:32					
Client ID:	Run ID: ICS3K2_318340	SeqNo: 4617526			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	9.292	0.500	10	0	92.9	80 - 120				
MS	Sample ID: HS18060430-11MS	Units: mg/L			Analysis Date: 19-Jun-2018 10:34					
Client ID:	Run ID: ICS3K2_318340	SeqNo: 4617519			PrepDate:			DF: 20		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	193.9	10.0	200	15.67	89.1	80 - 120				
MSD	Sample ID: HS18060635-11MSD	Units: mg/L			Analysis Date: 19-Jun-2018 17:53					
Client ID:	Run ID: ICS3K2_318340	SeqNo: 4617527			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	9.507	0.500	10	0	95.1	80 - 120	9.292	2.29	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

QC BATCH REPORT

Batch ID: R318340	Instrument: ICS3K2	Method: E300
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MSD	Sample ID: HS18060430-11MSD	Units: mg/L	Analysis Date: 19-Jun-2018 10:55						
Client ID:	Run ID: ICS3K2_318340	SeqNo: 4617520	PrepDate: DF: 20						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Sulfate	193.8	10.0	200	15.67	89.1	80 - 120	193.9	0.032	20

The following samples were analyzed in this batch: HS18060413-29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18060413

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919 2016-2018	31-Jul-2018
Oklahoma	2017-088	31-Aug-2018
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Kansas	E-10352 2017-218	31-Jul-2018
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	L2231 Rev 3-30-2018	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019

Sample Receipt Checklist

Client Name: Source
 Work Order: HS18060413

Date/Time Received: **08-Jun-2018 10:15**
 Received by: **PMG**

Checklist completed by: Paresh M. Giga 8-Jun-2018 Reviewed by: Nicole Edwards 11-Jun-2018
 eSignature Date eSignature Date

Matrices: **Water** Carrier name: **Client**

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 6.4c/5.9c;5.6c/5.1c;3.5c/3.0c;2.7c/2.2c;4.8c/4.3c;2.3c/1.8c;6.1c/5.6c U/C IR11

Cooler(s)/Kit(s): 43904;3125;25255;5017;43552;42731;24186

Date/Time sample(s) sent to storage: 6/8/18 15:30

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes: NO dates/times of collection for all DUP samples. Logged in as 6/5/18 @ 000

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



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Chain of Custody Form

Page 1 of 4

COC ID: **182313**

HS18060413

.wv

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



ALS Project Manager:

Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	San Miguel Electric CCR Well Moni	A	300_W (Cl, FI, SO4)
Work Order		Project Number		B	HG_W
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc	C	ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D	PH_W M4500H+B
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140	E	Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F	Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G	TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H	
Fax	(713) 621-4588	Fax	(713) 621-4588	I	
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	AP-31	6/5/18	10:55	H2O	2,7,8	6	X	X	X	X	X	X	X				
2	MW-3		11:40														
3	AP-32		12:20														
4	AP-32 MS		12:35														
5	FIELD BLANK 1		12:35														
6	AP-33	6/6/18	10:33														
7	P2-5		11:18														
8	EQUIPMENT BLANK	6/5/18	10:28														
9	DUP-1																
10	MS DUP-2																

Sampler(s) Please Print & Sign: Joshua Mitchell

Relinquished by: [Signature] Date: 6/5/18 Time: 10:15

Relinquished by: [Signature] Date: 6/5/18 Time: 10:15

Received by: [Signature] Date: 6/8/18 Time: 10:15

Received by (Laboratory): [Signature] Date: 6/8/18 Time: 10:15

Checked by (Laboratory): [Signature] Date: 6/8/18 Time: 10:15

Shipment Method: _____

Required Turnaround Time: (Check Box) STD 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour

Results Due Date: _____

Notes: San Miguel Electric CCR Well Monitoring

QC Package: (Check One Box Below)

Level II Std QC TRRP Checklist

Level III Std QC/Raw Date TRRP Level IV

Level IV SW846/CLP

Other: _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

ote: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

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COC ID: 182317

HS18060413

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



1, WV

Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	San Miguel Electric CCR Well Moni	A	300_W (Cl, Fl, SO4)
Work Order		Project Number		B	HG_W
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc	C	ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D	PH_W M4500H+B
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140	E	Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F	Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G	TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H	
Fax	(713) 621-4588	Fax	(713) 621-4588	I	
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	AP-34	6/6/18	11:55	H ₂ O	2,7,8	6	X	X	X	X	X	X	X				
2	AP-35		12:30														
3	AP-36		13:09														
4	FIELD BLANK 2		13:00														
5	P2-6		14:15														
6	EP-38		14:55														
7	P2-2		16:20														
8	EP-31	6/7/18	8:41														
9	EP-32		9:20														
10	DUP-2																

Sampler(s) Please Print & Sign <i>Joshua Mitchell</i>		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:		
Relinquished by:		Date: 6/8/18	Time: 10:15	Received by:		<input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				
Relinquished by:		Date:	Time:	Received by (Laboratory):		Notes: San Miguel Electric CCR Well Monitoring				
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)		
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				6/8/18 10:15				<input checked="" type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRRP Checklist	
								<input type="checkbox"/> Level III Std QC/Raw Data	<input type="checkbox"/> TRRP Level IV	
								<input type="checkbox"/> Level IV SW846/CLP	<input type="checkbox"/> Other	

NOTE: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

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Holland, MI
+1 616 399 6070

Chain of Custody Fo

Page 3 of 4

COC ID: 182315

HS18060413

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring

Houston, WV
168

280



ALS Project Manager:

Customer Information		Project Information		
Purchase Order		Project Name	San Miguel Electric CCR Well Moni	A
Work Order		Project Number		B
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc	C
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140	E
				F
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G
Phone	(713) 621-4474	Phone	(713) 621-4474	H
Fax	(713) 621-4588	Fax	(713) 621-4588	I
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-4	6/6/18	15:25	H2O	2,7,8	6	X	X	X	X	X	X	X				
2	EP-32 MS	6/7/18	9:20														
3	EP-33		9:58														
4	FIELD BLANK 3		9:50														
5	EP-34		10:30														
6	EP-35		11:00														
7	EP-36		11:32														
8	EP-37		12:06														
9	PZ-3		16:30														
10	MS DUP-1																

Sampler(s) Please Print & Sign: Joshua Mitchell

Relinquished by: [Signature] Date: 6/18/18 Time: 10:15

Received by: [Signature] Date: 6/18/18 Time: 10:15

Checked by (Laboratory): [Signature] Date: 6/18/18 Time: 10:15

Shipment Method: _____

Required Turnaround Time: (Check Box) STD 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour

Results Due Date: _____

Notes: San Miguel Electric CCR Well Monitoring

QC Package: (Check One Box Below)

Level II Std QC TRRP Checklist

Level III Std QC/Raw Data TRRP Level IV

Level IV SW846/CLP

Other _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

ote: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
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Chain of Custody Form

Page 4 of 4

COC ID: **180520**

HS18060413

wv

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring

ALS Project Manager:



Customer Information		Project Information		
Purchase Order		Project Name	San Miguel Electric CCR Well Moni	A
Work Order		Project Number		B
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc	C
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140	E
				F
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G
Phone	(713) 621-4474	Phone	(713) 621-4474	H
Fax	(713) 621-4588	Fax	(713) 621-4588	I
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SP-34	6/7/18	13:15	H ₂ O	2, 7, 8	4	X	X	X	X							
2	SP-1	↓	13:50	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
3	SP-1 MS		13:55														
4	SP-32		14:33														
5	SP-3		15:07														
6	SP-2		15:50														
7																	
8																	
9	MS Dup-3			H ₂ O		4	X	X	X	X							
10	Dup-3																

Sampler(s) Please Print & Sign: _____ Shipment Method: _____

Required Turnaround Time: (Check Box) STD 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour

Results Due Date: _____

Relinquished by: [Signature] Date: 6/8/18 Time: 10:15

Received by: _____ Date: _____ Time: _____

Relinquished by: _____ Date: _____ Time: _____

Received by (Laboratory): F 6/8/18 10:15

Notes: San Miguel Electric CCR Well Monitoring

Logged by (Laboratory): _____ Date: _____ Time: _____

Checked by (Laboratory): _____

QC Package: (Check One Box Below)

Level II Std QC TRRP Checklist

Level III Std QC/Raw Data TRRP Level IV

Level IV SWB46/GLP

Other

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Friday, July 27, 2018

Nicole Edwards
ALS Environmental
10450 Stancliff Rd, Suite 210
Houston, TX 77099

Re: ALS Workorder: 1806189
Project Name:
Project Number: HS18060413

Dear Ms. Edwards:

Twenty six water samples were received from ALS Environmental, on 6/11/2018. The samples were scheduled for the following analyses:

Radium-226

Radium-228

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Jeff R. Kujawa
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



1806189

Radium-228:

The samples were analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac , which is the ingrown progeny of ^{228}Ra , according to the current revision of SOP 724.

The Ra-228 recovery in the associated laboratory control sample RA180628-5LCS is below the lower control limit of 70% at 63.6%. The laboratory control sample duplicate RA180628-5LCSD recovery was within acceptance limits at 102%. Additionally, the duplicate error ratio (DER) for this LCS/LCSD pair is within control limits at 1.3. Results are submitted without further qualification.

All remaining acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to the current revision of SOP 783.

The Ra-226 recovery in the associated laboratory control sample RE180628-6LCS at the upper control limit of 120%. The laboratory control sample duplicate RE180628-6LCSD recovery was within acceptance limits at 108%. Additionally, the duplicate error ratio (DER) for this LCS/LCSD pair is within control limits at 0.3. Results are submitted with project manager approval.

All remaining acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1806189

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS18060413

Client PO Number: HS18060413

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
AP-31	1806189-1		WATER	05-Jun-18	10:55
MW-3	1806189-2		WATER	05-Jun-18	11:40
AP-32	1806189-3		WATER	05-Jun-18	12:20
Filed Blank 1	1806189-4		WATER	05-Jun-18	12:35
AP-33	1806189-5		WATER	06-Jun-18	10:33
PZ-5	1806189-6		WATER	06-Jun-18	11:18
Equipment Blank	1806189-7		WATER	05-Jun-18	10:28
DUP-1	1806189-8		WATER	05-Jun-18	
AP-34	1806189-9		WATER	06-Jun-18	11:55
AP-35	1806189-10		WATER	06-Jun-18	12:30
AP-36	1806189-11		WATER	06-Jun-18	13:09
Field Blank 2	1806189-12		WATER	06-Jun-18	13:00
PZ-6	1806189-13		WATER	06-Jun-18	14:15
EP-38	1806189-14		WATER	06-Jun-18	14:55
PZ-2	1806189-15		WATER	06-Jun-18	16:20
EP-31	1806189-16		WATER	07-Jun-18	8:41
EP-32	1806189-17		WATER	07-Jun-18	9:20
DUP-2	1806189-18		WATER	05-Jun-18	
MW-4	1806189-19		WATER	06-Jun-18	15:25
EP-33	1806189-20		WATER	07-Jun-18	9:58
Field Blank 3	1806189-21		WATER	07-Jun-18	9:50
EP-34	1806189-22		WATER	07-Jun-18	10:30
EP-35	1806189-23		WATER	07-Jun-18	11:00
EP-36	1806189-24		WATER	07-Jun-18	11:32
EP-37	1806189-25		WATER	07-Jun-18	12:06
PZ-3	1806189-26		WATER	07-Jun-18	16:30



Please analyze MS/MSD for Highlighted Samples

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

COC ID: 9255

SUBCONTRACT TO:

ALS Environmental, Fort Collins
225 Commerce Drive
Fort Collins, CO 80524

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

Company: ALS Houston
Contact: Nicole Edwards
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: Nicole.Edwards@alsglobal.com
Alternate Contact:
Email:

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS18060413
TSR: Jennifer Bell

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	HS18060413-01	AP-31	Water	05 Jun 2018 10:55
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
2.	HS18060413-02	MW-3	Water	05 Jun 2018 11:40
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
3.	HS18060413-03	AP-32	Water	05 Jun 2018 12:20
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
4.	HS18060413-04	Field Blank 1	Water	05 Jun 2018 12:35
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
5.	HS18060413-05	AP-33	Water	06 Jun 2018 10:33
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
6.	HS18060413-06	PZ-5	Water	06 Jun 2018 11:18
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018



Subcontract Chain of Custody

COC ID: 9255

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
7.	HS18060413-07	Equipment Blank	Water	05 Jun 2018 10:28
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
8.	HS18060413-08	DUP-1	Water	05 Jun 2018 00:00
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
9.	HS18060413-09	AP-34	Water	06 Jun 2018 11:55
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
10.	HS18060413-10	AP-35	Water	06 Jun 2018 12:30
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
11.	HS18060413-11	AP-36	Water	06 Jun 2018 13:09
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
12.	HS18060413-12	Field Blank 2	Water	06 Jun 2018 13:00
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
13.	HS18060413-13	PZ-6	Water	06 Jun 2018 14:15
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
14.	HS18060413-14	EP-38	Water	06 Jun 2018 14:55
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
15.	HS18060413-15	PZ-2	Water	06 Jun 2018 16:20
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
16.	HS18060413-16	EP-31	Water	07 Jun 2018 08:41
	SUB_RA 226			22 Jun 2018
	SUB_RA 228			22 Jun 2018
17.	HS18060413-17	EP-32	Water	07 Jun 2018 09:20



Subcontract Chain of Custody

COC ID: 9255

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
18. HS18060413-18	DUP-2	Water	05 Jun 2018 00:00
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
19. HS18060413-19	MW-4	Water	06 Jun 2018 15:25
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
20. HS18060413-20	EP-33	Water	07 Jun 2018 09:58
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
21. HS18060413-21	Field Blank 3	Water	07 Jun 2018 09:50
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
22. HS18060413-22	EP-34	Water	07 Jun 2018 10:30
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
23. HS18060413-23	EP-35	Water	07 Jun 2018 11:00
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
24. HS18060413-24	EP-36	Water	07 Jun 2018 11:32
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
25. HS18060413-25	EP-37	Water	07 Jun 2018 12:06
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018
26. HS18060413-26	PZ-3	Water	07 Jun 2018 16:30
SUB_RA 226			22 Jun 2018
SUB_RA 228			22 Jun 2018

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.



Subcontract Chain of Custody

COC ID: 9255

QC Level: STD (Laboratory Standard QC: method blank and LCS required)

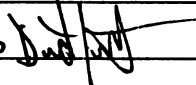
Relinquished By:



Date/Time:

6/8/18 18:00

Received By:

David Lemons 

Date/Time:

6/11/18 0950

Cooler ID(s):

Temperature(s):



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS Houston

Workorder No: 1806189

Project Manager: JRK

Initials: DL Date: 6/11/18

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	NONE	<input checked="" type="radio"/> YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	<input checked="" type="radio"/> N/A	YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ___ < green pea ___ > green pea	<input checked="" type="radio"/> N/A	YES	NO
15. Do any water samples contain sediment? Amount of sediment: ___ dusting ___ moderate ___ heavy	Amount N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		YES	<input checked="" type="radio"/> NO
17. Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #1 #3 #4	<input checked="" type="radio"/> RAD ONLY	YES NO
Cooler #: <u>1 2 3</u>			
Temperature (°C): <u>Amb Amb Amb</u>			
No. of custody seals on cooler: <u>2 2 2</u>			
External µR/hr reading: <u>11</u>			
Background µR/hr reading: <u>13</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: [Signature] 6-11-18

Must Deliver Next Business Day
Time and Temperature Sensitive!



11
2-
AMS

ORIGIN ID:SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 08 JUN 18
ACTWGT: 50.30 LB
CAD: 300130/CAFE3111
DIMS: 26x14x14 IN
BILL SENDER

TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524

(970) 490-1511
REF: HS18060413/424/427/428 - NE & BF



FedEx
Express



1 of 4
TRK# 80 9529 9267
SER ##

MON - 11 JUN 3:00
STANDARD OVERNIGHT

ETCA

80524
CO-US DEN





Must Deliver Next Business Day
Time and Temperature Sensitive

11
2-
AMB

ORIGIN ID:SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 08JUN18
ACTWGT: 50.30 LB
CAD: 300130/CAFE3111
DIMS: 26x14x14 IN
BILL SENDER

TO **SAMPLE RECEIVING
ALS ENVIRONMENTAL
225 COMMERCE DRIVE**

FORT COLLINS CO 80524

(970) 490-1611

REF: HS18060413/424/427/428 - NE & BF



**FedEx
Express**



546C1/48E/33C1

2 of 4
MPS# 4380 9529 9278
0263
Metr# 4380 9529 9267

0201

BD FTCA

**MON - 11 JUN 3:00P
STANDARD OVERNIGHT**

**80524
CO-US DEN**





**Must Deliver Next Business Day
Time and Temperature Sensitive!**

11
2-
AMB

ORIGIN ID:SGRA (281) 530-5656
CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

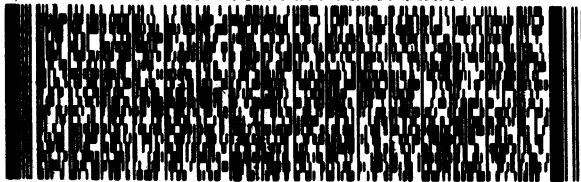
SHIP DATE: 08JUN18
ACTWT: 50.30 LB
CAD: 300130/CAFE3111
DIMS: 26x14x14 IN
BILL SENDER

TO **SAMPLE RECEIVING
ALS ENVIRONMENTAL
225 COMMERCE DRIVE**

FORT COLLINS CO 80524

(970) 490-1611

REF: HS18060413/424/427/428 - NE & BF



**FedEx
Express**



3 of 4

MPS# 4380 9529 9289
0263

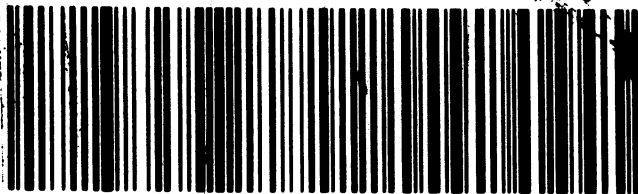
Mstr# 4380 9529 9267

0201

**MON - 11 JUN 3:00P
STANDARD OVERNIGHT**

BD FTCA

**80524
CO-US DEN**



Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: AP-31

Lab ID: 1806189-1

Legal Location:

Matrix: WATER

Collection Date: 6/5/2018 10:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 6/27/2018	PrepBy: RGS
Ra-226	ND (+/- 0.29)	U	0.47	pCi/l	NA	7/17/2018 11:24
Carr: BARIUM	89.3		40-110	%REC	DL = NA	7/17/2018 11:24
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 6/27/2018	PrepBy: RGS
Ra-228	0.99 (+/- 0.4)	LT	0.59	pCi/l	NA	7/2/2018 10:58
Carr: BARIUM	88.1		40-110	%REC	DL = NA	7/2/2018 10:58

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: MW-3

Lab ID: 1806189-2

Legal Location:

Matrix: WATER

Collection Date: 6/5/2018 11:40

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.76 (+/- 0.33)	LT	0.17	pCi/l	NA	7/17/2018 11:24
Carr: BARIUM	87.2		40-110	%REC	DL = NA	7/17/2018 11:24
Radium-228 Analysis by GFPC						
Ra-228	4.9 (+/- 1.2)		0.7	pCi/l	NA	7/2/2018 10:58
Carr: BARIUM	83.5		40-110	%REC	DL = NA	7/2/2018 10:58

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: AP-32

Lab ID: 1806189-3

Legal Location:

Matrix: WATER

Collection Date: 6/5/2018 12:20

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.61 (+/- 0.34)	LT	0.33	pCi/l	NA	7/13/2018 13:06
Carr: BARIUM	89.1		40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	9.2 (+/- 2.2)		0.6	pCi/l	NA	7/5/2018 10:30
Carr: BARIUM	84.5		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: Filed Blank 1

Lab ID: 1806189-4

Legal Location:

Matrix: WATER

Collection Date: 6/5/2018 12:35

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.21)	U	0.29	pCi/l	NA	7/13/2018 13:06
Carr: BARIUM	82.5		40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	ND (+/- 0.31)	U	0.74	pCi/l	NA	7/5/2018 10:30
Carr: BARIUM	70.8		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: AP-33

Lab ID: 1806189-5

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 10:33

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.17 (+/- 0.52)		SOP 783		Prep Date: 6/28/2018	PrepBy: RGS
<i>Carr: BARIUM</i>	88.5		0.41	pCi/l	NA	7/13/2018 13:06
			40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	7.3 (+/- 1.8)		SOP 724		Prep Date: 6/28/2018	PrepBy: RGS
<i>Carr: BARIUM</i>	87.2		0.6	pCi/l	NA	7/5/2018 10:30
			40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: PZ-5

Lab ID: 1806189-6

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 11:18

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.44 (+/- 0.26)	LT	0.28	pCi/l	NA	7/13/2018 13:06
Carr: BARIUM	88.5		40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	3.14 (+/- 0.85)		0.61	pCi/l	NA	7/5/2018 10:30
Carr: BARIUM	83.9		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: Equipment Blank

Lab ID: 1806189-7

Legal Location:

Matrix: WATER

Collection Date: 6/5/2018 10:28

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 6/28/2018	PrepBy: RGS
Ra-226	ND (+/- 0.17)	U	0.33	pCi/l	NA	7/13/2018 13:06
Carr: BARIUM	87.7		40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 6/28/2018	PrepBy: RGS
Ra-228	ND (+/- 0.26)	U	0.61	pCi/l	NA	7/5/2018 10:30
Carr: BARIUM	84.9		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: DUP-1

Lab ID: 1806189-8

Legal Location:

Matrix: WATER

Collection Date: 6/5/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.44 (+/- 0.32)	LT	0.41	pCi/l	NA	7/13/2018 13:06
Carr: BARIUM	85.3		40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	1.59 (+/- 0.53)		0.66	pCi/l	NA	7/5/2018 10:30
Carr: BARIUM	85.5		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: AP-34

Lab ID: 1806189-9

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 11:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.35 (+/- 0.25)	LT	SOP 783	0.3 pCi/l	NA	Prep Date: 6/28/2018 PrepBy: RGS 7/13/2018 13:06
Carr: BARIUM	90.7			40-110 %REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	3.23 (+/- 0.87)		SOP 724	0.64 pCi/l	NA	Prep Date: 6/28/2018 PrepBy: RGS 7/5/2018 10:30
Carr: BARIUM	82.6			40-110 %REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental
 Project: HS18060413
 Sample ID: AP-35
 Legal Location:
 Collection Date: 6/6/2018 12:30

Date: 27-Jul-18
 Work Order: 1806189
 Lab ID: 1806189-10
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	7 (+/- 1.9)		SOP 783		Prep Date: 6/28/2018	PrepBy: RGS
Carr: BARIUM	87		0.3	pCi/l	NA	7/13/2018 13:06
			40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	30.8 (+/- 7.2)		SOP 724		Prep Date: 6/28/2018	PrepBy: RGS
Carr: BARIUM	83		0.6	pCi/l	NA	7/5/2018 10:30
			40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: AP-36

Lab ID: 1806189-11

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 13:09

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.32)	U	0.44	pCi/l	NA	7/13/2018 13:06
Carr: BARIUM	86.8		40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	2.93 (+/- 0.81)		0.63	pCi/l	NA	7/5/2018 10:30
Carr: BARIUM	83.9		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: Field Blank 2

Lab ID: 1806189-12

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 13:00

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.59 (+/- 0.37)	LT	SOP 783	0.4 pCi/l	NA	Prep Date: 6/28/2018 PrepBy: RGS 7/13/2018 13:06
Carr: BARIUM	85.9		40-110	%REC	DL = NA	7/13/2018 13:06
Radium-228 Analysis by GFPC						
Ra-228	ND (+/- 0.3)	U	SOP 724	0.66 pCi/l	NA	Prep Date: 6/28/2018 PrepBy: RGS 7/5/2018 10:30
Carr: BARIUM	82.1		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: PZ-6

Lab ID: 1806189-13

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 14:15

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.15)	U	0.23	pCi/l	NA	7/13/2018 13:33
Carr: BARIUM	89.7		40-110	%REC	DL = NA	7/13/2018 13:33
Radium-228 Analysis by GFPC						
Ra-228	1.89 (+/- 0.58)		0.62	pCi/l	NA	7/5/2018 10:30
Carr: BARIUM	85.5		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: EP-38

Lab ID: 1806189-14

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 14:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.71 (+/- 0.42)	LT	SOP 783	0.5 pCi/l	NA	Prep Date: 6/28/2018 PrepBy: RGS 7/13/2018 13:33
Carr: BARIUM	77.9		40-110	%REC	DL = NA	7/13/2018 13:33
Radium-228 Analysis by GFPC						
Ra-228	1.57 (+/- 0.53)		SOP 724	0.65 pCi/l	NA	Prep Date: 6/28/2018 PrepBy: RGS 7/5/2018 10:30
Carr: BARIUM	81.4		40-110	%REC	DL = NA	7/5/2018 10:30

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: PZ-2

Lab ID: 1806189-15

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 16:20

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.46 (+/- 0.25)	LT	0.21	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	83.9		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
Ra-228	2.07 (+/- 0.62)		0.62	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	86.6		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: EP-31

Lab ID: 1806189-16

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 08:41

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 6/28/2018	PrepBy: RGS
Ra-226	ND (+/- 0.19)	U	0.24	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	85.6		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 6/28/2018	PrepBy: RGS
Ra-228	0.94 (+/- 0.4)	LT	0.62	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	85.9		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: EP-32

Lab ID: 1806189-17

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 09:20

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.78 (+/- 0.35)	LT	0.19	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	83.8		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
Ra-228	2.04 (+/- 0.62)		0.64	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	85.4		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: DUP-2

Lab ID: 1806189-18

Legal Location:

Matrix: WATER

Collection Date: 6/5/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.51 (+/- 0.28)	LT	0.29	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	80.9		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
Ra-228	3.8 (+/- 1)		0.6	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	85.5		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: MW-4

Lab ID: 1806189-19

Legal Location:

Matrix: WATER

Collection Date: 6/6/2018 15:25

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.44 (+/- 0.25)	LT	0.19	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	81.3		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
Ra-228	2.9 (+/- 0.8)		0.64	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	82.3		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: EP-33

Lab ID: 1806189-20

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 09:58

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 6/28/2018	PrepBy: RGS
Ra-226	0.3 (+/- 0.2)	LT	0.23	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	84.4		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 6/28/2018	PrepBy: RGS
Ra-228	0.89 (+/- 0.39)	LT	0.64	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	84.3		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: Field Blank 3

Lab ID: 1806189-21

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 09:50

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 6/28/2018	PrepBy: RGS
Ra-226	ND (+/- 0.11)	U	0.16	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	83.2		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 6/28/2018	PrepBy: RGS
Ra-228	ND (+/- 0.29)	U	0.62	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	84.2		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental
 Project: HS18060413
 Sample ID: EP-34
 Legal Location:
 Collection Date: 6/7/2018 10:30

Date: 27-Jul-18
 Work Order: 1806189
 Lab ID: 1806189-22
 Matrix: WATER
 Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			SOP 783		Prep Date: 6/28/2018	PrepBy: RGS
Ra-226	1.78 (+/- 0.59)		0.2	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	83.8		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC			SOP 724		Prep Date: 6/28/2018	PrepBy: RGS
Ra-228	5 (+/- 1.3)		0.6	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	86.8		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: EP-35

Lab ID: 1806189-23

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 11:00

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.45 (+/- 0.27)	LT	0.27	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	82.6		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
Ra-228	1.54 (+/- 0.51)		0.63	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	83.5		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: EP-36

Lab ID: 1806189-24

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 11:32

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.27)	U	0.35	pCi/l	NA	7/25/2018 13:31
Carr: BARIUM	82.6		40-110	%REC	DL = NA	7/25/2018 13:31
Radium-228 Analysis by GFPC						
Ra-228	3.46 (+/- 0.93)		0.67	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	84.4		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: EP-37

Lab ID: 1806189-25

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 12:06

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.66 (+/- 0.28)	LT	0.14	pCi/l	NA	7/26/2018 12:43
Carr: BARIUM	85.2		40-110	%REC	DL = NA	7/26/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	3.53 (+/- 0.93)		0.61	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	84.8		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: PZ-3

Lab ID: 1806189-26

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 16:30

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.54 (+/- 0.26)	LT	0.23	pCi/l	NA	7/26/2018 12:43
Carr: BARIUM	83.2		40-110	%REC	DL = NA	7/26/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	4.9 (+/- 1.2)		0.6	pCi/l	NA	7/6/2018 08:37
Carr: BARIUM	82.9		40-110	%REC	DL = NA	7/6/2018 08:37

Client: ALS Environmental

Date: 27-Jul-18

Project: HS18060413

Work Order: 1806189

Sample ID: PZ-3

Lab ID: 1806189-26

Legal Location:

Matrix: WATER

Collection Date: 6/7/2018 16:30

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC
- U or ND - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- W - DER is greater than Warning Limit of 1.42
- * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
- # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
- G - Sample density differs by more than 15% of LCS density.
- D - DER is greater than Control Limit
- M - Requested MDC not met.
- LT - Result is less than requested MDC but greater than achieved MDC.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- * - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- * - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

ALS -- Fort Collins

Date: 7/27/2018 9:58:

Client: ALS Environmental
 Work Order: 1806189
 Project: HS18060413

QC BATCH REPORT

Batch ID: **RE180627-1-1** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS		Sample ID: RE180627-1			Units: pCi/l		Analysis Date: 7/17/2018 11:57				
Client ID:		Run ID: RE180627-1A			Prep Date: 6/27/2018		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	54 (+/- 14)	0	47.88		114	67-120					P
Carr: BARIUM	25960		30210		85.9	40-110					

LCSD		Sample ID: RE180627-1			Units: pCi/l		Analysis Date: 7/17/2018 11:57				
Client ID:		Run ID: RE180627-1A			Prep Date: 6/27/2018		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	54 (+/- 13)	0	47.88		112	67-120		54	0.04	2.1	P
Carr: BARIUM	27120		30210		89.7	40-110		25960			

MB		Sample ID: RE180627-1			Units: pCi/l		Analysis Date: 7/17/2018 11:57				
Client ID:		Run ID: RE180627-1A			Prep Date: 6/27/2018		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.29									U
Carr: BARIUM	26760		30210		88.6	40-110					

The following samples were analyzed in this batch:

Client: ALS Environmental
 Work Order: 1806189
 Project: HS18060413

QC BATCH REPORT

Batch ID: **RE180628-5-1** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS		Sample ID: RE180628-5		Units: pCi/l			Analysis Date: 7/13/2018 13:33				
Client ID:		Run ID: RE180628-5C			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	38 (+/- 9.5)	0.4	31.92		119	67-120					P
Carr: BARIUM	27980		31840		87.9	40-110					

LCSD		Sample ID: RE180628-5		Units: pCi/l			Analysis Date: 7/13/2018 13:33					
Client ID:		Run ID: RE180628-5C			Prep Date: 6/28/2018			DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual	
Ra-226	33.3 (+/- 8.4)	0.3	31.92		104	67-120			38	0.4	2.1	P
Carr: BARIUM	28010		31840		88	40-110			27980			

MB		Sample ID: RE180628-5		Units: pCi/l			Analysis Date: 7/13/2018 13:33				
Client ID:		Run ID: RE180628-5C			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.28									U
Carr: BARIUM	26910		31840		84.5	40-110					

The following samples were analyzed in this batch:

1806189-3	1806189-4	1806189-5
1806189-6	1806189-7	1806189-8
1806189-9	1806189-10	1806189-11
1806189-12	1806189-13	1806189-14

Client: ALS Environmental
 Work Order: 1806189
 Project: HS18060413

QC BATCH REPORT

Batch ID: **RE180628-6-1** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS		Sample ID: RE180628-6		Units: pCi/l			Analysis Date: 7/26/2018 12:43				
Client ID:		Run ID: RE180628-6A			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	38.4 (+/- 9.6)	0.3	31.92		120	67-120					H
Carr: BARIUM	27500		33090		83.1	40-110					

LCSD		Sample ID: RE180628-6		Units: pCi/l			Analysis Date: 7/26/2018 12:43				
Client ID:		Run ID: RE180628-6A			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	34.5 (+/- 8.6)	0.2	31.92		108	67-120		38.4	0.3	2.1	P
Carr: BARIUM	28220		33090		85.3	40-110		27500			

MB		Sample ID: RE180628-6		Units: pCi/l			Analysis Date: 7/26/2018 12:43				
Client ID:		Run ID: RE180628-6A			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.21									U
Carr: BARIUM	27760		33090		83.9	40-110					

The following samples were analyzed in this batch:

1806189-15	1806189-16	1806189-17
1806189-18	1806189-19	1806189-20
1806189-21	1806189-22	1806189-23
1806189-24	1806189-25	1806189-26

Client: ALS Environmental
 Work Order: 1806189
 Project: HS18060413

QC BATCH REPORT

Batch ID: RA180627-1-1 Instrument ID LB4100-C Method: Radium-228 Analysis by GFPC

LCS		Sample ID: RA180627-1		Units: pCi/l			Analysis Date: 7/2/2018 10:58				
Client ID:		Run ID: RA180627-1A			Prep Date: 6/27/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	5.7 (+/- 1.4)	0.6	6.037		95	70-130					P
Carr: BARIUM	31250		36020		86.7	40-110					

LCSD		Sample ID: RA180627-1		Units: pCi/l			Analysis Date: 7/2/2018 10:58				
Client ID:		Run ID: RA180627-1A			Prep Date: 6/27/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	6.8 (+/- 1.7)	0.6	6.037		113	70-130		5.7	0.5	2.1	P
Carr: BARIUM	30530		36020		84.8	40-110		31250			

MB		Sample ID: RA180627-1		Units: pCi/l			Analysis Date: 7/2/2018 10:58				
Client ID:		Run ID: RA180627-1A			Prep Date: 6/27/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.64									U
Carr: BARIUM	30980		36020		86	40-110					

The following samples were analyzed in this batch: 1806189-1 1806189-2

Client: ALS Environmental
 Work Order: 1806189
 Project: HS18060413

QC BATCH REPORT

Batch ID: RA180628-5-1 Instrument ID LB4100-C Method: Radium-228 Analysis by GFPC

LCS		Sample ID: RA180628-5			Units: pCi/l		Analysis Date: 7/5/2018 10:30				
Client ID:		Run ID: RA180628-5A			Prep Date: 6/28/2018		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	3.8 (+/- 1)	0.6	6.031		63.6	70-130					L
Carr: BARIUM	33490		39980		83.8	40-110					

LCSD		Sample ID: RA180628-5			Units: pCi/l		Analysis Date: 7/5/2018 10:30				
Client ID:		Run ID: RA180628-5A			Prep Date: 6/28/2018		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	6.2 (+/- 1.5)	0.6	6.031		102	70-130		3.8	1.3	2.1	P
Carr: BARIUM	33940		39980		84.9	40-110		33490			

MB		Sample ID: RA180628-5			Units: pCi/l		Analysis Date: 7/5/2018 10:30				
Client ID:		Run ID: RA180628-5A			Prep Date: 6/28/2018		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.65									U
Carr: BARIUM	33770		39980		84.5	40-110					

The following samples were analyzed in this batch:

1806189-3	1806189-4	1806189-5
1806189-6	1806189-7	1806189-8
1806189-9	1806189-10	1806189-11
1806189-12	1806189-13	1806189-14

Client: ALS Environmental
 Work Order: 1806189
 Project: HS18060413

QC BATCH REPORT

Batch ID: RA180628-6-1 Instrument ID LB4100-C Method: Radium-228 Analysis by GFPC

LCS		Sample ID: RA180628-6		Units: pCi/l			Analysis Date: 7/6/2018 08:37				
Client ID:		Run ID: RA180628-6A			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	6.7 (+/- 1.6)	0.6	6.029		111	70-130					P
Carr: BARIUM	33340		39850		83.6	40-110					

LCSD		Sample ID: RA180628-6		Units: pCi/l			Analysis Date: 7/6/2018 08:37				
Client ID:		Run ID: RA180628-6A			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	6.7 (+/- 1.6)	0.6	6.029		110	70-130		6.7	0.007	2.1	P
Carr: BARIUM	33960		39850		85.2	40-110		33340			

MB		Sample ID: RA180628-6		Units: pCi/l			Analysis Date: 7/6/2018 08:37				
Client ID:		Run ID: RA180628-6A			Prep Date: 6/28/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.61									U
Carr: BARIUM	33690		39850		84.5	40-110					

The following samples were analyzed in this batch:

1806189-15	1806189-16	1806189-17
1806189-18	1806189-19	1806189-20
1806189-21	1806189-22	1806189-23
1806189-24	1806189-25	1806189-26

APPENDIX C.3

Data Usability Summary – September 2018 Sampling Event

This Data Usability Summary (DUS) continues the format established in previous summaries completed by AECOM (AECOM, 2017). The DUS may be modified going forward, according to project needs. The laboratory report and field notes for the September 2018 sampling event were reviewed and the data usability was evaluated following the Draft Groundwater Sampling and Analysis Plan (ERM, 2016) and using the National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017 for metals.

Sample collection was performed by Source Environmental Sciences Inc. (Source) on 4 – 6 September 2018.

Sample Collection and Field Documentation: Sample collection and field documentation were performed in general accordance with the Draft Sampling and Analysis Plan (SAP) (ERM, 2016) with the following variances:

- Field Recording - Field notes were not on waterproof paper and/or waterproof ink, pages were not sequentially numbered and signed by field personnel. Weather conditions were not noted. Written errors were not corrected according to the SAP.
- Field Instrument Calibration - The time, date, and location were not specified for instrument calibration.
- Monitor Well Inspection - No documentation of monitoring well inspection was provided by Source
- Water Level and Total Depth Information - Depth to water and total depth measurements were not consistently recorded to 0.01-foot precision.

ALS Environmental located in Houston, Texas was contracted by Source Environmental Sciences Inc. to analyze groundwater samples from the September 2018 monitoring event. The radionuclide analyses were subcontracted to ALS Environmental in Fort Collins, Colorado. The prepared lab report was reviewed for data usability.

ALS Environmental is a National Environmental Laboratory Accreditation Program (NELAP) accredited lab with the following applicable NELAP certification:

- ALS Environmental in Houston, Texas - Texas certification No. T10470231-18-21
- ALS Environmental in Fort Collins, Colorado – Texas certification No. T104704241

A total of 32 groundwater samples were analyzed during the September 2018 semiannual groundwater monitoring program. Samples were analyzed for metals (SW6020A), mercury (SW7470A), anions (E300.0), total dissolved solids (SM2540C), pH (SM 4500-H+ B), Radium-226 (Method 903.1) and Radium-228 by Gas Flow Proportional Counting (GFPC). The samples, corresponding laboratory IDs, and analytical methods are listed in Table C.3.1.

The data package issued by the lab contained most of the information required to perform the data validation as specified in the SAP, with several variances as noted below. In addition, only the reporting limits were provided for each method and no data was flagged with a “J”-flag by the laboratory.

Preservation and Holding Times: Samples were received under chain-of-custody, in acceptable physical condition, and within the acceptable temperature limits. Analyses were completed within the required holding time as specified by the method for both semiannual events except for pH, which is an immediate test.

Initial Calibration and Continuing Calibration Verification: As per the NFG (USEPA, 2017), the acceptance criteria specified in the following table were used to qualify the data:

Criteria	Action	
	Detection	Non-Detect
ICV/CCV Recovery		
<75%	J- or R	R
75 – 89%	J	UJ
90 – 110%	None	None
111 – 125%	J+	None
>125%	J+ or R	None

The provided laboratory report did not contain information on Initial Calibration and Continuing Calibration Verification (ICV or CCV). Therefore, this quality control metric cannot be evaluated. No data were qualified due to calibration issues.

Blanks: As specified in the NFG (USEPA, 2017), results were qualified as non-detect (“U”-flag) if the sample concentrations were <10x the method blank concentration. No analytes were detected above the reporting limit (RL) in method blanks during the 2018 sampling events, therefore no data were qualified due to detections in method blanks.

The NFG (USEPA, 2017) do not specify procedures for the qualification of constituents detected in field or equipment blanks. Following AECOM (2017), sample concentrations that were <5x the field or equipment blank concentrations were qualified with a “U”-flag. Isotope analyses (Radium-226 and -228) were qualified with a “U”-flag if sample concentrations were within the field or equipment blank concentrations plus the reported error.

Boron was detected at 0.024 mg/L in the field blank sample collected on 5 September 2018, Field Blank 2. This boron concentration is two orders of magnitude lower than the corresponding samples and no data was qualified.

Radium-226 and Radium-228 were detected at 1.1 ± 0.48 pCi/L and 5.2 ± 1.3 pCi/L, respectively, in the equipment blank collected on 4 September 2018. Samples with Radium-226 concentrations below 1.58 pCi/L, Radium-228 concentrations below 6.5 pCi/L, and Radium-226 & Radium-228 concentrations below 8 pCi/L were qualified with a “U”-flag.

Data qualified due to blank detections are summarized in Table C.3.2.

Laboratory Control Samples: Following the approach used by AECOM (2017), laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) were qualified according to the following NFG criteria:

Criteria	Action	
	LCS/LCSD Recovery	Detection
< 40%	J-	R
40 – 69%	J-	UJ
70 – 130%	None	None
>130%	J+	None
>150%	R	None

The LCS/LCSD recoveries were averaged for comparison to the above criteria. The LCS/LCSD variability was evaluated using the NFG duplicate sample acceptance criteria of 20% relative percent difference (RPD).

All LCS/LCSD recoveries were within 70 – 130% and the %RPD between LCS and LCSD were within 20% for September 2018 sampling events. No data were qualified.

The analyte chromium was missing from the LCS (no LCSD) lab report for Batch 132318, do not know if this analyte was within acceptable limits.

Matrix Spike/Matrix Spike Duplicate and Post Digestion Spike: Matrix Spike (MS)/Matrix Spike Duplicate (MSD) and Post digestion spike (PDS) data were evaluated according to the acceptance criteria below:

Criteria		Action	
MS Recovery	PDS Recovery	Detection	Non-Detect
<30%	<75%	J-	R
<30%	≥75%	J	UJ
30-74%	<75%	J-	UJ
30-74%	≥75%	J	UJ
>125%	>125%	J+	None
>125%	≤125%	J	None
<30%	Not performed*	J-	R
30-74%	Not performed*	J-	UJ
75-125	Not required	None	None
>125	Not performed*	J+	None

MS/MSD recoveries were averaged for the evaluation. Per the NFG (USEPA, 2017), MS/MSDs were not qualified if the parent sample concentration was greater than 4x the concentration of the spike added. The MS/MSD variability was evaluated using the NFG duplicate sample acceptance criteria of 20% relative percent difference (RPD).

The MS/MSD and PDS analysis is detailed in Table C.3.3. Data qualified due to MS/MSD recoveries or variability or PDS recoveries are summarized in Table C.3.2.

Serial Dilution: Per the NFG (USEPA, 2017), the acceptance criteria specified in the following table are recommended to evaluate Serial Dilution (SD):

Criteria	Action	
	Detection	Non-Detect
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D > 10%	J	UJ
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D ≤ 10% ≥ 75%	None	None
Sample concentration > 50x MDL, serial dilution sample concentration ≥ CRQL, and %D ≥ 100% < 75%	Professional Judgement	
Sample concentration > 5x CRQL and serial dilution sample concentration < CRQL ≥ 75%	None	None
Interferences present	Professional Judgement	

The provided laboratory report did not specify the method detection limits (MDL). Therefore, this quality control metric cannot be evaluated. No data were qualified due to serial dilution issues.

Field Precision: For all analytes except Radium-226 and Radium-228, field duplicates were evaluated using the acceptance criteria specified in the following table:

Criteria	Action	
	Detection	Non-Detect
Both sample and field duplicate sample results are >5x MQL and RPD >20%	J	UJ
Both sample and field duplicate sample results are >5x MQL and RPD <20%	None	None
RPD > 100%	Professional Judgement	
Sample result or field duplicate result <5x MQL and absolute difference >MQL	J	UJ
Sample result or field duplicate result <5x MQL and absolute difference <MQL	None	None

Radium-226 and Radium-228 results were qualified due to field duplicate variability if the sample result ranges did not overlap. Data qualified due to field precision variability are summarized on Table C.3.2 and detailed in Table C.3.4.

Analytical Duplicate Evaluation: A lab duplicate samples was analyzed for total dissolved solids (TDS). Analytical duplicate RPDs were within the NFG duplicate sample acceptance criteria of 20% RPD.

Summary: No September 2018 data were rejected due to this review and data validation. Variances from the SAP were noted; however these variances were not found to significantly impact the data. All September 2018 data are considered usable, however, the limitations indicated by the data validation qualifiers should be considered.

References

AECOM 2017. Groundwater Sampling Report – Event 8 – August 2017, San Miguel Electric Cooperative, Inc., Atascosa County, Texas, October 2017.

ERM 2016. Draft Groundwater Sampling and Analysis Plan, San Miguel Electric Cooperative, Inc., June 2016.

USEPA 2017. National Functional Guidelines (NFGs) for Inorganic Superfund Methods Data Review (EPA 540-R-2017-001), January 2017.

TABLE C.3.1
Field and Laboratory Sample Identification and Analyses Performed - September 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Sample ID	Lab ID	Anions by E300.0	Total Dissolved Solids by SM2540C	pH by SM4500H+ B	ICP-MS Metals by SW6020A	Mercury by SW7470A	Radium-226 by Radon Emission Method 903.1	Radium-228 Analysis by GFPC
Ash Pile								
DUP-3	--	HS18090269-09	A	A	A	A	--	--
SP-1	--	HS18090269-30	A	A	A	A	--	--
SP-2	--	HS18090269-31	A	A	A	A	--	--
SP-3	--	HS18090269-28	A	A	A	A	--	--
SP-32	--	HS18090269-29	A	A	A	A	--	--
SP-34	--	HS18090269-27	A	A	A	A	--	--
Ash Pond								
AP-31	1809175-1	HS18090269-01	A	A	A	A	B	B
AP-32	1809175-4	HS18090269-04	A	A	A	A	B	B
AP-33	1809175-5	HS18090269-05	A	A	A	A	B	B
AP-34	1809175-9	HS18090269-10	A	A	A	A	B	B
AP-35	1809175-10	HS18090269-11	A	A	A	A	B	B
AP-36	1809175-11	HS18090269-12	A	A	A	A	B	B
DUP-1	1809175-7	HS18090269-07	A	A	A	A	B	B
MW-3	1809175-2	HS18090269-02	A	A	A	A	B	B
PZ-2	1809175-24	HS18090269-25	A	A	A	A	B	B
PZ-3	1809175-25	HS18090269-26	A	A	A	A	B	B
PZ-5	1809175-6	HS18090269-06	A	A	A	A	B	B
PZ-6	1809175-12	HS18090269-13	A	A	A	A	B	B
Equalization Pond								
DUP-2	1809175-8	HS18090269-08	A	A	A	A	B	B
EP-31	1809175-22	HS18090269-23	A	A	A	A	B	B
EP-32	1809175-16	HS18090269-17	A	A	A	A	B	B
EP-33	1809175-17	HS18090269-18	A	A	A	A	B	B
EP-34	1809175-18	HS18090269-19	A	A	A	A	B	B
EP-35	1809175-19	HS18090269-20	A	A	A	A	B	B
EP-36	1809175-20	HS18090269-21	A	A	A	A	B	B
EP-37	1809175-21	HS18090269-22	A	A	A	A	B	B
EP-38	1809175-14	HS18090269-15	A	A	A	A	B	B
MW-4	1809175-15	HS18090269-16	A	A	A	A	B	B
QA/QC Samples								
Equipment Blank	1809175-28	HS18090269-35	A	A	A	A	B	B
Field Blank 1	1809175-3	HS18090269-03	A	A	A	A	B	B
Field Blank 2	1809175-13	HS18090269-14	A	A	A	A	B	B
Field Blank 3	1809175-23	HS18090269-24	A	A	A	A	B	B

Notes:

1. A = analyzed by ALS Environmental in Houston, Texas; B = analyzed by ALS Environmental in Fort Collins, Colorado.
2. '--' = not analyzed

TABLE C.3.2
Qualified Analytical Data - September 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Sample ID	Analyte	Result (mg/L)	Units	Qualification	Justification
AP-31	Beryllium	0.011	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
AP-31	Cadmium	<0.01	mg/L	UJ	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
AP-31	Cobalt	0.229	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
AP-31	Radium-226	0.35 ± 0.27	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-31	Radium-226	0.35 ± 0.27	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-31	Radium-226 & Radium-228	1.73 ± 0.8	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-31	Radium-228	1.38 ± 0.53	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-31	Radium-228	1.38 ± 0.53	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-31	Selenium	0.0243	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
AP-32	Beryllium	<0.1	mg/L	UJ	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
AP-32	Boron	19.3	mg/L	J	Field duplicate variability exceeds acceptance criteria.
AP-32	Cadmium	0.0859	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
AP-32	Cobalt	0.595	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
AP-32	Radium-226	0.99 ± 0.47	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-32	Radium-226	0.99 ± 0.47	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-32	Selenium	0.0613	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
AP-33	Beryllium	0.309	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
AP-33	Cadmium	0.139	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
AP-33	Cobalt	1.36	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
AP-33	Radium-226	0.43 ± 0.28	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-33	Radium-226	0.43 ± 0.28	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-33	Selenium	0.112	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
AP-34	Beryllium	0.281	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-34	Cadmium	0.0394	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-34	Cobalt	1.14	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-34	Radium-226 & Radium-228	5.36 ± 1.71	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-34	Radium-228	3.37 ± 0.91	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-34	Radium-228	3.37 ± 0.91	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-34	Selenium	0.068	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-35	Beryllium	0.0737	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-35	Cadmium	0.0213	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-35	Cobalt	0.148	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-35	Selenium	0.0203	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-36	Beryllium	0.0187	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-36	Cobalt	0.0663	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
AP-36	Radium-226	0.4 ± 0.3	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-36	Radium-226 & Radium-228	3.61 ± 1.16	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
AP-36	Radium-228	3.21 ± 0.86	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
DUP-1	Beryllium	<0.2	mg/L	UJ	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
DUP-1	Boron	15.6	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-1	Cadmium	0.0917	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
DUP-1	Cobalt	0.589	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
DUP-1	Radium-226	1.29 ± 0.52	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
DUP-1	Radium-226	1.29 ± 0.52	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
DUP-1	Selenium	0.0629	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
DUP-2	Radium-226	2.15 ± 0.79	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-2	Radium-226 & Radium-228	3.61 ± 1.34	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-2	Radium-228	1.46 ± 0.55	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
DUP-3	Cadmium	0.0339	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
DUP-3	Cadmium	0.0339	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-3	Cobalt	0.109	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
DUP-3	Cobalt	0.109	mg/L	J	Field duplicate variability exceeds acceptance criteria.
DUP-3	Selenium	0.0367	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
EP-31	Cadmium	0.0156	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
EP-31	Cobalt	0.101	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
EP-31	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-31	Radium-226 & Radium-228	0.95 ± 0.67	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-31	Radium-228	0.95 ± 0.44	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-31	Selenium	0.0176	mg/L	J	Average MS/MSD recovery > 125% and PDS recovery ≤ 125%
EP-32	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-32	Radium-226 & Radium-228	1.76 ± 0.87	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-32	Radium-228	1.76 ± 0.56	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-33	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-33	Radium-226	ND ± 0.28	pCi/L	UJ	Field duplicate variability exceeds acceptance criteria.
EP-33	Radium-226 & Radium-228	0.97 ± 0.71	pCi/L	J	Field duplicate variability exceeds acceptance criteria.
EP-33	Radium-226 & Radium-228	0.97 ± 0.43	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-33	Radium-228	0.97 ± 0.43	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-34	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-34	Radium-226	1.42 ± 0.6	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-34	Radium-226 & Radium-228	6.82 ± 2	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-34	Radium-228	5.4 ± 1.4	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-35	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-35	Radium-226	0.57 ± 0.39	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-35	Radium-226 & Radium-228	0.57 ± 0.85	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-36	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-36	Radium-226	0.94 ± 0.51	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-36	Radium-226 & Radium-228	3.64 ± 1.29	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-36	Radium-228	2.7 ± 0.78	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-37	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
EP-37	Radium-226	0.57 ± 0.38	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-37	Radium-226 & Radium-228	3.79 ± 1.26	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-37	Radium-228	3.22 ± 0.88	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-38	Radium-226	0.61 ± 0.37	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-38	Radium-226 & Radium-228	1.83 ± 0.83	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
EP-38	Radium-228	1.22 ± 0.46	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.

TABLE C.3.2
Qualified Analytical Data - September 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Sample ID	Analyte	Result (mg/L)	Units	Qualification	Justification
EQUIPMENT BLANK	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
Equipment Blank	Radium-226	1.1 ± 0.48	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
Equipment Blank	Radium-226 & Radium-228	6.3 ± 1.78	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
Equipment Blank	Radium-228	5.2 ± 1.3	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
FIELD BLANK 1	Beryllium	<0.002	mg/L	UJ	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
FIELD BLANK 1	Cadmium	<0.002	mg/L	UJ	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
FIELD BLANK 1	Cobalt	<0.005	mg/L	UJ	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
FIELD BLANK 1	Selenium	<0.002	mg/L	UJ	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
FIELD BLANK 3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
MW-3	Beryllium	0.0318	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
MW-3	Cadmium	0.063	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
MW-3	Cobalt	0.355	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
MW-3	Radium-226 & Radium-228	5 ± 1.68	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
MW-3	Radium-228	5 ± 1.3	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
MW-3	Radium-228	5 ± 1.3	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
MW-3	Selenium	0.0312	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
MW-4	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
MW-4	Radium-226 & Radium-228	1.92 ± 0.9	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
MW-4	Radium-228	1.92 ± 0.61	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-2	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
PZ-2	Radium-226	0.6 ± 0.34	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-2	Radium-226 & Radium-228	2.83 ± 1.04	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-2	Radium-228	2.23 ± 0.7	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
PZ-5	Beryllium	0.26	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
PZ-5	Cadmium	0.0462	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
PZ-5	Cobalt	0.705	mg/L	J	Average MS/MSD recovery < 30% and PDS recovery ≥ 75%
PZ-5	Radium-226 & Radium-228	3.69 ± 1.18	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-5	Radium-228	3.69 ± 0.98	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-5	Radium-228	3.69 ± 0.98	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-5	Selenium	0.0622	mg/L	J	Average MS/MSD recovery between 30 - 74% and PDS recovery ≥ 75%
PZ-6	Radium-226	0.25 ± 0.21	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-6	Radium-226 & Radium-228	2.13 ± 0.79	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
PZ-6	Radium-228	1.88 ± 0.58	pCi/L	U	Sample concentration similar to corresponding equipment blank concentration.
SP-1	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-2	Mercury	0.000511	mg/L	J-	Average MS/MSD recovery between 30 - 74%.
SP-3	Cadmium	0.0525	mg/L	J	Field duplicate variability exceeds acceptance criteria.
SP-3	Cobalt	0.154	mg/L	J	Field duplicate variability exceeds acceptance criteria.
SP-3	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-32	Mercury	<0.0002	mg/L	UJ	Average MS/MSD recovery between 30 - 74%.
SP-34	Mercury	0.000262	mg/L	J-	Average MS/MSD recovery between 30 - 74%.

Notes:

1. pCi/L = pico Curies per liter, mg/L = milligrams per liter.
2. MS = matrix spike; MSD = matrix spike duplicate.
3. J = Result is an estimated value; UJ = analyte was not detected and the reporting limit is an estimate.

TABLE C.3.3
MS/MSD and PDS Results Outside of Acceptance Criteria - September 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Batch	Method	Analyte	MS % Recovery	MSD %Recovery	MS/MSD RPD	PDS %Recovery	Qualified Samples	Qualification
132282	7470A Mercury	Mercury	61.7	63.7	3.23	--	MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3, PZ-2, PZ-3, SP-34, SP-3, SP-32, SP-1, SP-2, EQUIPMENT BLANK	J- or UJ
132317	6020A - ICP-MS Metals	Beryllium	45.5	42.2	3.11	116	AP-31, MW-3, FIELD BLANK 1, AP-32, AP-33, PZ-5, DUP-1	J or UJ
132317	6020A - ICP-MS Metals	Boron	7280	6970	2.88	89.2	AP-31, MW-3, FIELD BLANK 1, AP-32, AP-33, PZ-5, DUP-1	No change - Parent Sample is \geq 4x spike amount
132317	6020A - ICP-MS Metals	Cadmium	-27.7	-28.2	0.544	99.8	AP-31, MW-3, FIELD BLANK 1, AP-32, AP-33, PZ-5, DUP-1	J or UJ
132317	6020A - ICP-MS Metals	Calcium	-632	-860	2.38	70.1	AP-31, MW-3, FIELD BLANK 1, AP-32, AP-33, PZ-5, DUP-1	No change - Parent Sample is \geq 4x spike amount
132317	6020A - ICP-MS Metals	Cobalt	-614	-618	3.82	89	AP-31, MW-3, FIELD BLANK 1, AP-32, AP-33, PZ-5, DUP-1	J or UJ
132317	6020A - ICP-MS Metals	Lithium	-737	-811	6.71	134	AP-31, MW-3, FIELD BLANK 1, AP-32, AP-33, PZ-5, DUP-1	No change - Parent Sample is \geq 4x spike amount
132317	6020A - ICP-MS Metals	Selenium	36.9	36.1	0.825	91.8	AP-31, MW-3, FIELD BLANK 1, AP-32, AP-33, PZ-5, DUP-1	J or UJ
132318	6020A - ICP-MS Metals	Beryllium	154	168	8.64	106	DUP-2, DUP-3, AP-34, AP-35, AP-36, PZ-6, FIELD BLANK 2, EP-38, MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3	J or none
132318	6020A - ICP-MS Metals	Boron	-6720	-6460	7.45	111	DUP-2, DUP-3, AP-34, AP-35, AP-36, PZ-6, FIELD BLANK 2, EP-38, MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3	No change - Parent Sample is \geq 4x spike amount
132318	6020A - ICP-MS Metals	Cadmium	220	225	2.61	96.2	DUP-2, DUP-3, AP-34, AP-35, AP-36, PZ-6, FIELD BLANK 2, EP-38, MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3	J or none
132318	6020A - ICP-MS Metals	Calcium	528	800	2.58	33.6	DUP-2, DUP-3, AP-34, AP-35, AP-36, PZ-6, FIELD BLANK 2, EP-38, MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3	No change - Parent Sample is \geq 4x spike amount
132318	6020A - ICP-MS Metals	Cobalt	795	799	0.463	87.5	DUP-2, DUP-3, AP-34, AP-35, AP-36, PZ-6, FIELD BLANK 2, EP-38, MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3	No change - Parent Sample is \geq 4x spike amount
132318	6020A - ICP-MS Metals	Lithium	796	952	8.52	115	DUP-2, DUP-3, AP-34, AP-35, AP-36, PZ-6, FIELD BLANK 2, EP-38, MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3	No change - Parent Sample is \geq 4x spike amount
132318	6020A - ICP-MS Metals	Selenium	163	160	2.43	92.8	DUP-2, DUP-3, AP-34, AP-35, AP-36, PZ-6, FIELD BLANK 2, EP-38, MW-4, EP-32, EP-33, EP-34, EP-35, EP-36, EP-37, EP-31, FIELD BLANK 3	J or none
132377	6020A - ICP-MS Metals	Boron	78.7	93.5	0.511	93.1	PZ-2, PZ-3, SP-34, SP-3, SP-32, SP-1, SP-2, Equipment Blank	No change - Parent Sample is \geq 4x spike amount
132377	6020A - ICP-MS Metals	Cadmium	125	93.9	6.22	91.7	PZ-2, PZ-3, SP-34, SP-3, SP-32, SP-1, SP-2, Equipment Blank	No change - Parent Sample is \geq 4x spike amount
132377	6020A - ICP-MS Metals	Calcium	-28.8	-454	3.04	-61.2	PZ-2, PZ-3, SP-34, SP-3, SP-32, SP-1, SP-2, Equipment Blank	No change - Parent Sample is \geq 4x spike amount
132377	6020A - ICP-MS Metals	Cobalt	149	83.8	4.29	85.3	PZ-2, PZ-3, SP-34, SP-3, SP-32, SP-1, SP-2, Equipment Blank	No change - Parent Sample is \geq 4x spike amount
132377	6020A - ICP-MS Metals	Lithium	184	142	2.72	123	PZ-2, PZ-3, SP-34, SP-3, SP-32, SP-1, SP-2, Equipment Blank	No change - Parent Sample is \geq 4x spike amount
R323404	Anions by E300.0	Chloride	-121	-241	1.67	--	AP-31, MW-2, Field Blank 2, EP-34, Field Blank 3, Equipment Blank	No change - Parent Sample is \geq 4x spike amount

TABLE C.3.3
MS/MSD and PDS Results Outside of Acceptance Criteria - September 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Batch	Method	Analyte	MS % Recovery	MSD %Recovery	MS/MSD RPD	PDS %Recovery	Qualified Samples	Qualification
R323404	Anions by E300.0	Sulfate	-152	-238	1.31	--	AP-31, MW-2, Field Blank 2, EP-34, Field Blank 3, Equipment Blank	No change - Parent Sample is \geq 4x spike amount
R323404	Anions by E300.0	Sulfate	3.75	7.86	0.0508	--	AP-31, MW-2, Field Blank 2, EP-34, Field Blank 3, Equipment Blank	No change - Parent Sample is \geq 4x spike amount
R323715	Anions by E300.0	Sulfate	127	88.1	10.1	--	EP-31, SP-34	No change - Parent Sample is \geq 4x spike amount
R323715	Anions by E300.0	Sulfate	-150	-81.1	2.04	--	EP-31, SP-34	No change - Parent Sample is \geq 4x spike amount
R323221	Anions by E300.0	Chloride	75.6	62.6	1.68	--	AP-31, MW-3, AP-32	No change - Parent Sample is \geq 4x spike amount

Notes:

1. MS = matrix spike; MSD = matrix spike duplicate; RPD = relative percent difference; PDS = post digestion spike.

TABLE C.3.4
Field Precision Evaluation - September 2018

San Miguel Electric Cooperative, Inc.
 Christine, Atascosa County, Texas

Location ID	Analyte	N Sample Result	FD Sample Result	RL	Units	Both N and FD Sample Results $\geq 5x$ RL	RPD (%)	Absolute Difference >RL?	Qualification
AP-32	Arsenic	0.0215	0.0212	0.01	mg/L	No	--	No	none
	Boron	19.3	15.6	2	mg/L	Yes	21%	--	J or UJ
	Cadmium	0.0859	0.0917	0.01	mg/L	Yes	7%	--	none
	Calcium	673	718	2.5	mg/L	Yes	6%	--	none
	Cobalt	0.595	0.589	0.025	mg/L	Yes	1%	--	none
	Lithium	1.51	1.35	0.5	mg/L	No	--	No	none
	Mercury	0.00222	0.00206	0.0002	mg/L	Yes	7%	--	none
	Selenium	0.0613	0.0629	0.01	mg/L	Yes	3%	--	none
	Chloride	2760	2760	50	mg/L	Yes	0%	--	none
	Fluoride	1.48	1.48	0.5	mg/L	No	--	No	none
	Sulfate	3230	3210	50	mg/L	Yes	1%	--	none
	Total Dissolved Solids	10200	10400	10	mg/L	Yes	2%	--	none
	Radium-226	0.99 ± 0.47	1.29 ± 0.52	--	pCi/L	Result ranges overlap.			none
	Radium-228	11.3 ± 2.7	9.5 ± 2.3	--	pCi/L	Result ranges overlap.			none
Radium-226 & Radium-228	12.29 ± 3.2	10.79 ± 2.8	--	pCi/L	Result ranges overlap.			none	
EP-33	Boron	63.8	70.4	2	mg/L	Yes	10%	--	none
	Calcium	660	639	2.5	mg/L	Yes	3%	--	none
	Lithium	0.718	0.712	0.025	mg/L	Yes	1%	--	none
	Molybdenum	0.0588	0.0588	0.025	mg/L	No	--	No	none
	Chloride	2970	3480	50	mg/L	Yes	16%	--	none
	Sulfate	2780	2930	50	mg/L	Yes	5%	--	none
	Total Dissolved Solids	10300	10300	10	mg/L	Yes	0%	--	none
Radium-226	ND ± 0.28	2.15 ± 0.79	--	pCi/L	Result ranges do not overlap.			J	
Radium-228	0.97 ± 0.43	1.46 ± 0.55	--	pCi/L	Result ranges overlap.			none	
Radium-226 & Radium-228	0.97 ± 0.71	3.61 ± 1.3	--	pCi/L	Result ranges do not overlap.			J	
SP-03	Barium	0.0251	0.0229	0.02	mg/L	No	--	No	none
	Boron	6.7	7.71	2	mg/L	No	--	No	none
	Cadmium	0.0525	0.0339	0.01	mg/L	No	--	Yes	J or UJ
	Calcium	876	791	2.5	mg/L	Yes	10%	--	none
	Cobalt	0.154	0.109	0.025	mg/L	No	--	Yes	J or UJ
	Lithium	1.59	1.37	0.25	mg/L	Yes	15%	--	none
	Selenium	0.0464	0.0367	0.01	mg/L	No	--	No	none
	Chloride	4250	3730	50	mg/L	Yes	13%	--	none
	Fluoride	0.846	0.517	0.5	mg/L	No	--	No	none
	Sulfate	2680	2700	50	mg/L	Yes	0.7%	--	none
	Total Dissolved Solids	11900	11400	10	mg/L	Yes	4%	--	none

Notes:

1. N = normal sample; FD = field duplicate sample; RL = reporting limit; RPD = relative percent difference.
2. mg/L = milligrams per liter; pCi/L = pico Curies per liter.



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October 31, 2018

Josh Mitchell
Source Environmental Sciences Inc.
2060 North Loop West, Suite 140
Houston, TX 77018

Work Order: **HS18090269**

Laboratory Results for: **San Miguel Electric CCR Well Monitoring**

Dear Josh,

ALS Environmental received 35 sample(s) on Sep 07, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Corey Grandits
Project Manager

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18090269

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18090269-01	AP-31	Water		04-Sep-2018 10:23	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-02	MW-3	Water		04-Sep-2018 11:05	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-03	Field Blank 1	Water		04-Sep-2018 11:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-04	AP-32	Water		04-Sep-2018 11:58	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-05	AP-33	Water		04-Sep-2018 12:42	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-06	PZ-5	Water		04-Sep-2018 13:27	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-07	Dup-1	Water		04-Sep-2018 00:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-08	Dup-2	Water		04-Sep-2018 00:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-09	Dup-3	Water		04-Sep-2018 00:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-10	AP-34	Water		04-Sep-2018 09:55	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-11	AP-35	Water		05-Sep-2018 10:30	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-12	AP-36	Water		05-Sep-2018 11:03	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-13	PZ-6	Water		05-Sep-2018 11:37	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-14	Field Blank 2	Water		05-Sep-2018 11:30	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-15	EP-38	Water		05-Sep-2018 12:25	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-16	MW-4	Water		05-Sep-2018 13:15	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-17	EP-32	Water		05-Sep-2018 14:05	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-18	EP-33	Water		05-Sep-2018 14:39	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-19	EP-34	Water		05-Sep-2018 15:23	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-20	EP-35	Water		06-Sep-2018 09:25	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-21	EP-36	Water		06-Sep-2018 10:30	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-22	EP-37	Water		06-Sep-2018 10:51	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-23	EP-31	Water		06-Sep-2018 12:05	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-24	Field Blank 3	Water		06-Sep-2018 12:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-25	PZ-2	Water		06-Sep-2018 12:51	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-26	PZ-3	Water		06-Sep-2018 13:13	07-Sep-2018 10:24	<input type="checkbox"/>

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18090269

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18090269-27	SP-34	Water		06-Sep-2018 14:26	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-28	SP-3	Water		06-Sep-2018 15:12	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-29	SP-32	Water		06-Sep-2018 15:49	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-30	SP-1	Water		06-Sep-2018 16:13	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-31	SP-2	Water		06-Sep-2018 17:07	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-32	MS Dup-1	Water		06-Sep-2018 00:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-33	MS Dup-2	Water		06-Sep-2018 00:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-34	MS Dup-3	Water		06-Sep-2018 00:00	07-Sep-2018 10:24	<input type="checkbox"/>
HS18090269-35	Equipment Blank	Water		04-Sep-2018 09:58	07-Sep-2018 10:24	<input type="checkbox"/>

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18090269

CASE NARRATIVE**Work Order Comments**

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier. The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.
- The analyses for Radium-226 and Radium-228 were subcontracted to ALS Environmental in Fort Collins, CO. Final report attached.

Metals by Method SW6020**Batch ID: 132317**

- Except for Sample "Field Blank 1 (HS18090269-03) samples ran at a 50x due to internal standard 6 (Beryllium) failure.
- Except for Sample "Field Blank 1 (HS18090269-03) all samples ran at a 5x due to high Sodium concentration.

Sample ID: MW-3 (HS18090269-02PDS)

The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount for Calcium.

- PDS recovery was outside the control limit for Lithium.

Sample ID: MW-3 (HS18090269-02SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10% (Lithium).

Sample ID: MW-3 (HS18090269-02MS)

The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Boron, Calcium, Cobalt, Lithium.

- Arsenic, Beryllium, Cadmium and Selenium failed in the MS/MSD but passed in the PDS.

Batch ID: 132318

- Except for Field Blank 2 and Field Blank 3 (HS18090269-14 and 24) samples ran at a 10x due to high Sodium concentration.
- Except for Field Blank 2 and Field Blank 3 (HS18090269-14 and 24) samples ran at a 100x due to internal standard 6 (Beryllium and or Lithium) failure.

Sample ID: EP-34 (HS18090269-19MS)

- Barium, Beryllium, Cadmium, Cobalt, Molybdenum, and Selenium failed in the MS/MSD but passed in the PDS.
- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Boron, Calcium, Lithium.

Sample ID: EP-34 (HS18090269-19PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount for Calcium.

Sample ID: EP-34 (HS18090269-19SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10% (Lithium).

Batch ID: 132377

- Some samples ran at a 5x due to high Sodium concentration.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18090269

CASE NARRATIVE

Metals by Method SW6020**Batch ID: 132377**

- Some samples ran at a 50x due to internal standard 6 (Beryllium) failure.

Sample ID: SP-34 (HS18090269-27MS)

- Cadmium failed in the MS but passed in the MSD and PDS.

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Boron, Calcium, Cobalt, Lithium,

Sample ID: SP-34 (HS18090269-27PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount for Calcium .

Sample ID: SP-34 (HS18090269-27SD)

- The percent difference between the results of the sample and the serial dilution were greater than 10% (Beryllium and Lithium).

Metals by Method SW7470**Batch ID: 132281**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: 132282**Sample ID: EP-34 (HS18090269-19MS)**

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: EP-34 (HS18090269-19MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Wet Chemistry by Method E300**Batch ID: R323715****Sample ID: EP-31 (HS18090269-23MS)**

- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Sulfate.

WetChemistry by Method M2540C**Batch ID: R323225,R323385,R323473**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300**Batch ID: R323882**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18090269

CASE NARRATIVE

WetChemistry by Method E300**Batch ID: R323688****Sample ID: Dup-2 (HS18090269-08)**

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-38 (HS18090269-15)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: MW-4 (HS18090269-16)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-6 (HS18090269-13)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Batch ID: R323221**Sample ID: HS18090360-01MS**

- MS and MSD are for an unrelated sample.

Batch ID: R323700**Sample ID: CCB**

- All reported samples bracketed by this CCB are 10 times greater than the Sulfate content in this CCB.
- All reported samples bracketed by this CCB are 10 times greater than the Chloride and Sulfate content in this CCB.

Sample ID: EP-32 (HS18090269-17)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-33 (HS18090269-18)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-35 (HS18090269-20)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: EP-37 (HS18090269-22)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: MS Dup-1 (HS18090269-32)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-2 (HS18090269-25)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: PZ-3 (HS18090269-26)

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
Work Order: HS18090269

CASE NARRATIVE

WetChemistry by Method E300

Batch ID: R323700

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Sample ID: SP-2 (HS18090269-31)

- The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride)

Batch ID: R323404

Sample ID: EP-34 (HS18090269-19MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount for Chloride,Sulfate.

Batch ID: R323715

Sample ID: SP-34 (HS18090269-27MS)

- The matrix spike recovery was outside of the control limits Sulfate.
- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Chloride and Sulfate.

WetChemistry by Method SM4500H+ B

Batch ID: R323202,R323237,R323356

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-31
 Collection Date: 04-Sep-2018 10:23

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-01
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:22
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:22
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:22
Beryllium	0.0110		0.0100	mg/L	5	20-Sep-2018 18:22
Boron	34.7		10.0	mg/L	500	23-Sep-2018 14:02
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:22
Calcium	601		2.50	mg/L	5	20-Sep-2018 18:22
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:22
Cobalt	0.229		0.0250	mg/L	5	20-Sep-2018 18:22
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:22
Lithium	0.947		0.0250	mg/L	5	20-Sep-2018 18:22
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:22
Selenium	0.0243		0.0100	mg/L	5	20-Sep-2018 18:22
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:22
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.000403		0.000200	mg/L	1	11-Sep-2018 15:39
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,550		50.0	mg/L	100	11-Sep-2018 20:02
Fluoride	0.406		0.200	mg/L	2	12-Sep-2018 14:55
Sulfate	3,020		50.0	mg/L	100	11-Sep-2018 20:02
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	8,220		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.45	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	21.0	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MW-3
 Collection Date: 04-Sep-2018 11:05

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-02
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Sep-2018 13:43
Arsenic	0.0108		0.0100	mg/L	5	13-Sep-2018 13:43
Barium	ND		0.0200	mg/L	5	13-Sep-2018 13:43
Beryllium	0.0318		0.0100	mg/L	5	13-Sep-2018 13:43
Boron	13.0		2.00	mg/L	100	23-Sep-2018 14:16
Cadmium	0.0630		0.0100	mg/L	5	13-Sep-2018 13:43
Calcium	518		2.50	mg/L	5	13-Sep-2018 13:43
Chromium	ND		0.0200	mg/L	5	13-Sep-2018 13:43
Cobalt	0.355		0.0250	mg/L	5	13-Sep-2018 13:43
Lead	ND		0.0100	mg/L	5	13-Sep-2018 13:43
Lithium	1.88		0.0250	mg/L	5	13-Sep-2018 13:43
Molybdenum	ND		0.0250	mg/L	5	13-Sep-2018 13:43
Selenium	0.0312		0.0100	mg/L	5	13-Sep-2018 13:43
Thallium	ND		0.0100	mg/L	5	13-Sep-2018 13:43
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 15:26
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,750		50.0	mg/L	100	11-Sep-2018 20:31
Fluoride	0.817		0.500	mg/L	5	12-Sep-2018 15:10
Sulfate	4,150		50.0	mg/L	100	11-Sep-2018 20:31
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,620		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.41	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	21.2	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 1
 Collection Date: 04-Sep-2018 11:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-03
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	20-Sep-2018 17:37
Arsenic	ND		0.00200	mg/L	1	20-Sep-2018 17:37
Barium	ND		0.00400	mg/L	1	20-Sep-2018 17:37
Beryllium	ND		0.00200	mg/L	1	20-Sep-2018 17:37
Boron	ND		0.0200	mg/L	1	20-Sep-2018 17:37
Cadmium	ND		0.00200	mg/L	1	20-Sep-2018 17:37
Calcium	ND		0.500	mg/L	1	20-Sep-2018 17:37
Chromium	ND		0.00400	mg/L	1	20-Sep-2018 17:37
Cobalt	ND		0.00500	mg/L	1	20-Sep-2018 17:37
Lead	ND		0.00200	mg/L	1	20-Sep-2018 17:37
Lithium	ND		0.00500	mg/L	1	20-Sep-2018 17:37
Molybdenum	ND		0.00500	mg/L	1	20-Sep-2018 17:37
Selenium	ND		0.00200	mg/L	1	20-Sep-2018 17:37
Thallium	ND		0.00200	mg/L	1	20-Sep-2018 17:37
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 15:41
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	ND		0.500	mg/L	1	11-Sep-2018 19:33
Fluoride	ND		0.100	mg/L	1	11-Sep-2018 19:33
Sulfate	ND		0.500	mg/L	1	11-Sep-2018 19:33
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.97	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	21.3	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-32
 Collection Date: 04-Sep-2018 11:58

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-04
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:24
Arsenic	0.0215		0.0100	mg/L	5	20-Sep-2018 18:24
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:24
Beryllium	ND		0.100	mg/L	50	23-Sep-2018 14:56
Boron	19.3		1.00	mg/L	50	23-Sep-2018 14:56
Cadmium	0.0859		0.0100	mg/L	5	20-Sep-2018 18:24
Calcium	673		2.50	mg/L	5	20-Sep-2018 18:24
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:24
Cobalt	0.595		0.0250	mg/L	5	20-Sep-2018 18:24
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:24
Lithium	1.51		0.250	mg/L	50	23-Sep-2018 14:56
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:24
Selenium	0.0613		0.0100	mg/L	5	20-Sep-2018 18:24
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:24
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.00222		0.000200	mg/L	1	11-Sep-2018 15:43
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,760		50.0	mg/L	100	14-Sep-2018 09:12
Fluoride	1.48		0.500	mg/L	5	14-Sep-2018 08:57
Sulfate	3,230		50.0	mg/L	100	14-Sep-2018 09:12
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,200		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.27	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	21.0	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-33
 Collection Date: 04-Sep-2018 12:42

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-05
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:26
Arsenic	0.0406		0.0100	mg/L	5	20-Sep-2018 18:26
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:26
Beryllium	0.309		0.100	mg/L	50	23-Sep-2018 14:58
Boron	55.3		10.0	mg/L	500	23-Sep-2018 14:04
Cadmium	0.139		0.0100	mg/L	5	20-Sep-2018 18:26
Calcium	812		2.50	mg/L	5	20-Sep-2018 18:26
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:26
Cobalt	1.36		0.0250	mg/L	5	20-Sep-2018 18:26
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:26
Lithium	1.19		0.250	mg/L	50	23-Sep-2018 14:58
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:26
Selenium	0.112		0.0100	mg/L	5	20-Sep-2018 18:26
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:26
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.00412		0.000200	mg/L	1	11-Sep-2018 15:44
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,350		50.0	mg/L	100	14-Sep-2018 11:24
Fluoride	6.82		0.500	mg/L	5	14-Sep-2018 11:10
Sulfate	3,160		50.0	mg/L	100	14-Sep-2018 11:24
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	12,900		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.12	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	21.2	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-5
 Collection Date: 04-Sep-2018 13:27

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-06
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:28
Arsenic	0.0202		0.0100	mg/L	5	20-Sep-2018 18:28
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:28
Beryllium	0.260		0.0100	mg/L	5	20-Sep-2018 18:28
Boron	37.1		10.0	mg/L	500	23-Sep-2018 14:06
Cadmium	0.0462		0.0100	mg/L	5	20-Sep-2018 18:28
Calcium	682		2.50	mg/L	5	20-Sep-2018 18:28
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:28
Cobalt	0.705		0.0250	mg/L	5	20-Sep-2018 18:28
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:28
Lithium	0.820		0.0250	mg/L	5	20-Sep-2018 18:28
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:28
Selenium	0.0622		0.0100	mg/L	5	20-Sep-2018 18:28
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:28
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.000330		0.000200	mg/L	1	11-Sep-2018 15:50
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,680		50.0	mg/L	100	14-Sep-2018 12:08
Fluoride	3.56		0.500	mg/L	5	14-Sep-2018 11:53
Sulfate	2,760		50.0	mg/L	100	14-Sep-2018 12:08
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,980		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.34	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	21.0	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Dup-1
 Collection Date: 04-Sep-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-07
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:30
Arsenic	0.0212		0.0100	mg/L	5	20-Sep-2018 18:30
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:30
Beryllium	ND		0.200	mg/L	100	23-Sep-2018 14:36
Boron	15.6		2.00	mg/L	100	23-Sep-2018 14:36
Cadmium	0.0917		0.0100	mg/L	5	20-Sep-2018 18:30
Calcium	718		2.50	mg/L	5	20-Sep-2018 18:30
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:30
Cobalt	0.589		0.0250	mg/L	5	20-Sep-2018 18:30
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:30
Lithium	1.35		0.500	mg/L	100	23-Sep-2018 14:36
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:30
Selenium	0.0629		0.0100	mg/L	5	20-Sep-2018 18:30
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:30
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.00206		0.000200	mg/L	1	11-Sep-2018 15:51
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,760		50.0	mg/L	100	14-Sep-2018 12:37
Fluoride	1.48		0.500	mg/L	5	14-Sep-2018 12:22
Sulfate	3,210		50.0	mg/L	100	14-Sep-2018 12:37
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,400		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.45	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	22.1	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Dup-2
 Collection Date: 04-Sep-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-08
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 17:39
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 17:39
Barium	ND		0.0200	mg/L	5	20-Sep-2018 17:39
Beryllium	ND		0.0100	mg/L	5	20-Sep-2018 17:39
Boron	70.4		2.00	mg/L	100	12-Sep-2018 13:15
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 17:39
Calcium	639		2.50	mg/L	5	20-Sep-2018 17:39
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 17:39
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 17:39
Lead	ND		0.0100	mg/L	5	20-Sep-2018 17:39
Lithium	0.712		0.0250	mg/L	5	20-Sep-2018 17:39
Molybdenum	0.0588		0.0250	mg/L	5	20-Sep-2018 17:39
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 17:39
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 17:39
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 15:53
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,480		50.0	mg/L	100	14-Sep-2018 13:35
Fluoride	ND		0.500	mg/L	5	14-Sep-2018 13:21
Sulfate	2,930		50.0	mg/L	100	14-Sep-2018 13:35
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,300		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.32	H	0.100	pH Units	1	10-Sep-2018 14:26
Temp Deg C @pH	21.0	H	0	°C	1	10-Sep-2018 14:26
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Dup-3
 Collection Date: 04-Sep-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-09
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 17:41
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 17:41
Barium	0.0229		0.0200	mg/L	5	20-Sep-2018 17:41
Beryllium	ND		0.100	mg/L	50	23-Sep-2018 14:52
Boron	7.71		2.00	mg/L	100	12-Sep-2018 13:17
Cadmium	0.0339		0.0100	mg/L	5	20-Sep-2018 17:41
Calcium	791		2.50	mg/L	5	20-Sep-2018 17:41
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 17:41
Cobalt	0.109		0.0250	mg/L	5	20-Sep-2018 17:41
Lead	ND		0.0100	mg/L	5	20-Sep-2018 17:41
Lithium	1.37		0.250	mg/L	50	23-Sep-2018 14:52
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 17:41
Selenium	0.0367		0.0100	mg/L	5	20-Sep-2018 17:41
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 17:41
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 15:55
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,730		50.0	mg/L	100	14-Sep-2018 14:04
Fluoride	0.517		0.500	mg/L	5	14-Sep-2018 13:50
Sulfate	2,700		50.0	mg/L	100	14-Sep-2018 14:04
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,400		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	4.09	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	25.0	H	0	°C	1	11-Sep-2018 18:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-34
 Collection Date: 04-Sep-2018 09:55

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-10
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0200	mg/L	10	20-Sep-2018 17:49
Arsenic	0.0243		0.0200	mg/L	10	20-Sep-2018 17:49
Barium	ND		0.0400	mg/L	10	20-Sep-2018 17:49
Beryllium	0.281		0.0200	mg/L	10	20-Sep-2018 17:49
Boron	77.1		2.00	mg/L	100	12-Sep-2018 13:19
Cadmium	0.0394		0.0200	mg/L	10	20-Sep-2018 17:49
Calcium	1,690		50.0	mg/L	100	12-Sep-2018 13:19
Chromium	ND		0.0400	mg/L	10	20-Sep-2018 17:49
Cobalt	1.14		0.0500	mg/L	10	20-Sep-2018 17:49
Lead	ND		0.0200	mg/L	10	20-Sep-2018 17:49
Lithium	1.37		0.0500	mg/L	10	20-Sep-2018 17:49
Molybdenum	ND		0.0500	mg/L	10	20-Sep-2018 17:49
Selenium	0.0680		0.0200	mg/L	10	20-Sep-2018 17:49
Thallium	ND		0.0200	mg/L	10	20-Sep-2018 17:49
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.00217		0.000200	mg/L	1	11-Sep-2018 15:56
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,520		50.0	mg/L	100	14-Sep-2018 14:33
Fluoride	7.78		0.500	mg/L	5	14-Sep-2018 14:19
Sulfate	3,330		50.0	mg/L	100	14-Sep-2018 14:33
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,900		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	3.32	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.9	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-35
 Collection Date: 05-Sep-2018 10:30

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-11
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 17:51
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 17:51
Barium	ND		0.0200	mg/L	5	20-Sep-2018 17:51
Beryllium	0.0737		0.0100	mg/L	5	20-Sep-2018 17:51
Boron	44.4		2.00	mg/L	100	12-Sep-2018 13:21
Cadmium	0.0213		0.0100	mg/L	5	20-Sep-2018 17:51
Calcium	652		2.50	mg/L	5	20-Sep-2018 17:51
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 17:51
Cobalt	0.148		0.0250	mg/L	5	20-Sep-2018 17:51
Lead	ND		0.0100	mg/L	5	20-Sep-2018 17:51
Lithium	1.17		0.0250	mg/L	5	20-Sep-2018 17:51
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 17:51
Selenium	0.0203		0.0100	mg/L	5	20-Sep-2018 17:51
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 17:51
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.00830		0.000200	mg/L	1	11-Sep-2018 15:58
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,940		50.0	mg/L	100	14-Sep-2018 15:02
Fluoride	1.50		0.500	mg/L	5	14-Sep-2018 14:48
Sulfate	2,470		50.0	mg/L	100	14-Sep-2018 15:02
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	8,540		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	3.54	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.8	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: AP-36
 Collection Date: 05-Sep-2018 11:03

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-12
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 17:53
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 17:53
Barium	0.0247		0.0200	mg/L	5	20-Sep-2018 17:53
Beryllium	0.0187		0.0100	mg/L	5	20-Sep-2018 17:53
Boron	4.05		2.00	mg/L	100	12-Sep-2018 13:23
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 17:53
Calcium	661		2.50	mg/L	5	20-Sep-2018 17:53
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 17:53
Cobalt	0.0663		0.0250	mg/L	5	20-Sep-2018 17:53
Lead	ND		0.0100	mg/L	5	20-Sep-2018 17:53
Lithium	1.18		0.0250	mg/L	5	20-Sep-2018 17:53
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 17:53
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 17:53
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 17:53
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:00
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	1,730		50.0	mg/L	100	14-Sep-2018 15:31
Fluoride	0.652		0.500	mg/L	5	14-Sep-2018 15:17
Sulfate	2,420		50.0	mg/L	100	14-Sep-2018 15:31
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	7,760		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL
pH	3.81	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.8	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-6
 Collection Date: 05-Sep-2018 11:37

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-13
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 17:55
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 17:55
Barium	ND		0.0200	mg/L	5	20-Sep-2018 17:55
Beryllium	ND		0.0100	mg/L	5	20-Sep-2018 17:55
Boron	4.17		2.00	mg/L	100	12-Sep-2018 13:25
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 17:55
Calcium	637		2.50	mg/L	5	20-Sep-2018 17:55
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 17:55
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 17:55
Lead	ND		0.0100	mg/L	5	20-Sep-2018 17:55
Lithium	1.07		0.0250	mg/L	5	20-Sep-2018 17:55
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 17:55
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 17:55
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 17:55
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:01
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,370		50.0	mg/L	100	14-Sep-2018 16:30
Fluoride	ND		0.500	mg/L	5	14-Sep-2018 16:15
Sulfate	2,850		50.0	mg/L	100	14-Sep-2018 16:30
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	7,700		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	5.34	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.5	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 2
 Collection Date: 05-Sep-2018 11:30

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-14
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	20-Sep-2018 17:33
Arsenic	ND		0.00200	mg/L	1	20-Sep-2018 17:33
Barium	ND		0.00400	mg/L	1	20-Sep-2018 17:33
Beryllium	ND		0.00200	mg/L	1	20-Sep-2018 17:33
Boron	0.0240		0.0200	mg/L	1	20-Sep-2018 17:33
Cadmium	ND		0.00200	mg/L	1	20-Sep-2018 17:33
Calcium	ND		0.500	mg/L	1	20-Sep-2018 17:33
Chromium	ND		0.00400	mg/L	1	20-Sep-2018 17:33
Cobalt	ND		0.00500	mg/L	1	20-Sep-2018 17:33
Lead	ND		0.00200	mg/L	1	20-Sep-2018 17:33
Lithium	ND		0.00500	mg/L	1	20-Sep-2018 17:33
Molybdenum	ND		0.00500	mg/L	1	20-Sep-2018 17:33
Selenium	ND		0.00200	mg/L	1	20-Sep-2018 17:33
Thallium	ND		0.00200	mg/L	1	20-Sep-2018 17:33
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:03
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	ND		0.500	mg/L	1	13-Sep-2018 14:26
Fluoride	ND		0.100	mg/L	1	13-Sep-2018 14:26
Sulfate	ND		0.500	mg/L	1	13-Sep-2018 14:26
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	5.61	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.7	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-38
 Collection Date: 05-Sep-2018 12:25

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-15
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 17:57
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 17:57
Barium	ND		0.0200	mg/L	5	20-Sep-2018 17:57
Beryllium	ND		0.0100	mg/L	5	20-Sep-2018 17:57
Boron	3.21		2.00	mg/L	100	12-Sep-2018 13:29
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 17:57
Calcium	310		2.50	mg/L	5	20-Sep-2018 17:57
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 17:57
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 17:57
Lead	ND		0.0100	mg/L	5	20-Sep-2018 17:57
Lithium	0.685		0.0250	mg/L	5	20-Sep-2018 17:57
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 17:57
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 17:57
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 17:57
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:05
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	1,130		50.0	mg/L	100	14-Sep-2018 16:59
Fluoride	ND		0.500	mg/L	5	14-Sep-2018 16:44
Sulfate	1,840		50.0	mg/L	100	14-Sep-2018 16:59
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	4,950		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	5.45	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.2	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MW-4
 Collection Date: 05-Sep-2018 13:15

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-16
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 17:59
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 17:59
Barium	ND		0.0200	mg/L	5	20-Sep-2018 17:59
Beryllium	ND		0.0100	mg/L	5	20-Sep-2018 17:59
Boron	8.82		2.00	mg/L	100	12-Sep-2018 13:31
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 17:59
Calcium	309		2.50	mg/L	5	20-Sep-2018 17:59
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 17:59
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 17:59
Lead	ND		0.0100	mg/L	5	20-Sep-2018 17:59
Lithium	0.737		0.0250	mg/L	5	20-Sep-2018 17:59
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 17:59
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 17:59
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 17:59
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:43
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	1,570		50.0	mg/L	100	14-Sep-2018 17:34
Fluoride	ND		0.500	mg/L	5	14-Sep-2018 17:13
Sulfate	2,110		50.0	mg/L	100	14-Sep-2018 17:34
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	6,460		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL
pH	5.84	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.5	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-32
 Collection Date: 05-Sep-2018 14:05

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-17
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:07
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:07
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:07
Beryllium	ND		0.100	mg/L	50	23-Sep-2018 14:54
Boron	28.7		2.00	mg/L	100	12-Sep-2018 13:33
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:07
Calcium	458		2.50	mg/L	5	20-Sep-2018 18:07
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:07
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:07
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:07
Lithium	1.05		0.250	mg/L	50	23-Sep-2018 14:54
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:07
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:07
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:07
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:45
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,120		50.0	mg/L	100	15-Sep-2018 05:32
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 05:17
Sulfate	3,510		50.0	mg/L	100	15-Sep-2018 05:32
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,300		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	6.28	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.9	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-33
 Collection Date: 05-Sep-2018 14:39

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-18
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:09
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:09
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:09
Beryllium	ND		0.0100	mg/L	5	20-Sep-2018 18:09
Boron	63.8		2.00	mg/L	100	23-Sep-2018 14:22
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:09
Calcium	660		2.50	mg/L	5	20-Sep-2018 18:09
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:09
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:09
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:09
Lithium	0.718		0.0250	mg/L	5	20-Sep-2018 18:09
Molybdenum	0.0588		0.0250	mg/L	5	20-Sep-2018 18:09
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:09
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:09
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:47
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,970		50.0	mg/L	100	15-Sep-2018 06:01
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 05:46
Sulfate	2,780		50.0	mg/L	100	15-Sep-2018 06:01
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,300		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL		
pH	6.23	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	25.1	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-34
 Collection Date: 05-Sep-2018 15:23

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-19
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	13-Sep-2018 13:25
Arsenic	ND		0.0100	mg/L	5	13-Sep-2018 13:25
Barium	ND		0.0200	mg/L	5	13-Sep-2018 13:25
Beryllium	ND		0.0100	mg/L	5	13-Sep-2018 13:25
Boron	46.9		2.00	mg/L	100	12-Sep-2018 12:59
Cadmium	ND		0.0100	mg/L	5	13-Sep-2018 13:25
Calcium	492		2.50	mg/L	5	13-Sep-2018 13:25
Chromium	ND		0.0200	mg/L	5	13-Sep-2018 13:25
Cobalt	ND		0.0250	mg/L	5	13-Sep-2018 13:25
Lead	ND		0.0100	mg/L	5	13-Sep-2018 13:25
Lithium	0.961		0.0250	mg/L	5	13-Sep-2018 13:25
Molybdenum	ND		0.0250	mg/L	5	13-Sep-2018 13:25
Selenium	ND		0.0100	mg/L	5	13-Sep-2018 13:25
Thallium	ND		0.0100	mg/L	5	13-Sep-2018 13:25
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:30
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	3,610		50.0	mg/L	100	12-Sep-2018 16:55
Fluoride	ND		0.500	mg/L	5	12-Sep-2018 16:11
Sulfate	3,280		50.0	mg/L	100	12-Sep-2018 16:55
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	11,500		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL
pH	6.28	H	0.100	pH Units	1	11-Sep-2018 18:36
Temp Deg C @pH	24.7	H	0	°C	1	11-Sep-2018 18:36
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-35
 Collection Date: 06-Sep-2018 09:25

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-20
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:11
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:11
Barium	0.0221		0.0200	mg/L	5	20-Sep-2018 18:11
Beryllium	ND		0.200	mg/L	100	23-Sep-2018 14:24
Boron	30.1		2.00	mg/L	100	23-Sep-2018 14:24
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:11
Calcium	306		2.50	mg/L	5	20-Sep-2018 18:11
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:11
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:11
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:11
Lithium	0.951		0.500	mg/L	100	23-Sep-2018 14:24
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:11
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:11
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:11
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:49
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,310		50.0	mg/L	100	15-Sep-2018 06:45
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 06:30
Sulfate	2,730		50.0	mg/L	100	15-Sep-2018 06:45
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,200		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.13	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	23.4	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-36
 Collection Date: 06-Sep-2018 10:30

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-21
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:13
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:13
Barium	0.0245		0.0200	mg/L	5	20-Sep-2018 18:13
Beryllium	ND		0.200	mg/L	100	23-Sep-2018 14:26
Boron	20.3		2.00	mg/L	100	23-Sep-2018 14:26
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:13
Calcium	475		2.50	mg/L	5	20-Sep-2018 18:13
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:13
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:13
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:13
Lithium	1.11		0.500	mg/L	100	23-Sep-2018 14:26
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:13
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:13
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:13
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:50
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,850		50.0	mg/L	100	15-Sep-2018 07:43
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 07:28
Sulfate	2,720		50.0	mg/L	100	15-Sep-2018 07:43
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,300		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.12	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.8	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-37
 Collection Date: 06-Sep-2018 10:51

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-22
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:15
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:15
Barium	0.0251		0.0200	mg/L	5	20-Sep-2018 18:15
Beryllium	ND		0.200	mg/L	100	23-Sep-2018 14:34
Boron	21.0		2.00	mg/L	100	23-Sep-2018 14:34
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:15
Calcium	471		2.50	mg/L	5	20-Sep-2018 18:15
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:15
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:15
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:15
Lithium	1.11		0.500	mg/L	100	23-Sep-2018 14:34
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:15
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:15
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:15
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:55
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	3,410		50.0	mg/L	100	15-Sep-2018 08:12
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 07:57
Sulfate	2,480		50.0	mg/L	100	20-Sep-2018 20:03
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	10,400		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	6.13	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.3	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: EP-31
 Collection Date: 06-Sep-2018 12:05

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-23
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	20-Sep-2018 17:31
Arsenic	0.0118		0.00200	mg/L	1	20-Sep-2018 17:31
Barium	0.00488		0.00400	mg/L	1	20-Sep-2018 17:31
Beryllium	ND		0.100	mg/L	50	23-Sep-2018 15:14
Boron	4.46		1.00	mg/L	50	23-Sep-2018 15:14
Cadmium	0.0156		0.00200	mg/L	1	20-Sep-2018 17:31
Calcium	411		50.0	mg/L	100	12-Sep-2018 13:47
Chromium	ND		0.00400	mg/L	1	20-Sep-2018 17:31
Cobalt	0.101		0.00500	mg/L	1	20-Sep-2018 17:31
Lead	ND		0.00200	mg/L	1	20-Sep-2018 17:31
Lithium	0.560		0.250	mg/L	50	23-Sep-2018 15:14
Molybdenum	ND		0.00500	mg/L	1	20-Sep-2018 17:31
Selenium	0.0176		0.00200	mg/L	1	20-Sep-2018 17:31
Thallium	ND		0.00200	mg/L	1	20-Sep-2018 17:31
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:57
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	146		5.00	mg/L	10	16-Sep-2018 20:46
Fluoride	1.79		0.100	mg/L	1	15-Sep-2018 14:01
Sulfate	3,110		50.0	mg/L	100	14-Sep-2018 09:26
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	4,920		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.84	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	21.4	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Field Blank 3
 Collection Date: 06-Sep-2018 12:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-24
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Sep-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	20-Sep-2018 17:35
Arsenic	ND		0.00200	mg/L	1	20-Sep-2018 17:35
Barium	ND		0.00400	mg/L	1	20-Sep-2018 17:35
Beryllium	ND		0.00200	mg/L	1	20-Sep-2018 17:35
Boron	ND		0.0200	mg/L	1	20-Sep-2018 17:35
Cadmium	ND		0.00200	mg/L	1	20-Sep-2018 17:35
Calcium	ND		0.500	mg/L	1	20-Sep-2018 17:35
Chromium	ND		0.00400	mg/L	1	20-Sep-2018 17:35
Cobalt	ND		0.00500	mg/L	1	20-Sep-2018 17:35
Lead	ND		0.00200	mg/L	1	20-Sep-2018 17:35
Lithium	ND		0.00500	mg/L	1	20-Sep-2018 17:35
Molybdenum	ND		0.00500	mg/L	1	20-Sep-2018 17:35
Selenium	ND		0.00200	mg/L	1	20-Sep-2018 17:35
Thallium	ND		0.00200	mg/L	1	20-Sep-2018 17:35
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 16:59
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	ND		0.500	mg/L	1	13-Sep-2018 14:41
Fluoride	ND		0.100	mg/L	1	13-Sep-2018 14:41
Sulfate	ND		0.500	mg/L	1	13-Sep-2018 14:41
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.83	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.4	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-2
 Collection Date: 06-Sep-2018 12:51

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-25
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:38
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:38
Barium	0.0309		0.0200	mg/L	5	20-Sep-2018 18:38
Beryllium	ND		0.100	mg/L	50	23-Sep-2018 15:00
Boron	5.97		1.00	mg/L	50	23-Sep-2018 15:00
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:38
Calcium	801		2.50	mg/L	5	20-Sep-2018 18:38
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:38
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:38
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:38
Lithium	1.71		0.250	mg/L	50	23-Sep-2018 15:00
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:38
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:38
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:38
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:01
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,600		50.0	mg/L	100	15-Sep-2018 08:41
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 08:26
Sulfate	2,660		50.0	mg/L	100	15-Sep-2018 08:41
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,600		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.71	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	23.0	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: PZ-3
 Collection Date: 06-Sep-2018 13:13

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-26
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:40
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:40
Barium	0.0300		0.0200	mg/L	5	20-Sep-2018 18:40
Beryllium	ND		0.100	mg/L	50	23-Sep-2018 15:08
Boron	5.48		1.00	mg/L	50	23-Sep-2018 15:08
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:40
Calcium	818		2.50	mg/L	5	20-Sep-2018 18:40
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:40
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:40
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:40
Lithium	1.68		0.250	mg/L	50	23-Sep-2018 15:08
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:40
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:40
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:40
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:02
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,500		50.0	mg/L	100	20-Sep-2018 20:25
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 10:23
Sulfate	2,650		50.0	mg/L	100	20-Sep-2018 20:25
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	10,500		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.74	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.7	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-34
 Collection Date: 06-Sep-2018 14:26

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-27
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	17-Sep-2018 17:20
Arsenic	0.0139		0.0100	mg/L	5	17-Sep-2018 17:20
Barium	ND		0.0200	mg/L	5	17-Sep-2018 17:20
Beryllium	0.171		0.0100	mg/L	5	17-Sep-2018 17:20
Boron	11.2		1.00	mg/L	50	17-Sep-2018 23:16
Cadmium	0.197		0.0100	mg/L	5	17-Sep-2018 17:20
Calcium	711		2.50	mg/L	5	17-Sep-2018 17:20
Chromium	ND		0.0200	mg/L	5	17-Sep-2018 17:20
Cobalt	0.702		0.0250	mg/L	5	17-Sep-2018 17:20
Lead	ND		0.0100	mg/L	5	17-Sep-2018 17:20
Lithium	1.38		0.0250	mg/L	5	17-Sep-2018 17:20
Molybdenum	ND		0.0250	mg/L	5	17-Sep-2018 17:20
Selenium	0.122		0.0100	mg/L	5	17-Sep-2018 17:20
Thallium	0.0187		0.0100	mg/L	5	17-Sep-2018 17:20
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.000262		0.000200	mg/L	1	11-Sep-2018 16:38
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,120		50.0	mg/L	100	15-Sep-2018 16:12
Fluoride	4.98		0.500	mg/L	5	15-Sep-2018 14:59
Sulfate	2,770		50.0	mg/L	100	15-Sep-2018 16:12
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	8,420		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.21	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	23.9	H	0	°C	1	13-Sep-2018 10:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-3
 Collection Date: 06-Sep-2018 15:12

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-28
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:42
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:42
Barium	0.0251		0.0200	mg/L	5	20-Sep-2018 18:42
Beryllium	ND		0.100	mg/L	50	23-Sep-2018 15:10
Boron	6.70		1.00	mg/L	50	23-Sep-2018 15:10
Cadmium	0.0525		0.0100	mg/L	5	20-Sep-2018 18:42
Calcium	876		2.50	mg/L	5	20-Sep-2018 18:42
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:42
Cobalt	0.154		0.0250	mg/L	5	20-Sep-2018 18:42
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:42
Lithium	1.59		0.250	mg/L	50	23-Sep-2018 15:10
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:42
Selenium	0.0464		0.0100	mg/L	5	20-Sep-2018 18:42
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:42
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:04
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,250		50.0	mg/L	100	15-Sep-2018 09:10
Fluoride	0.846		0.500	mg/L	5	15-Sep-2018 08:56
Sulfate	2,680		50.0	mg/L	100	15-Sep-2018 09:10
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,900		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.78	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	23.2	H	0	°C	1	13-Sep-2018 10:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-32
 Collection Date: 06-Sep-2018 15:49

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-29
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:44
Arsenic	0.0589		0.0100	mg/L	5	20-Sep-2018 18:44
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:44
Beryllium	0.346		0.200	mg/L	100	23-Sep-2018 14:38
Boron	7.54		2.00	mg/L	100	23-Sep-2018 14:38
Cadmium	0.414		0.0100	mg/L	5	20-Sep-2018 18:44
Calcium	465		2.50	mg/L	5	20-Sep-2018 18:44
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:44
Cobalt	2.66		0.0250	mg/L	5	20-Sep-2018 18:44
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:44
Lithium	3.03		0.500	mg/L	100	23-Sep-2018 14:38
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:44
Selenium	0.169		0.0100	mg/L	5	20-Sep-2018 18:44
Thallium	0.0141		0.0100	mg/L	5	20-Sep-2018 18:44
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:06
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	1,560		50.0	mg/L	100	20-Sep-2018 20:47
Fluoride	15.2		0.500	mg/L	5	15-Sep-2018 09:25
Sulfate	9,450		50.0	mg/L	100	15-Sep-2018 09:39
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	17,900		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	3.36	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.4	H	0	°C	1	13-Sep-2018 10:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-1
 Collection Date: 06-Sep-2018 16:13

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-30
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:46
Arsenic	0.0377		0.0100	mg/L	5	20-Sep-2018 18:46
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:46
Beryllium	0.348		0.100	mg/L	50	23-Sep-2018 15:12
Boron	5.30		1.00	mg/L	50	23-Sep-2018 15:12
Cadmium	0.413		0.0100	mg/L	5	20-Sep-2018 18:46
Calcium	423		2.50	mg/L	5	20-Sep-2018 18:46
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:46
Cobalt	2.16		0.0250	mg/L	5	20-Sep-2018 18:46
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:46
Lithium	1.82		0.250	mg/L	50	23-Sep-2018 15:12
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:46
Selenium	0.113		0.0100	mg/L	5	20-Sep-2018 18:46
Thallium	0.0113		0.0100	mg/L	5	20-Sep-2018 18:46
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:07
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,540		50.0	mg/L	100	20-Sep-2018 21:08
Fluoride	14.0		0.500	mg/L	5	15-Sep-2018 10:52
Sulfate	5,340		50.0	mg/L	100	20-Sep-2018 21:08
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,300		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.29	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.5	H	0	°C	1	13-Sep-2018 10:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: SP-2
 Collection Date: 06-Sep-2018 17:07

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-31
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:54
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:54
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:54
Beryllium	0.0146		0.0100	mg/L	5	20-Sep-2018 18:54
Boron	8.92		2.00	mg/L	100	23-Sep-2018 14:40
Cadmium	0.0160		0.0100	mg/L	5	20-Sep-2018 18:54
Calcium	1,070		50.0	mg/L	100	23-Sep-2018 14:40
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:54
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:54
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:54
Lithium	0.646		0.0250	mg/L	5	20-Sep-2018 18:54
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:54
Selenium	0.114		0.0100	mg/L	5	20-Sep-2018 18:54
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:54
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	0.000511		0.000200	mg/L	1	11-Sep-2018 17:09
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	4,420		50.0	mg/L	100	20-Sep-2018 21:30
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 11:21
Sulfate	1,710		50.0	mg/L	100	20-Sep-2018 21:30
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	13,300		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	5.50	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.3	H	0	°C	1	13-Sep-2018 10:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MS Dup-1
 Collection Date: 06-Sep-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-32
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:56
Arsenic	ND		0.0100	mg/L	5	20-Sep-2018 18:56
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:56
Beryllium	ND		0.0100	mg/L	5	20-Sep-2018 18:56
Boron	46.6		10.0	mg/L	500	23-Sep-2018 14:08
Cadmium	ND		0.0100	mg/L	5	20-Sep-2018 18:56
Calcium	516		2.50	mg/L	5	20-Sep-2018 18:56
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:56
Cobalt	ND		0.0250	mg/L	5	20-Sep-2018 18:56
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:56
Lithium	1.10		0.0250	mg/L	5	20-Sep-2018 18:56
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:56
Selenium	ND		0.0100	mg/L	5	20-Sep-2018 18:56
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 18:56
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:11
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	3,700		50.0	mg/L	100	20-Sep-2018 21:52
Fluoride	ND		0.500	mg/L	5	15-Sep-2018 11:50
Sulfate	3,340		50.0	mg/L	100	20-Sep-2018 21:52
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	11,900		10.0	mg/L	1	12-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	6.35	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	23.1	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC		
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MS Dup-2
 Collection Date: 06-Sep-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-33
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 18:58
Arsenic	0.0143		0.0100	mg/L	5	20-Sep-2018 18:58
Barium	ND		0.0200	mg/L	5	20-Sep-2018 18:58
Beryllium	0.167		0.0100	mg/L	5	20-Sep-2018 18:58
Boron	11.4		2.00	mg/L	100	23-Sep-2018 14:42
Cadmium	0.200		0.0100	mg/L	5	20-Sep-2018 18:58
Calcium	745		2.50	mg/L	5	20-Sep-2018 18:58
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 18:58
Cobalt	0.710		0.0250	mg/L	5	20-Sep-2018 18:58
Lead	ND		0.0100	mg/L	5	20-Sep-2018 18:58
Lithium	1.35		0.0250	mg/L	5	20-Sep-2018 18:58
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 18:58
Selenium	0.118		0.0100	mg/L	5	20-Sep-2018 18:58
Thallium	0.0169		0.0100	mg/L	5	20-Sep-2018 18:58
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:16
ANIONS BY E300.0		Method:E300		Analyst: KMU		
Chloride	2,150		50.0	mg/L	100	20-Sep-2018 22:13
Fluoride	4.94		0.500	mg/L	5	15-Sep-2018 12:19
Sulfate	2,780		50.0	mg/L	100	20-Sep-2018 22:13
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH		
Total Dissolved Solids (Residue, Filterable)	9,940		10.0	mg/L	1	13-Sep-2018 16:50
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: MZD		
pH	3.25	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.9	H	0	°C	1	13-Sep-2018 10:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: MS Dup-3
 Collection Date: 06-Sep-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-34
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A			Method:SW6020		Prep:SW3010A / 12-Sep-2018	Analyst: JDE
Antimony	ND		0.0100	mg/L	5	20-Sep-2018 19:00
Arsenic	0.0104		0.0100	mg/L	5	20-Sep-2018 19:00
Barium	ND		0.0200	mg/L	5	20-Sep-2018 19:00
Beryllium	ND		0.200	mg/L	100	23-Sep-2018 14:44
Boron	14.0		2.00	mg/L	100	23-Sep-2018 14:44
Cadmium	0.0570		0.0100	mg/L	5	20-Sep-2018 19:00
Calcium	498		2.50	mg/L	5	20-Sep-2018 19:00
Chromium	ND		0.0200	mg/L	5	20-Sep-2018 19:00
Cobalt	0.352		0.0250	mg/L	5	20-Sep-2018 19:00
Lead	ND		0.0100	mg/L	5	20-Sep-2018 19:00
Lithium	1.46		0.500	mg/L	100	23-Sep-2018 14:44
Molybdenum	ND		0.0250	mg/L	5	20-Sep-2018 19:00
Selenium	0.0305		0.0100	mg/L	5	20-Sep-2018 19:00
Thallium	ND		0.0100	mg/L	5	20-Sep-2018 19:00
MERCURY BY SW7470A			Method:SW7470		Prep:SW7470 / 10-Sep-2018	Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:18
ANIONS BY E300.0			Method:E300			Analyst: KMU
Chloride	1,670		50.0	mg/L	100	15-Sep-2018 17:10
Fluoride	0.941		0.500	mg/L	5	15-Sep-2018 16:56
Sulfate	3,890		50.0	mg/L	100	15-Sep-2018 17:10
TOTAL DISSOLVED SOLIDS BY SM2540C			Method:M2540C			Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	10,600		10.0	mg/L	1	13-Sep-2018 16:50
PH BY SM4500H+ B			Method:SM4500H+ B			Analyst: MZD
pH	3.53	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.8	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226			Method:NA			Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228			Method:NA			Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Source Environmental Sciences Inc.
 Project: San Miguel Electric CCR Well Monitoring
 Sample ID: Equipment Blank
 Collection Date: 04-Sep-2018 09:58

ANALYTICAL REPORT
 WorkOrder:HS18090269
 Lab ID:HS18090269-35
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 12-Sep-2018		Analyst: JDE
Antimony	ND		0.00200	mg/L	1	23-Sep-2018 14:00
Arsenic	ND		0.00200	mg/L	1	23-Sep-2018 14:00
Barium	ND		0.00400	mg/L	1	23-Sep-2018 14:00
Beryllium	ND		0.00200	mg/L	1	23-Sep-2018 14:00
Boron	ND		0.0200	mg/L	1	23-Sep-2018 14:00
Cadmium	ND		0.00200	mg/L	1	23-Sep-2018 14:00
Calcium	ND		0.500	mg/L	1	23-Sep-2018 14:00
Chromium	ND		0.00400	mg/L	1	23-Sep-2018 14:00
Cobalt	ND		0.00500	mg/L	1	23-Sep-2018 14:00
Lead	ND		0.00200	mg/L	1	23-Sep-2018 14:00
Lithium	ND		0.00500	mg/L	1	23-Sep-2018 14:00
Molybdenum	ND		0.00500	mg/L	1	23-Sep-2018 14:00
Selenium	ND		0.00200	mg/L	1	23-Sep-2018 14:00
Thallium	ND		0.00200	mg/L	1	23-Sep-2018 14:00
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 10-Sep-2018		Analyst: JBA
Mercury	ND		0.000200	mg/L	1	11-Sep-2018 17:19
ANIONS BY E300.0		Method:E300				Analyst: KMU
Chloride	ND		0.500	mg/L	1	13-Sep-2018 14:55
Fluoride	ND		0.100	mg/L	1	13-Sep-2018 14:55
Sulfate	ND		0.500	mg/L	1	13-Sep-2018 14:55
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	ND		10.0	mg/L	1	11-Sep-2018 08:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: MZD
pH	5.44	H	0.100	pH Units	1	13-Sep-2018 10:20
Temp Deg C @pH	22.4	H	0	°C	1	13-Sep-2018 10:20
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC
Subcontract Analysis	See Attached			NA	1	26-Oct-2018 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

Batch ID: 132281 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18090269-01	1	10 (mL)	10 (mL)	1
HS18090269-02	1	10 (mL)	10 (mL)	1
HS18090269-03	1	10 (mL)	10 (mL)	1
HS18090269-04	1	10 (mL)	10 (mL)	1
HS18090269-05	1	10 (mL)	10 (mL)	1
HS18090269-06	1	10 (mL)	10 (mL)	1
HS18090269-07	1	10 (mL)	10 (mL)	1
HS18090269-08	1	10 (mL)	10 (mL)	1
HS18090269-09	1	10 (mL)	10 (mL)	1
HS18090269-10	1	10 (mL)	10 (mL)	1
HS18090269-11	1	10 (mL)	10 (mL)	1
HS18090269-12	1	10 (mL)	10 (mL)	1
HS18090269-13	1	10 (mL)	10 (mL)	1
HS18090269-14	1	10 (mL)	10 (mL)	1
HS18090269-15	1	10 (mL)	10 (mL)	1

Batch ID: 132282 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18090269-16	1	10 (mL)	10 (mL)	1
HS18090269-17	1	10 (mL)	10 (mL)	1
HS18090269-18	1	10 (mL)	10 (mL)	1
HS18090269-19	1	10 (mL)	10 (mL)	1
HS18090269-20	1	10 (mL)	10 (mL)	1
HS18090269-21	1	10 (mL)	10 (mL)	1
HS18090269-22	1	10 (mL)	10 (mL)	1
HS18090269-23	1	10 (mL)	10 (mL)	1
HS18090269-24	1	10 (mL)	10 (mL)	1
HS18090269-25	1	10 (mL)	10 (mL)	1
HS18090269-26	1	10 (mL)	10 (mL)	1
HS18090269-27	1	10 (mL)	10 (mL)	1
HS18090269-28	1	10 (mL)	10 (mL)	1
HS18090269-29	1	10 (mL)	10 (mL)	1
HS18090269-30	1	10 (mL)	10 (mL)	1
HS18090269-31	1	10 (mL)	10 (mL)	1
HS18090269-32	1	10 (mL)	10 (mL)	1
HS18090269-33	1	10 (mL)	10 (mL)	1
HS18090269-34	1	10 (mL)	10 (mL)	1
HS18090269-35	1	10 (mL)	10 (mL)	1

Batch ID: 132317 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18090269-01	1	10	10 (mL)	1
HS18090269-02	1	10	10 (mL)	1
HS18090269-03	1	10	10 (mL)	1
HS18090269-04	1	10	10 (mL)	1
HS18090269-05	1	10	10 (mL)	1
HS18090269-06	1	10	10 (mL)	1
HS18090269-07	1	10	10 (mL)	1

WEIGHT LOG

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

Batch ID: 132318 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18090269-08	1	10	10 (mL)	1
HS18090269-09	1	10	10 (mL)	1
HS18090269-10	1	10	10 (mL)	1
HS18090269-11	1	10	10 (mL)	1
HS18090269-12	1	10	10 (mL)	1
HS18090269-13	1	10	10 (mL)	1
HS18090269-14	1	10	10 (mL)	1
HS18090269-15	1	10	10 (mL)	1
HS18090269-16	1	10	10 (mL)	1
HS18090269-17	1	10	10 (mL)	1
HS18090269-18	1	10	10 (mL)	1
HS18090269-19	1	10	10 (mL)	1
HS18090269-20	1	10	10 (mL)	1
HS18090269-21	1	10	10 (mL)	1
HS18090269-22	1	10	10 (mL)	1
HS18090269-23	1	10	10 (mL)	1
HS18090269-24	1	10	10 (mL)	1

Batch ID: 132377 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SamplID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18090269-25	1	10	10 (mL)	1
HS18090269-26	1	10	10 (mL)	1
HS18090269-27	1	10	10 (mL)	1
HS18090269-28	1	10	10 (mL)	1
HS18090269-29	1	10	10 (mL)	1
HS18090269-30	1	10	10 (mL)	1
HS18090269-31	1	10	10 (mL)	1
HS18090269-32	1	10	10 (mL)	1
HS18090269-33	1	10	10 (mL)	1
HS18090269-34	1	10	10 (mL)	1
HS18090269-35	1	10	10 (mL)	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 132281		Test Name : MERCURY BY SW7470A		Matrix: Water		
HS18090269-01	AP-31	04 Sep 2018 10:23		10 Sep 2018 11:34	11 Sep 2018 15:39	1
HS18090269-02	MW-3	04 Sep 2018 11:05		10 Sep 2018 11:34	11 Sep 2018 15:26	1
HS18090269-03	Field Blank 1	04 Sep 2018 11:00		10 Sep 2018 11:34	11 Sep 2018 15:41	1
HS18090269-04	AP-32	04 Sep 2018 11:58		10 Sep 2018 11:34	11 Sep 2018 15:43	1
HS18090269-05	AP-33	04 Sep 2018 12:42		10 Sep 2018 11:34	11 Sep 2018 15:44	1
HS18090269-06	PZ-5	04 Sep 2018 13:27		10 Sep 2018 11:34	11 Sep 2018 15:50	1
HS18090269-07	Dup-1	04 Sep 2018 00:00		10 Sep 2018 11:34	11 Sep 2018 15:51	1
HS18090269-08	Dup-2	04 Sep 2018 00:00		10 Sep 2018 11:34	11 Sep 2018 15:53	1
HS18090269-09	Dup-3	04 Sep 2018 00:00		10 Sep 2018 11:34	11 Sep 2018 15:55	1
HS18090269-10	AP-34	04 Sep 2018 09:55		10 Sep 2018 11:34	11 Sep 2018 15:56	1
HS18090269-11	AP-35	05 Sep 2018 10:30		10 Sep 2018 11:34	11 Sep 2018 15:58	1
HS18090269-12	AP-36	05 Sep 2018 11:03		10 Sep 2018 11:34	11 Sep 2018 16:00	1
HS18090269-13	PZ-6	05 Sep 2018 11:37		10 Sep 2018 11:34	11 Sep 2018 16:01	1
HS18090269-14	Field Blank 2	05 Sep 2018 11:30		10 Sep 2018 11:34	11 Sep 2018 16:03	1
HS18090269-15	EP-38	05 Sep 2018 12:25		10 Sep 2018 11:34	11 Sep 2018 16:05	1
Batch ID 132282		Test Name : MERCURY BY SW7470A		Matrix: Water		
HS18090269-16	MW-4	05 Sep 2018 13:15		10 Sep 2018 11:34	11 Sep 2018 16:43	1
HS18090269-17	EP-32	05 Sep 2018 14:05		10 Sep 2018 11:34	11 Sep 2018 16:45	1
HS18090269-18	EP-33	05 Sep 2018 14:39		10 Sep 2018 11:34	11 Sep 2018 16:47	1
HS18090269-19	EP-34	05 Sep 2018 15:23		10 Sep 2018 11:34	11 Sep 2018 16:30	1
HS18090269-20	EP-35	06 Sep 2018 09:25		10 Sep 2018 11:34	11 Sep 2018 16:49	1
HS18090269-21	EP-36	06 Sep 2018 10:30		10 Sep 2018 11:34	11 Sep 2018 16:50	1
HS18090269-22	EP-37	06 Sep 2018 10:51		10 Sep 2018 11:34	11 Sep 2018 16:55	1
HS18090269-23	EP-31	06 Sep 2018 12:05		10 Sep 2018 11:34	11 Sep 2018 16:57	1
HS18090269-24	Field Blank 3	06 Sep 2018 12:00		10 Sep 2018 11:34	11 Sep 2018 16:59	1
HS18090269-25	PZ-2	06 Sep 2018 12:51		10 Sep 2018 11:34	11 Sep 2018 17:01	1
HS18090269-26	PZ-3	06 Sep 2018 13:13		10 Sep 2018 11:34	11 Sep 2018 17:02	1
HS18090269-27	SP-34	06 Sep 2018 14:26		10 Sep 2018 11:34	11 Sep 2018 16:38	1
HS18090269-28	SP-3	06 Sep 2018 15:12		10 Sep 2018 11:34	11 Sep 2018 17:04	1
HS18090269-29	SP-32	06 Sep 2018 15:49		10 Sep 2018 11:34	11 Sep 2018 17:06	1
HS18090269-30	SP-1	06 Sep 2018 16:13		10 Sep 2018 11:34	11 Sep 2018 17:07	1
HS18090269-31	SP-2	06 Sep 2018 17:07		10 Sep 2018 11:34	11 Sep 2018 17:09	1
HS18090269-32	MS Dup-1	06 Sep 2018 00:00		10 Sep 2018 11:34	11 Sep 2018 17:11	1
HS18090269-33	MS Dup-2	06 Sep 2018 00:00		10 Sep 2018 11:34	11 Sep 2018 17:16	1
HS18090269-34	MS Dup-3	06 Sep 2018 00:00		10 Sep 2018 11:34	11 Sep 2018 17:18	1
HS18090269-35	Equipment Blank	04 Sep 2018 09:58		10 Sep 2018 11:34	11 Sep 2018 17:19	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 132317	Test Name : ICP-MS METALS BY SW6020A				Matrix: Water	
HS18090269-01	AP-31	04 Sep 2018 10:23		11 Sep 2018 10:30	23 Sep 2018 14:02	500
HS18090269-01	AP-31	04 Sep 2018 10:23		11 Sep 2018 10:30	20 Sep 2018 18:22	5
HS18090269-02	MW-3	04 Sep 2018 11:05		11 Sep 2018 10:30	23 Sep 2018 14:16	100
HS18090269-02	MW-3	04 Sep 2018 11:05		11 Sep 2018 10:30	13 Sep 2018 13:43	5
HS18090269-03	Field Blank 1	04 Sep 2018 11:00		11 Sep 2018 10:30	20 Sep 2018 17:37	1
HS18090269-04	AP-32	04 Sep 2018 11:58		11 Sep 2018 10:30	23 Sep 2018 14:56	50
HS18090269-04	AP-32	04 Sep 2018 11:58		11 Sep 2018 10:30	20 Sep 2018 18:24	5
HS18090269-05	AP-33	04 Sep 2018 12:42		11 Sep 2018 10:30	23 Sep 2018 14:58	50
HS18090269-05	AP-33	04 Sep 2018 12:42		11 Sep 2018 10:30	23 Sep 2018 14:04	500
HS18090269-05	AP-33	04 Sep 2018 12:42		11 Sep 2018 10:30	20 Sep 2018 18:26	5
HS18090269-06	PZ-5	04 Sep 2018 13:27		11 Sep 2018 10:30	23 Sep 2018 14:06	500
HS18090269-06	PZ-5	04 Sep 2018 13:27		11 Sep 2018 10:30	20 Sep 2018 18:28	5
HS18090269-07	Dup-1	04 Sep 2018 00:00		11 Sep 2018 10:30	23 Sep 2018 14:36	100
HS18090269-07	Dup-1	04 Sep 2018 00:00		11 Sep 2018 10:30	20 Sep 2018 18:30	5

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 132318		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18090269-08	Dup-2	04 Sep 2018 00:00		11 Sep 2018 10:30	20 Sep 2018 17:39	5
HS18090269-08	Dup-2	04 Sep 2018 00:00		11 Sep 2018 10:30	12 Sep 2018 13:15	100
HS18090269-09	Dup-3	04 Sep 2018 00:00		11 Sep 2018 10:30	23 Sep 2018 14:52	50
HS18090269-09	Dup-3	04 Sep 2018 00:00		11 Sep 2018 10:30	20 Sep 2018 17:41	5
HS18090269-09	Dup-3	04 Sep 2018 00:00		11 Sep 2018 10:30	12 Sep 2018 13:17	100
HS18090269-10	AP-34	04 Sep 2018 09:55		11 Sep 2018 10:30	20 Sep 2018 17:49	10
HS18090269-10	AP-34	04 Sep 2018 09:55		11 Sep 2018 10:30	12 Sep 2018 13:19	100
HS18090269-11	AP-35	05 Sep 2018 10:30		11 Sep 2018 10:30	20 Sep 2018 17:51	5
HS18090269-11	AP-35	05 Sep 2018 10:30		11 Sep 2018 10:30	12 Sep 2018 13:21	100
HS18090269-12	AP-36	05 Sep 2018 11:03		11 Sep 2018 10:30	20 Sep 2018 17:53	5
HS18090269-12	AP-36	05 Sep 2018 11:03		11 Sep 2018 10:30	12 Sep 2018 13:23	100
HS18090269-13	PZ-6	05 Sep 2018 11:37		11 Sep 2018 10:30	20 Sep 2018 17:55	5
HS18090269-13	PZ-6	05 Sep 2018 11:37		11 Sep 2018 10:30	12 Sep 2018 13:25	100
HS18090269-14	Field Blank 2	05 Sep 2018 11:30		11 Sep 2018 10:30	20 Sep 2018 17:33	1
HS18090269-15	EP-38	05 Sep 2018 12:25		11 Sep 2018 10:30	20 Sep 2018 17:57	5
HS18090269-15	EP-38	05 Sep 2018 12:25		11 Sep 2018 10:30	12 Sep 2018 13:29	100
HS18090269-16	MW-4	05 Sep 2018 13:15		11 Sep 2018 10:30	20 Sep 2018 17:59	5
HS18090269-16	MW-4	05 Sep 2018 13:15		11 Sep 2018 10:30	12 Sep 2018 13:31	100
HS18090269-17	EP-32	05 Sep 2018 14:05		11 Sep 2018 10:30	23 Sep 2018 14:54	50
HS18090269-17	EP-32	05 Sep 2018 14:05		11 Sep 2018 10:30	20 Sep 2018 18:07	5
HS18090269-17	EP-32	05 Sep 2018 14:05		11 Sep 2018 10:30	12 Sep 2018 13:33	100
HS18090269-18	EP-33	05 Sep 2018 14:39		11 Sep 2018 10:30	23 Sep 2018 14:22	100
HS18090269-18	EP-33	05 Sep 2018 14:39		11 Sep 2018 10:30	20 Sep 2018 18:09	5
HS18090269-19	EP-34	05 Sep 2018 15:23		11 Sep 2018 10:30	13 Sep 2018 13:25	5
HS18090269-19	EP-34	05 Sep 2018 15:23		11 Sep 2018 10:30	12 Sep 2018 12:59	100
HS18090269-20	EP-35	06 Sep 2018 09:25		11 Sep 2018 10:30	23 Sep 2018 14:24	100
HS18090269-20	EP-35	06 Sep 2018 09:25		11 Sep 2018 10:30	20 Sep 2018 18:11	5
HS18090269-21	EP-36	06 Sep 2018 10:30		11 Sep 2018 10:30	23 Sep 2018 14:26	100
HS18090269-21	EP-36	06 Sep 2018 10:30		11 Sep 2018 10:30	20 Sep 2018 18:13	5
HS18090269-22	EP-37	06 Sep 2018 10:51		11 Sep 2018 10:30	23 Sep 2018 14:34	100
HS18090269-22	EP-37	06 Sep 2018 10:51		11 Sep 2018 10:30	20 Sep 2018 18:15	5
HS18090269-23	EP-31	06 Sep 2018 12:05		11 Sep 2018 10:30	23 Sep 2018 15:14	50
HS18090269-23	EP-31	06 Sep 2018 12:05		11 Sep 2018 10:30	20 Sep 2018 17:31	1
HS18090269-23	EP-31	06 Sep 2018 12:05		11 Sep 2018 10:30	12 Sep 2018 13:47	100
HS18090269-24	Field Blank 3	06 Sep 2018 12:00		11 Sep 2018 10:30	20 Sep 2018 17:35	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 132377		Test Name : ICP-MS METALS BY SW6020A		Matrix: Water		
HS18090269-25	PZ-2	06 Sep 2018 12:51		12 Sep 2018 13:00	23 Sep 2018 15:00	50
HS18090269-25	PZ-2	06 Sep 2018 12:51		12 Sep 2018 13:00	20 Sep 2018 18:38	5
HS18090269-26	PZ-3	06 Sep 2018 13:13		12 Sep 2018 13:00	23 Sep 2018 15:08	50
HS18090269-26	PZ-3	06 Sep 2018 13:13		12 Sep 2018 13:00	20 Sep 2018 18:40	5
HS18090269-27	SP-34	06 Sep 2018 14:26		12 Sep 2018 13:00	17 Sep 2018 23:16	50
HS18090269-27	SP-34	06 Sep 2018 14:26		12 Sep 2018 13:00	17 Sep 2018 17:20	5
HS18090269-28	SP-3	06 Sep 2018 15:12		12 Sep 2018 13:00	23 Sep 2018 15:10	50
HS18090269-28	SP-3	06 Sep 2018 15:12		12 Sep 2018 13:00	20 Sep 2018 18:42	5
HS18090269-29	SP-32	06 Sep 2018 15:49		12 Sep 2018 13:00	23 Sep 2018 14:38	100
HS18090269-29	SP-32	06 Sep 2018 15:49		12 Sep 2018 13:00	20 Sep 2018 18:44	5
HS18090269-30	SP-1	06 Sep 2018 16:13		12 Sep 2018 13:00	23 Sep 2018 15:12	50
HS18090269-30	SP-1	06 Sep 2018 16:13		12 Sep 2018 13:00	20 Sep 2018 18:46	5
HS18090269-31	SP-2	06 Sep 2018 17:07		12 Sep 2018 13:00	23 Sep 2018 14:40	100
HS18090269-31	SP-2	06 Sep 2018 17:07		12 Sep 2018 13:00	20 Sep 2018 18:54	5
HS18090269-32	MS Dup-1	06 Sep 2018 00:00		12 Sep 2018 13:00	23 Sep 2018 14:08	500
HS18090269-32	MS Dup-1	06 Sep 2018 00:00		12 Sep 2018 13:00	20 Sep 2018 18:56	5
HS18090269-33	MS Dup-2	06 Sep 2018 00:00		12 Sep 2018 13:00	23 Sep 2018 14:42	100
HS18090269-33	MS Dup-2	06 Sep 2018 00:00		12 Sep 2018 13:00	20 Sep 2018 18:58	5
HS18090269-34	MS Dup-3	06 Sep 2018 00:00		12 Sep 2018 13:00	23 Sep 2018 14:44	100
HS18090269-34	MS Dup-3	06 Sep 2018 00:00		12 Sep 2018 13:00	20 Sep 2018 19:00	5
HS18090269-35	Equipment Blank	04 Sep 2018 09:58		12 Sep 2018 13:00	23 Sep 2018 14:00	1
Batch ID R323202		Test Name : PH BY SM4500H+ B		Matrix: Water		
HS18090269-01	AP-31	04 Sep 2018 10:23			10 Sep 2018 14:26	1
HS18090269-02	MW-3	04 Sep 2018 11:05			10 Sep 2018 14:26	1
HS18090269-03	Field Blank 1	04 Sep 2018 11:00			10 Sep 2018 14:26	1
HS18090269-04	AP-32	04 Sep 2018 11:58			10 Sep 2018 14:26	1
HS18090269-05	AP-33	04 Sep 2018 12:42			10 Sep 2018 14:26	1
HS18090269-06	PZ-5	04 Sep 2018 13:27			10 Sep 2018 14:26	1
HS18090269-07	Dup-1	04 Sep 2018 00:00			10 Sep 2018 14:26	1
HS18090269-08	Dup-2	04 Sep 2018 00:00			10 Sep 2018 14:26	1
Batch ID R323221		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18090269-01	AP-31	04 Sep 2018 10:23			11 Sep 2018 20:02	100
HS18090269-02	MW-3	04 Sep 2018 11:05			11 Sep 2018 20:31	100
HS18090269-03	Field Blank 1	04 Sep 2018 11:00			11 Sep 2018 19:33	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R323225		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS18090269-01	AP-31	04 Sep 2018 10:23			11 Sep 2018 08:20	1
HS18090269-02	MW-3	04 Sep 2018 11:05			11 Sep 2018 08:20	1
HS18090269-03	Field Blank 1	04 Sep 2018 11:00			11 Sep 2018 08:20	1
HS18090269-04	AP-32	04 Sep 2018 11:58			11 Sep 2018 08:20	1
HS18090269-05	AP-33	04 Sep 2018 12:42			11 Sep 2018 08:20	1
HS18090269-06	PZ-5	04 Sep 2018 13:27			11 Sep 2018 08:20	1
HS18090269-07	Dup-1	04 Sep 2018 00:00			11 Sep 2018 08:20	1
HS18090269-08	Dup-2	04 Sep 2018 00:00			11 Sep 2018 08:20	1
HS18090269-09	Dup-3	04 Sep 2018 00:00			11 Sep 2018 08:20	1
HS18090269-10	AP-34	04 Sep 2018 09:55			11 Sep 2018 08:20	1
HS18090269-11	AP-35	05 Sep 2018 10:30			11 Sep 2018 08:20	1
HS18090269-12	AP-36	05 Sep 2018 11:03			11 Sep 2018 08:20	1
HS18090269-13	PZ-6	05 Sep 2018 11:37			11 Sep 2018 08:20	1
HS18090269-35	Equipment Blank	04 Sep 2018 09:58			11 Sep 2018 08:20	1
Batch ID R323237		Test Name : PH BY SM4500H+ B			Matrix: Water	
HS18090269-09	Dup-3	04 Sep 2018 00:00			11 Sep 2018 18:36	1
HS18090269-10	AP-34	04 Sep 2018 09:55			11 Sep 2018 18:36	1
HS18090269-11	AP-35	05 Sep 2018 10:30			11 Sep 2018 18:36	1
HS18090269-12	AP-36	05 Sep 2018 11:03			11 Sep 2018 18:36	1
HS18090269-13	PZ-6	05 Sep 2018 11:37			11 Sep 2018 18:36	1
HS18090269-14	Field Blank 2	05 Sep 2018 11:30			11 Sep 2018 18:36	1
HS18090269-15	EP-38	05 Sep 2018 12:25			11 Sep 2018 18:36	1
HS18090269-16	MW-4	05 Sep 2018 13:15			11 Sep 2018 18:36	1
HS18090269-17	EP-32	05 Sep 2018 14:05			11 Sep 2018 18:36	1
HS18090269-18	EP-33	05 Sep 2018 14:39			11 Sep 2018 18:36	1
HS18090269-19	EP-34	05 Sep 2018 15:23			11 Sep 2018 18:36	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R323356		Test Name : PH BY SM4500H+ B		Matrix: Water		
HS18090269-20	EP-35	06 Sep 2018 09:25			13 Sep 2018 10:20	1
HS18090269-21	EP-36	06 Sep 2018 10:30			13 Sep 2018 10:20	1
HS18090269-22	EP-37	06 Sep 2018 10:51			13 Sep 2018 10:20	1
HS18090269-23	EP-31	06 Sep 2018 12:05			13 Sep 2018 10:20	1
HS18090269-24	Field Blank 3	06 Sep 2018 12:00			13 Sep 2018 10:20	1
HS18090269-25	PZ-2	06 Sep 2018 12:51			13 Sep 2018 10:20	1
HS18090269-26	PZ-3	06 Sep 2018 13:13			13 Sep 2018 10:20	1
HS18090269-27	SP-34	06 Sep 2018 14:26			13 Sep 2018 10:20	1
HS18090269-28	SP-3	06 Sep 2018 15:12			13 Sep 2018 10:20	1
HS18090269-29	SP-32	06 Sep 2018 15:49			13 Sep 2018 10:20	1
HS18090269-30	SP-1	06 Sep 2018 16:13			13 Sep 2018 10:20	1
HS18090269-31	SP-2	06 Sep 2018 17:07			13 Sep 2018 10:20	1
HS18090269-32	MS Dup-1	06 Sep 2018 00:00			13 Sep 2018 10:20	1
HS18090269-33	MS Dup-2	06 Sep 2018 00:00			13 Sep 2018 10:20	1
HS18090269-34	MS Dup-3	06 Sep 2018 00:00			13 Sep 2018 10:20	1
HS18090269-35	Equipment Blank	04 Sep 2018 09:58			13 Sep 2018 10:20	1
Batch ID R323385		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C		Matrix: Water		
HS18090269-14	Field Blank 2	05 Sep 2018 11:30			12 Sep 2018 16:50	1
HS18090269-15	EP-38	05 Sep 2018 12:25			12 Sep 2018 16:50	1
HS18090269-16	MW-4	05 Sep 2018 13:15			12 Sep 2018 16:50	1
HS18090269-17	EP-32	05 Sep 2018 14:05			12 Sep 2018 16:50	1
HS18090269-18	EP-33	05 Sep 2018 14:39			12 Sep 2018 16:50	1
HS18090269-19	EP-34	05 Sep 2018 15:23			12 Sep 2018 16:50	1
HS18090269-20	EP-35	06 Sep 2018 09:25			12 Sep 2018 16:50	1
HS18090269-21	EP-36	06 Sep 2018 10:30			12 Sep 2018 16:50	1
HS18090269-22	EP-37	06 Sep 2018 10:51			12 Sep 2018 16:50	1
HS18090269-23	EP-31	06 Sep 2018 12:05			12 Sep 2018 16:50	1
HS18090269-24	Field Blank 3	06 Sep 2018 12:00			12 Sep 2018 16:50	1
HS18090269-25	PZ-2	06 Sep 2018 12:51			12 Sep 2018 16:50	1
HS18090269-26	PZ-3	06 Sep 2018 13:13			12 Sep 2018 16:50	1
HS18090269-27	SP-34	06 Sep 2018 14:26			12 Sep 2018 16:50	1
HS18090269-28	SP-3	06 Sep 2018 15:12			12 Sep 2018 16:50	1
HS18090269-29	SP-32	06 Sep 2018 15:49			12 Sep 2018 16:50	1
HS18090269-30	SP-1	06 Sep 2018 16:13			12 Sep 2018 16:50	1
HS18090269-31	SP-2	06 Sep 2018 17:07			12 Sep 2018 16:50	1
HS18090269-32	MS Dup-1	06 Sep 2018 00:00			12 Sep 2018 16:50	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R323404		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18090269-01	AP-31	04 Sep 2018 10:23			12 Sep 2018 14:55	2
HS18090269-02	MW-3	04 Sep 2018 11:05			12 Sep 2018 15:10	5
HS18090269-14	Field Blank 2	05 Sep 2018 11:30			13 Sep 2018 14:26	1
HS18090269-19	EP-34	05 Sep 2018 15:23			12 Sep 2018 16:55	100
HS18090269-19	EP-34	05 Sep 2018 15:23			12 Sep 2018 16:11	5
HS18090269-24	Field Blank 3	06 Sep 2018 12:00			13 Sep 2018 14:41	1
HS18090269-35	Equipment Blank	04 Sep 2018 09:58			13 Sep 2018 14:55	1
Batch ID R323473		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C		Matrix: Water		
HS18090269-33	MS Dup-2	06 Sep 2018 00:00			13 Sep 2018 16:50	1
HS18090269-34	MS Dup-3	06 Sep 2018 00:00			13 Sep 2018 16:50	1
Batch ID R323688		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18090269-04	AP-32	04 Sep 2018 11:58			14 Sep 2018 09:12	100
HS18090269-04	AP-32	04 Sep 2018 11:58			14 Sep 2018 08:57	5
HS18090269-05	AP-33	04 Sep 2018 12:42			14 Sep 2018 11:24	100
HS18090269-05	AP-33	04 Sep 2018 12:42			14 Sep 2018 11:10	5
HS18090269-06	PZ-5	04 Sep 2018 13:27			14 Sep 2018 12:08	100
HS18090269-06	PZ-5	04 Sep 2018 13:27			14 Sep 2018 11:53	5
HS18090269-07	Dup-1	04 Sep 2018 00:00			14 Sep 2018 12:37	100
HS18090269-07	Dup-1	04 Sep 2018 00:00			14 Sep 2018 12:22	5
HS18090269-08	Dup-2	04 Sep 2018 00:00			14 Sep 2018 13:35	100
HS18090269-08	Dup-2	04 Sep 2018 00:00			14 Sep 2018 13:21	5
HS18090269-09	Dup-3	04 Sep 2018 00:00			14 Sep 2018 14:04	100
HS18090269-09	Dup-3	04 Sep 2018 00:00			14 Sep 2018 13:50	5
HS18090269-10	AP-34	04 Sep 2018 09:55			14 Sep 2018 14:33	100
HS18090269-10	AP-34	04 Sep 2018 09:55			14 Sep 2018 14:19	5
HS18090269-11	AP-35	05 Sep 2018 10:30			14 Sep 2018 15:02	100
HS18090269-11	AP-35	05 Sep 2018 10:30			14 Sep 2018 14:48	5
HS18090269-12	AP-36	05 Sep 2018 11:03			14 Sep 2018 15:31	100
HS18090269-12	AP-36	05 Sep 2018 11:03			14 Sep 2018 15:17	5
HS18090269-13	PZ-6	05 Sep 2018 11:37			14 Sep 2018 16:30	100
HS18090269-13	PZ-6	05 Sep 2018 11:37			14 Sep 2018 16:15	5
HS18090269-15	EP-38	05 Sep 2018 12:25			14 Sep 2018 16:59	100
HS18090269-15	EP-38	05 Sep 2018 12:25			14 Sep 2018 16:44	5
HS18090269-16	MW-4	05 Sep 2018 13:15			14 Sep 2018 17:34	100
HS18090269-16	MW-4	05 Sep 2018 13:15			14 Sep 2018 17:13	5

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R323700		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18090269-17	EP-32	05 Sep 2018 14:05			15 Sep 2018 05:32	100
HS18090269-17	EP-32	05 Sep 2018 14:05			15 Sep 2018 05:17	5
HS18090269-18	EP-33	05 Sep 2018 14:39			15 Sep 2018 06:01	100
HS18090269-18	EP-33	05 Sep 2018 14:39			15 Sep 2018 05:46	5
HS18090269-20	EP-35	06 Sep 2018 09:25			15 Sep 2018 06:45	100
HS18090269-20	EP-35	06 Sep 2018 09:25			15 Sep 2018 06:30	5
HS18090269-21	EP-36	06 Sep 2018 10:30			15 Sep 2018 07:43	100
HS18090269-21	EP-36	06 Sep 2018 10:30			15 Sep 2018 07:28	5
HS18090269-22	EP-37	06 Sep 2018 10:51			15 Sep 2018 08:12	100
HS18090269-22	EP-37	06 Sep 2018 10:51			15 Sep 2018 07:57	5
HS18090269-23	EP-31	06 Sep 2018 12:05			14 Sep 2018 09:26	100
HS18090269-25	PZ-2	06 Sep 2018 12:51			15 Sep 2018 08:41	100
HS18090269-25	PZ-2	06 Sep 2018 12:51			15 Sep 2018 08:26	5
HS18090269-26	PZ-3	06 Sep 2018 13:13			15 Sep 2018 10:23	5
HS18090269-28	SP-3	06 Sep 2018 15:12			15 Sep 2018 09:10	100
HS18090269-28	SP-3	06 Sep 2018 15:12			15 Sep 2018 08:56	5
HS18090269-29	SP-32	06 Sep 2018 15:49			15 Sep 2018 09:39	100
HS18090269-29	SP-32	06 Sep 2018 15:49			15 Sep 2018 09:25	5
HS18090269-30	SP-1	06 Sep 2018 16:13			15 Sep 2018 10:52	5
HS18090269-31	SP-2	06 Sep 2018 17:07			15 Sep 2018 11:21	5
HS18090269-32	MS Dup-1	06 Sep 2018 00:00			15 Sep 2018 11:50	5
HS18090269-33	MS Dup-2	06 Sep 2018 00:00			15 Sep 2018 12:19	5
Batch ID R323715		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18090269-23	EP-31	06 Sep 2018 12:05			16 Sep 2018 20:46	10
HS18090269-23	EP-31	06 Sep 2018 12:05			15 Sep 2018 14:01	1
HS18090269-27	SP-34	06 Sep 2018 14:26			15 Sep 2018 16:12	100
HS18090269-27	SP-34	06 Sep 2018 14:26			15 Sep 2018 14:59	5
HS18090269-34	MS Dup-3	06 Sep 2018 00:00			15 Sep 2018 17:10	100
HS18090269-34	MS Dup-3	06 Sep 2018 00:00			15 Sep 2018 16:56	5
Batch ID R323882		Test Name : ANIONS BY E300.0		Matrix: Water		
HS18090269-22	EP-37	06 Sep 2018 10:51			20 Sep 2018 20:03	100
HS18090269-26	PZ-3	06 Sep 2018 13:13			20 Sep 2018 20:25	100
HS18090269-29	SP-32	06 Sep 2018 15:49			20 Sep 2018 20:47	100
HS18090269-30	SP-1	06 Sep 2018 16:13			20 Sep 2018 21:08	100
HS18090269-31	SP-2	06 Sep 2018 17:07			20 Sep 2018 21:30	100
HS18090269-32	MS Dup-1	06 Sep 2018 00:00			20 Sep 2018 21:52	100
HS18090269-33	MS Dup-2	06 Sep 2018 00:00			20 Sep 2018 22:13	100

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R326210		Test Name : SUBCONTRACT ANALYSIS - RADIUM 228		Matrix: Water		
HS18090269-01	AP-31	04 Sep 2018 10:23			26 Oct 2018 13:30	1
HS18090269-01	AP-31	04 Sep 2018 10:23			26 Oct 2018 13:30	1
HS18090269-02	MW-3	04 Sep 2018 11:05			26 Oct 2018 13:30	1
HS18090269-02	MW-3	04 Sep 2018 11:05			26 Oct 2018 13:30	1
HS18090269-03	Field Blank 1	04 Sep 2018 11:00			26 Oct 2018 13:30	1
HS18090269-03	Field Blank 1	04 Sep 2018 11:00			26 Oct 2018 13:30	1
HS18090269-04	AP-32	04 Sep 2018 11:58			26 Oct 2018 13:30	1
HS18090269-04	AP-32	04 Sep 2018 11:58			26 Oct 2018 13:30	1
HS18090269-05	AP-33	04 Sep 2018 12:42			26 Oct 2018 13:30	1
HS18090269-05	AP-33	04 Sep 2018 12:42			26 Oct 2018 13:30	1
HS18090269-06	PZ-5	04 Sep 2018 13:27			26 Oct 2018 13:30	1
HS18090269-06	PZ-5	04 Sep 2018 13:27			26 Oct 2018 13:30	1
HS18090269-07	Dup-1	04 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-07	Dup-1	04 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-08	Dup-2	04 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-08	Dup-2	04 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-10	AP-34	04 Sep 2018 09:55			26 Oct 2018 13:30	1
HS18090269-10	AP-34	04 Sep 2018 09:55			26 Oct 2018 13:30	1
HS18090269-11	AP-35	05 Sep 2018 10:30			26 Oct 2018 13:30	1
HS18090269-11	AP-35	05 Sep 2018 10:30			26 Oct 2018 13:30	1
HS18090269-12	AP-36	05 Sep 2018 11:03			26 Oct 2018 13:30	1
HS18090269-12	AP-36	05 Sep 2018 11:03			26 Oct 2018 13:30	1
HS18090269-13	PZ-6	05 Sep 2018 11:37			26 Oct 2018 13:30	1
HS18090269-13	PZ-6	05 Sep 2018 11:37			26 Oct 2018 13:30	1
HS18090269-14	Field Blank 2	05 Sep 2018 11:30			26 Oct 2018 13:30	1
HS18090269-14	Field Blank 2	05 Sep 2018 11:30			26 Oct 2018 13:30	1
HS18090269-15	EP-38	05 Sep 2018 12:25			26 Oct 2018 13:30	1
HS18090269-15	EP-38	05 Sep 2018 12:25			26 Oct 2018 13:30	1
HS18090269-16	MW-4	05 Sep 2018 13:15			26 Oct 2018 13:30	1
HS18090269-16	MW-4	05 Sep 2018 13:15			26 Oct 2018 13:30	1
HS18090269-17	EP-32	05 Sep 2018 14:05			26 Oct 2018 13:30	1
HS18090269-17	EP-32	05 Sep 2018 14:05			26 Oct 2018 13:30	1
HS18090269-18	EP-33	05 Sep 2018 14:39			26 Oct 2018 13:30	1
HS18090269-18	EP-33	05 Sep 2018 14:39			26 Oct 2018 13:30	1
HS18090269-19	EP-34	05 Sep 2018 15:23			26 Oct 2018 13:30	1
HS18090269-19	EP-34	05 Sep 2018 15:23			26 Oct 2018 13:30	1
HS18090269-20	EP-35	06 Sep 2018 09:25			26 Oct 2018 13:30	1
HS18090269-20	EP-35	06 Sep 2018 09:25			26 Oct 2018 13:30	1
HS18090269-21	EP-36	06 Sep 2018 10:30			26 Oct 2018 13:30	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
HS18090269-21	EP-36	06 Sep 2018 10:30			26 Oct 2018 13:30	1
HS18090269-22	EP-37	06 Sep 2018 10:51			26 Oct 2018 13:30	1
HS18090269-22	EP-37	06 Sep 2018 10:51			26 Oct 2018 13:30	1
HS18090269-23	EP-31	06 Sep 2018 12:05			26 Oct 2018 13:30	1
HS18090269-23	EP-31	06 Sep 2018 12:05			26 Oct 2018 13:30	1
HS18090269-24	Field Blank 3	06 Sep 2018 12:00			26 Oct 2018 13:30	1
HS18090269-24	Field Blank 3	06 Sep 2018 12:00			26 Oct 2018 13:30	1
HS18090269-25	PZ-2	06 Sep 2018 12:51			26 Oct 2018 13:30	1
HS18090269-25	PZ-2	06 Sep 2018 12:51			26 Oct 2018 13:30	1
HS18090269-26	PZ-3	06 Sep 2018 13:13			26 Oct 2018 13:30	1
HS18090269-26	PZ-3	06 Sep 2018 13:13			26 Oct 2018 13:30	1
HS18090269-32	MS Dup-1	06 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-32	MS Dup-1	06 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-34	MS Dup-3	06 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-34	MS Dup-3	06 Sep 2018 00:00			26 Oct 2018 13:30	1
HS18090269-35	Equipment Blank	04 Sep 2018 09:58			26 Oct 2018 13:30	1
HS18090269-35	Equipment Blank	04 Sep 2018 09:58			26 Oct 2018 13:30	1

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132281	Instrument: HG03	Method: SW7470
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MBLK	Sample ID: MBLK-132281	Units: mg/L	Analysis Date: 11-Sep-2018 15:19							
Client ID:	Run ID: HG03_323212	SeqNo: 4722412	PrepDate: 10-Sep-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury ND 0.000200

LCS	Sample ID: LCS-132281	Units: mg/L	Analysis Date: 11-Sep-2018 15:21							
Client ID:	Run ID: HG03_323212	SeqNo: 4722413	PrepDate: 10-Sep-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00533 0.000200 0.005 0 107 80 - 120

MS	Sample ID: HS18090269-02MS	Units: mg/L	Analysis Date: 11-Sep-2018 15:28							
Client ID: MW-3	Run ID: HG03_323212	SeqNo: 4722415	PrepDate: 10-Sep-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00534 0.000200 0.005 0.000025 106 75 - 125

MSD	Sample ID: HS18090269-02MSD	Units: mg/L	Analysis Date: 11-Sep-2018 15:30							
Client ID: MW-3	Run ID: HG03_323212	SeqNo: 4722416	PrepDate: 10-Sep-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00525 0.000200 0.005 0.000025 104 75 - 125 0.00534 1.7 20

The following samples were analyzed in this batch:

HS18090269-01	HS18090269-02	HS18090269-03	HS18090269-04
HS18090269-05	HS18090269-06	HS18090269-07	HS18090269-08
HS18090269-09	HS18090269-10	HS18090269-11	HS18090269-12
HS18090269-13	HS18090269-14	HS18090269-15	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132282		Instrument: HG03		Method: SW7470						
MBLK	Sample ID: MBLK-132282	Units: mg/L		Analysis Date: 11-Sep-2018 16:26						
Client ID:	Run ID: HG03_323212	SeqNo: 4722614		PrepDate: 10-Sep-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	ND	0.000200								
LCS	Sample ID: LCS-132282	Units: mg/L		Analysis Date: 11-Sep-2018 16:28						
Client ID:	Run ID: HG03_323212	SeqNo: 4722615		PrepDate: 10-Sep-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00536	0.000200	0.005	0	107	80 - 120				
MS	Sample ID: HS18090269-27MS	Units: mg/L		Analysis Date: 11-Sep-2018 16:40						
Client ID: SP-34	Run ID: HG03_323212	SeqNo: 4722620		PrepDate: 10-Sep-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.0055	0.000200	0.005	0.000262	105	75 - 125				
MS	Sample ID: HS18090269-19MS	Units: mg/L		Analysis Date: 11-Sep-2018 16:35						
Client ID: EP-34	Run ID: HG03_323212	SeqNo: 4722617		PrepDate: 10-Sep-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00305	0.000200	0.005	-0.000034	61.7	75 - 125			S	
MSD	Sample ID: HS18090269-27MSD	Units: mg/L		Analysis Date: 11-Sep-2018 16:42						
Client ID: SP-34	Run ID: HG03_323212	SeqNo: 4722621		PrepDate: 10-Sep-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00526	0.000200	0.005	0.000262	100.0	75 - 125	0.0055	4.46	20	
MSD	Sample ID: HS18090269-19MSD	Units: mg/L		Analysis Date: 11-Sep-2018 16:37						
Client ID: EP-34	Run ID: HG03_323212	SeqNo: 4722618		PrepDate: 10-Sep-2018		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Mercury	0.00315	0.000200	0.005	-0.000034	63.7	75 - 125	0.00305	3.23	20 S	
The following samples were analyzed in this batch:										
	HS18090269-16	HS18090269-17	HS18090269-18	HS18090269-19						
	HS18090269-20	HS18090269-21	HS18090269-22	HS18090269-23						
	HS18090269-24	HS18090269-25	HS18090269-26	HS18090269-27						
	HS18090269-28	HS18090269-29	HS18090269-30	HS18090269-31						
	HS18090269-32	HS18090269-33	HS18090269-34	HS18090269-35						

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132317		Instrument: ICPMS05		Method: SW6020					
MBLK	Sample ID: MBLK-132317	Units: mg/L			Analysis Date: 12-Sep-2018 14:58				
Client ID:	Run ID: ICPMS05_323246	SeqNo: 4724002		PrepDate: 11-Sep-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Antimony	ND	0.00200							
Arsenic	ND	0.00200							
Barium	ND	0.00400							
Beryllium	ND	0.00200							
Boron	ND	0.0200							
Cadmium	ND	0.00200							
Calcium	ND	0.500							
Chromium	ND	0.00400							
Cobalt	ND	0.00500							
Lead	ND	0.00200							
Lithium	ND	0.00500							
Molybdenum	ND	0.00500							
Selenium	ND	0.00200							
Thallium	ND	0.00200							

LCS	Sample ID: LCS-132317	Units: mg/L			Analysis Date: 12-Sep-2018 15:00				
Client ID:	Run ID: ICPMS05_323246	SeqNo: 4724003		PrepDate: 11-Sep-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Antimony	0.049	0.00200	0.05	0	98.0	80 - 120			
Arsenic	0.04877	0.00200	0.05	0	97.5	80 - 120			
Barium	0.04734	0.00400	0.05	0	94.7	80 - 120			
Beryllium	0.04875	0.00200	0.05	0	97.5	80 - 120			
Boron	0.4959	0.0200	0.5	0	99.2	80 - 120			
Cadmium	0.04916	0.00200	0.05	0	98.3	80 - 120			
Calcium	5.043	0.500	5	0	101	80 - 120			
Chromium	0.05063	0.00400	0.05	0	101	80 - 120			
Cobalt	0.04905	0.00500	0.05	0	98.1	80 - 120			
Lead	0.05066	0.00200	0.05	0	101	80 - 120			
Lithium	0.09753	0.00500	0.1	0	97.5	80 - 120			
Molybdenum	0.0505	0.00500	0.05	0	101	80 - 120			
Selenium	0.04708	0.00200	0.05	0	94.2	80 - 120			
Thallium	0.04578	0.00200	0.05	0	91.6	80 - 120			

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132317		Instrument: ICPMS05			Method: SW6020					
MS		Sample ID: HS18090269-02MS			Units: mg/L		Analysis Date: 13-Sep-2018 13:47			
Client ID: MW-3		Run ID: ICPMS05_323343			SeqNo: 4724987		PrepDate: 11-Sep-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04752	0.0100	0.05	0	95.0	80 - 120				
Arsenic	0.0508	0.0100	0.05	0.01082	80.0	80 - 120				S
Barium	0.06663	0.0200	0.05	0.009941	113	80 - 120				
Beryllium	0.05453	0.0100	0.05	0.03177	45.5	80 - 120				S
Boron	55.39	0.100	0.5	18.99	7280	80 - 120				SEO
Cadmium	0.04919	0.0100	0.05	0.06302	-27.7	80 - 120				S
Calcium	485.9	2.50	5	517.5	-632	80 - 120				SO
Chromium	0.05032	0.0200	0.05	0	101	80 - 120				
Cobalt	0.04742	0.0250	0.05	0.3546	-614	80 - 120				SO
Lead	0.04593	0.0100	0.05	0	91.9	80 - 120				
Lithium	1.145	0.0250	0.1	1.881	-737	80 - 120				SO
Molybdenum	0.05606	0.0250	0.05	0	112	80 - 120				
Selenium	0.04968	0.0100	0.05	0.03121	36.9	80 - 120				S
Thallium	0.04435	0.0100	0.05	0.001872	84.9	80 - 120				

MSD		Sample ID: HS18090269-02MSD			Units: mg/L		Analysis Date: 13-Sep-2018 13:49			
Client ID: MW-3		Run ID: ICPMS05_323343			SeqNo: 4724988		PrepDate: 11-Sep-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04629	0.0100	0.05	0	92.6	80 - 120	0.04752	2.63	20	
Arsenic	0.05003	0.0100	0.05	0.01082	78.4	80 - 120	0.0508	1.54	20	S
Barium	0.06594	0.0200	0.05	0.009941	112	80 - 120	0.06663	1.05	20	
Beryllium	0.05286	0.0100	0.05	0.03177	42.2	80 - 120	0.05453	3.11	20	S
Boron	53.82	0.100	0.5	18.99	6970	80 - 120	55.39	2.88	20	SEO
Cadmium	0.04893	0.0100	0.05	0.06302	-28.2	80 - 120	0.04919	0.544	20	S
Calcium	474.5	2.50	5	517.5	-860	80 - 120	485.9	2.38	20	SO
Chromium	0.04993	0.0200	0.05	0	99.9	80 - 120	0.05032	0.794	20	
Cobalt	0.04565	0.0250	0.05	0.3546	-618	80 - 120	0.04742	3.82	20	SO
Lead	0.04628	0.0100	0.05	0	92.6	80 - 120	0.04593	0.761	20	
Lithium	1.07	0.0250	0.1	1.881	-811	80 - 120	1.145	6.71	20	SO
Molybdenum	0.05443	0.0250	0.05	0	109	80 - 120	0.05606	2.95	20	
Selenium	0.04928	0.0100	0.05	0.03121	36.1	80 - 120	0.04968	0.825	20	S
Thallium	0.0464	0.0100	0.05	0.001872	89.1	80 - 120	0.04435	4.53	20	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132317		Instrument: ICPMS05		Method: SW6020						
PDS		Sample ID: HS18090269-02PDS		Units: mg/L		Analysis Date: 13-Sep-2018 13:51				
Client ID: MW-3		Run ID: ICPMS05_323343		SeqNo: 4724989		PrepDate: 11-Sep-2018		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Antimony	0.4235	0.0100	0.5	0	84.7	75 - 125				
Arsenic	0.471	0.0100	0.5	0.01082	92.0	75 - 125				
Barium	0.4953	0.0200	0.5	0.009941	97.1	75 - 125				
Beryllium	0.61	0.0100	0.5	0.03177	116	75 - 125				
Cadmium	0.5618	0.0100	0.5	0.06302	99.8	75 - 125				
Calcium	552.6	2.50	50	517.5	70.1	75 - 125			SO	
Chromium	0.4609	0.0200	0.5	0	92.2	75 - 125				
Cobalt	0.7998	0.0250	0.5	0.3546	89.0	75 - 125				
Lead	0.4658	0.0100	0.5	0	93.2	75 - 125				
Lithium	2.553	0.0250	0.5	1.881	134	70 - 125			S	
Molybdenum	0.4772	0.0250	0.5	0	95.4	75 - 125				
Selenium	0.4902	0.0100	0.5	0.03121	91.8	75 - 125				
Thallium	0.4806	0.0100	0.5	0.001872	95.8	75 - 125				

PDS		Sample ID: HS18090269-02PDS		Units: mg/L		Analysis Date: 23-Sep-2018 14:20			
Client ID: MW-3		Run ID: ICPMS05_323953		SeqNo: 4737147		PrepDate: 11-Sep-2018		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Boron	102.2	2.00	100	12.96	89.2	75 - 125			

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132317		Instrument: ICPMS05		Method: SW6020						
SD	Sample ID: HS18090269-02SD	Units: mg/L			Analysis Date: 13-Sep-2018 13:45					
Client ID: MW-3	Run ID: ICPMS05_323343	SeqNo: 4724986		PrepDate: 11-Sep-2018		DF: 25				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual	
Antimony	ND	0.0500					-0.000001	0	10	
Arsenic	ND	0.0500					0.01082	0	10	
Barium	ND	0.100					0.009941	0	10	
Beryllium	0.0273	0.0500					0.03177	0	10 J	
Cadmium	0.06003	0.0500					0.06302	4.75	10	
Calcium	515.2	12.5					517.5	0.453	10	
Chromium	ND	0.100					0.000091	0	10	
Cobalt	0.3288	0.125					0.3546	7.28	10	
Lead	ND	0.0500					-0.000251	0	10	
Lithium	1.665	0.125					1.881	11.5	10 R	
Molybdenum	ND	0.125					0.000287	0	10	
Selenium	0.03151	0.0500					0.03121	0	10 J	
Thallium	ND	0.0500					0.001872	0	10	

SD	Sample ID: HS18090269-02SD	Units: mg/L			Analysis Date: 23-Sep-2018 14:18				
Client ID: MW-3	Run ID: ICPMS05_323953	SeqNo: 4737146		PrepDate: 11-Sep-2018		DF: 500			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Boron	12.57	10.0					12.96	2.97	10

The following samples were analyzed in this batch:

HS18090269-01	HS18090269-02	HS18090269-03	HS18090269-04
HS18090269-05	HS18090269-06	HS18090269-07	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132318		Instrument: ICPMS05		Method: SW6020						
MBLK	Sample ID: MBLK-132318	Units: mg/L			Analysis Date: 12-Sep-2018 12:34					
Client ID:	Run ID: ICPMS05_323246	SeqNo: 4723935	PrepDate: 11-Sep-2018	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Beryllium	ND	0.00200								
Boron	ND	0.0200								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Lithium	ND	0.00500								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

LCS	Sample ID: LCS-132318	Units: mg/L			Analysis Date: 12-Sep-2018 12:36					
Client ID:	Run ID: ICPMS05_323246	SeqNo: 4723944	PrepDate: 11-Sep-2018	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04912	0.00200	0.05	0	98.2	80 - 120				
Arsenic	0.04965	0.00200	0.05	0	99.3	80 - 120				
Barium	0.04584	0.00400	0.05	0	91.7	80 - 120				
Beryllium	0.04918	0.00200	0.05	0	98.4	80 - 120				
Boron	0.4846	0.0200	0.5	0	96.9	80 - 120				
Cadmium	0.04652	0.00200	0.05	0	93.0	80 - 120				
Calcium	5.051	0.500	5	0	101	80 - 120				
Cobalt	0.04817	0.00500	0.05	0	96.3	80 - 120				
Lead	0.05072	0.00200	0.05	0	101	80 - 120				
Lithium	0.09839	0.00500	0.1	0	98.4	80 - 120				
Molybdenum	0.04913	0.00500	0.05	0	98.3	80 - 120				
Selenium	0.0477	0.00200	0.05	0	95.4	80 - 120				
Thallium	0.04258	0.00200	0.05	0	85.2	80 - 120				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132318		Instrument: ICPMS05			Method: SW6020					
MS		Sample ID: HS18090269-19MS			Units: mg/L		Analysis Date: 13-Sep-2018 13:29			
Client ID: EP-34		Run ID: ICPMS05_323343			SeqNo: 4724970		PrepDate: 11-Sep-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04675	0.0100	0.05	0	93.5	80 - 120				
Arsenic	0.05786	0.0100	0.05	0	116	80 - 120				
Barium	0.05819	0.0200	0.05	0.01928	77.8	80 - 120				S
Beryllium	0.07692	0.0100	0.05	0	154	80 - 120				S
Boron	17	0.100	0.5	50.61	-6720	80 - 120				SEO
Cadmium	0.1098	0.0100	0.05	0	220	80 - 120				S
Calcium	518.5	2.50	5	492.1	528	80 - 120				SO
Chromium	0.04802	0.0200	0.05	0	96.0	80 - 120				
Cobalt	0.3977	0.0250	0.05	0	795	80 - 120				S
Lead	0.04315	0.0100	0.05	0	86.3	80 - 120				
Lithium	1.756	0.0250	0.1	0.9607	796	80 - 120				SO
Molybdenum	0.04834	0.0250	0.05	0.00978	77.1	80 - 120				S
Selenium	0.08174	0.0100	0.05	0	163	80 - 120				S
Thallium	0.0486	0.0100	0.05	0	97.2	80 - 120				

MSD		Sample ID: HS18090269-19MSD			Units: mg/L		Analysis Date: 13-Sep-2018 13:31			
Client ID: EP-34		Run ID: ICPMS05_323343			SeqNo: 4724971		PrepDate: 11-Sep-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04604	0.0100	0.05	0	92.1	80 - 120	0.04675	1.53	20	
Arsenic	0.05999	0.0100	0.05	0	120	80 - 120	0.05786	3.61	20	
Barium	0.05905	0.0200	0.05	0.01928	79.6	80 - 120	0.05819	1.48	20	S
Beryllium	0.08387	0.0100	0.05	0	168	80 - 120	0.07692	8.64	20	S
Boron	18.32	0.100	0.5	50.61	-6460	80 - 120	17	7.45	20	SEO
Cadmium	0.1127	0.0100	0.05	0	225	80 - 120	0.1098	2.61	20	S
Calcium	532.1	2.50	5	492.1	800	80 - 120	518.5	2.58	20	SO
Chromium	0.04686	0.0200	0.05	0	93.7	80 - 120	0.04802	2.44	20	
Cobalt	0.3996	0.0250	0.05	0	799	80 - 120	0.3977	0.463	20	S
Lead	0.04389	0.0100	0.05	0	87.8	80 - 120	0.04315	1.7	20	
Lithium	1.913	0.0250	0.1	0.9607	952	80 - 120	1.756	8.52	20	SO
Molybdenum	0.049	0.0250	0.05	0.00978	78.4	80 - 120	0.04834	1.35	20	S
Selenium	0.07978	0.0100	0.05	0	160	80 - 120	0.08174	2.43	20	S
Thallium	0.04818	0.0100	0.05	0	96.4	80 - 120	0.0486	0.88	20	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132318		Instrument: ICPMS05		Method: SW6020						
PDS	Sample ID: HS18090269-19PDS	Units: mg/L			Analysis Date: 13-Sep-2018 13:33					
Client ID: EP-34	Run ID: ICPMS05_323343	SeqNo: 4724972		PrepDate: 11-Sep-2018		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Antimony	0.4437	0.0100	0.5	0	88.7	75 - 125				
Arsenic	0.4711	0.0100	0.5	0	94.2	75 - 125				
Barium	0.4928	0.0200	0.5	0.01928	94.7	75 - 125				
Beryllium	0.5316	0.0100	0.5	0	106	75 - 125				
Cadmium	0.4808	0.0100	0.5	0	96.2	75 - 125				
Calcium	508.9	2.50	50	492.1	33.6	75 - 125			SO	
Chromium	0.461	0.0200	0.5	0	92.2	75 - 125				
Cobalt	0.4377	0.0250	0.5	0	87.5	75 - 125				
Lead	0.4216	0.0100	0.5	0	84.3	75 - 125				
Lithium	1.535	0.0250	0.5	0.9607	115	70 - 125				
Molybdenum	0.4781	0.0250	0.5	0.00978	93.7	75 - 125				
Selenium	0.464	0.0100	0.5	0	92.8	75 - 125				
Thallium	0.4705	0.0100	0.5	0	94.1	75 - 125				

PDS	Sample ID: HS18090269-19PDS	Units: mg/L			Analysis Date: 12-Sep-2018 13:07					
Client ID: EP-34	Run ID: ICPMS05_323246	SeqNo: 4723966		PrepDate: 11-Sep-2018		DF: 100				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Boron	158.3	2.00	100	46.92	111	75 - 125				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132318		Instrument: ICPMS05		Method: SW6020						
SD	Sample ID: HS18090269-19SD	Units: mg/L		Analysis Date: 13-Sep-2018 13:27						
Client ID: EP-34	Run ID: ICPMS05_323343	SeqNo: 4724969		PrepDate: 11-Sep-2018			DF: 25			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Antimony	ND	0.0500					0.000018	0	10	
Arsenic	ND	0.0500					0.001016	0	10	
Barium	ND	0.100					0.01928	0	10	
Beryllium	ND	0.0500					0.000098	0	10	
Cadmium	ND	0.0500					0.000039	0	10	
Calcium	461.7	12.5					492.1	6.19	10	
Chromium	ND	0.100					0.001776	0	10	
Cobalt	ND	0.125					-0.000035	0	10	
Lead	ND	0.0500					-0.000189	0	10	
Lithium	0.8455	0.125					0.9607	12	10	R
Molybdenum	ND	0.125					0.00978	0	10	
Selenium	ND	0.0500					0.000779	0	10	
Thallium	ND	0.0500					-0.000057	0	10	

SD	Sample ID: HS18090269-19SD	Units: mg/L		Analysis Date: 12-Sep-2018 13:01						
Client ID: EP-34	Run ID: ICPMS05_323246	SeqNo: 4723963		PrepDate: 11-Sep-2018			DF: 500			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Boron	51.45	10.0					46.92	9.67	10	

The following samples were analyzed in this batch:

HS18090269-08	HS18090269-09	HS18090269-10	HS18090269-11
HS18090269-12	HS18090269-13	HS18090269-14	HS18090269-15
HS18090269-16	HS18090269-17	HS18090269-18	HS18090269-19
HS18090269-20	HS18090269-21	HS18090269-22	HS18090269-23
HS18090269-24			

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132377	Instrument: ICPMS05	Method: SW6020
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MBLK	Sample ID: MBLK-132377	Units: mg/L	Analysis Date: 17-Sep-2018 16:08							
Client ID:	Run ID: ICPMS05_323548	SeqNo: 4728938	PrepDate: 12-Sep-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Cadmium	ND	0.00200								
Calcium	ND	0.500								
Chromium	ND	0.00400								
Cobalt	ND	0.00500								
Lead	ND	0.00200								
Molybdenum	ND	0.00500								
Selenium	ND	0.00200								
Thallium	ND	0.00200								

MBLK	Sample ID: MBLK-132377	Units: mg/L	Analysis Date: 17-Sep-2018 17:08							
Client ID:	Run ID: ICPMS05_323548	SeqNo: 4729024	PrepDate: 12-Sep-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Beryllium	ND	0.00200								
Boron	ND	0.0200								
Lithium	ND	0.00500								

LCS	Sample ID: LCS-132377	Units: mg/L	Analysis Date: 17-Sep-2018 16:10							
Client ID:	Run ID: ICPMS05_323548	SeqNo: 4728939	PrepDate: 12-Sep-2018 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Antimony	0.05604	0.00200	0.05	0	112	80 - 120				
Arsenic	0.05674	0.00200	0.05	0	113	80 - 120				
Barium	0.04885	0.00400	0.05	0	97.7	80 - 120				
Cadmium	0.05136	0.00200	0.05	0	103	80 - 120				
Calcium	5.15	0.500	5	0	103	80 - 120				
Chromium	0.0552	0.00400	0.05	0	110	80 - 120				
Cobalt	0.05623	0.00500	0.05	0	112	80 - 120				
Molybdenum	0.05067	0.00500	0.05	0	101	80 - 120				
Selenium	0.05595	0.00200	0.05	0	112	80 - 120				
Thallium	0.04803	0.00200	0.05	0	96.1	80 - 120				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132377	Instrument: ICPMS05	Method: SW6020
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LCS		Sample ID: LCS-132377			Units: mg/L		Analysis Date: 17-Sep-2018 17:10			
Client ID:		Run ID: ICPMS05_323548			SeqNo: 4729025		PrepDate: 12-Sep-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.05325	0.00200	0.05	0	106	80 - 120				
Boron	0.5255	0.0200	0.5	0	105	80 - 120				
Lead	0.04961	0.00200	0.05	0	99.2	80 - 120				
Lithium	0.1005	0.00500	0.1	0	101	80 - 120				

MS		Sample ID: HS18090269-27MS			Units: mg/L		Analysis Date: 17-Sep-2018 17:24			
Client ID: SP-34		Run ID: ICPMS05_323548			SeqNo: 4729043		PrepDate: 12-Sep-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05089	0.0100	0.05	0	102	80 - 120				
Arsenic	0.06361	0.0100	0.05	0.01388	99.5	80 - 120				
Barium	0.07291	0.0200	0.05	0.0181	110	80 - 120				
Beryllium	0.2232	0.0100	0.05	0.1708	105	80 - 120				
Boron	14.47	0.100	0.5	14.07	78.7	80 - 120				SEO
Cadmium	0.2594	0.0100	0.05	0.1968	125	80 - 120				S
Calcium	709.4	2.50	5	710.8	-28.8	80 - 120				SO
Chromium	0.05717	0.0200	0.05	0.009484	95.4	80 - 120				
Cobalt	0.7768	0.0250	0.05	0.7023	149	80 - 120				SO
Lead	0.05319	0.0100	0.05	0.005956	94.5	80 - 120				
Lithium	1.567	0.0250	0.1	1.383	184	80 - 120				SO
Molybdenum	0.04917	0.0250	0.05	0	98.3	80 - 120				
Selenium	0.1777	0.0100	0.05	0.1223	111	80 - 120				
Thallium	0.06775	0.0100	0.05	0.01872	98.1	80 - 120				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132377		Instrument: ICPMS05			Method: SW6020					
MSD		Sample ID: HS18090269-27MSD			Units: mg/L		Analysis Date: 17-Sep-2018 17:26			
Client ID: SP-34		Run ID: ICPMS05_323548			SeqNo: 4729044		PrepDate: 12-Sep-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04966	0.0100	0.05	0	99.3	80 - 120	0.05089	2.44	20	
Arsenic	0.06389	0.0100	0.05	0.01388	100	80 - 120	0.06361	0.449	20	
Barium	0.06851	0.0200	0.05	0.0181	101	80 - 120	0.07291	6.22	20	
Beryllium	0.2181	0.0100	0.05	0.1708	94.6	80 - 120	0.2232	2.28	20	
Boron	14.54	0.100	0.5	14.07	93.5	80 - 120	14.47	0.511	20	EO
Cadmium	0.2438	0.0100	0.05	0.1968	93.9	80 - 120	0.2594	6.22	20	
Calcium	688.1	2.50	5	710.8	-454	80 - 120	709.4	3.04	20	SO
Chromium	0.05598	0.0200	0.05	0.009484	93.0	80 - 120	0.05717	2.11	20	
Cobalt	0.7442	0.0250	0.05	0.7023	83.8	80 - 120	0.7768	4.29	20	O
Lead	0.05412	0.0100	0.05	0.005956	96.3	80 - 120	0.05319	1.72	20	
Lithium	1.525	0.0250	0.1	1.383	142	80 - 120	1.567	2.72	20	SO
Molybdenum	0.04947	0.0250	0.05	0	98.9	80 - 120	0.04917	0.602	20	
Selenium	0.174	0.0100	0.05	0.1223	103	80 - 120	0.1777	2.15	20	
Thallium	0.06549	0.0100	0.05	0.01872	93.5	80 - 120	0.06775	3.4	20	
PDS		Sample ID: HS18090269-27PDS			Units: mg/L		Analysis Date: 17-Sep-2018 17:28			
Client ID: SP-34		Run ID: ICPMS05_323548			SeqNo: 4729045		PrepDate: 12-Sep-2018		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4605	0.0100	0.5	0	92.1	75 - 125				
Arsenic	0.4959	0.0100	0.5	0.01388	96.4	75 - 125				
Barium	0.4924	0.0200	0.5	0.0181	94.9	75 - 125				
Beryllium	0.7507	0.0100	0.5	0.1708	116	75 - 125				
Cadmium	0.6555	0.0100	0.5	0.1968	91.7	75 - 125				
Calcium	680.2	2.50	50	710.8	-61.2	75 - 125				SO
Chromium	0.4597	0.0200	0.5	0.009484	90.0	75 - 125				
Cobalt	1.129	0.0250	0.5	0.7023	85.3	75 - 125				
Lead	0.4863	0.0100	0.5	0.005956	96.1	75 - 125				
Lithium	2	0.0250	0.5	1.383	123	70 - 125				
Molybdenum	0.4658	0.0250	0.5	0	93.2	75 - 125				
Selenium	0.5976	0.0100	0.5	0.1223	95.1	75 - 125				
Thallium	0.4872	0.0100	0.5	0.01872	93.7	75 - 125				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: 132377	Instrument: ICPMS05	Method: SW6020								
PDS	Sample ID: HS18090269-27PDS	Units: mg/L	Analysis Date: 18-Sep-2018 15:24							
Client ID: SP-34	Run ID: ICPMS05_323598	SeqNo: 4730619	PrepDate: 12-Sep-2018 DF: 50							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Boron	57.79	1.00	50	11.22	93.1	75 - 125
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SD	Sample ID: HS18090269-27SD	Units: mg/L	Analysis Date: 17-Sep-2018 17:22							
Client ID: SP-34	Run ID: ICPMS05_323548	SeqNo: 4729042	PrepDate: 12-Sep-2018 DF: 25							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual

Antimony	ND	0.0500					0.000877	0	10	
Arsenic	0.01244	0.0500					0.01388	0	10	J
Barium	ND	0.100					0.0181	0	10	
Chromium	ND	0.100					0.009484	0	10	
Cobalt	0.6424	0.125					0.7023	8.53	10	
Lead	ND	0.0500					0.005956	0	10	
Molybdenum	ND	0.125					0.000352	0	10	
Selenium	0.124	0.0500					0.1223	1.34	10	
Thallium	0.01642	0.0500					0.01872	0	10	J

SD	Sample ID: HS18090269-27SD	Units: mg/L	Analysis Date: 17-Sep-2018 18:08							
Client ID: SP-34	Run ID: ICPMS05_323548	SeqNo: 4729131	PrepDate: 12-Sep-2018 DF: 25							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual

Beryllium	0.1483	0.0500					0.1708	13.2	10	R
Cadmium	0.1927	0.0500					0.1968	2.11	10	
Calcium	659.7	12.5					710.8	7.19	10	
Lithium	1.215	0.125					1.383	12.1	10	R

SD	Sample ID: HS18090269-27SD	Units: mg/L	Analysis Date: 17-Sep-2018 23:18							
Client ID: SP-34	Run ID: ICPMS05_323548	SeqNo: 4729333	PrepDate: 12-Sep-2018 DF: 250							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual

Boron	11.71	5.00					11.22	4.36	10	
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The following samples were analyzed in this batch:

HS18090269-25	HS18090269-26	HS18090269-27	HS18090269-28
HS18090269-29	HS18090269-30	HS18090269-31	HS18090269-32
HS18090269-33	HS18090269-34	HS18090269-35	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323202		Instrument: WetChem_HS		Method: SM4500H+ B					
DUP	Sample ID: HS18090269-02DUP	Units: pH Units			Analysis Date: 10-Sep-2018 14:26				
Client ID: MW-3	Run ID: WetChem_HS_323202	SeqNo: 4722114		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

pH	3.47	0.100					3.41	1.74	10
Temp Deg C @pH	21	0					21.2	0.948	10

The following samples were analyzed in this batch:

HS18090269-01	HS18090269-02	HS18090269-03	HS18090269-04
HS18090269-05	HS18090269-06	HS18090269-07	HS18090269-08

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323221	Instrument: ICS2100	Method: E300
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MBLK	Sample ID: WBLKW1-091118	Units: mg/L	Analysis Date: 11-Sep-2018 08:48							
Client ID:	Run ID: ICS2100_323221	SeqNo: 4722480	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								

LCS	Sample ID: WLCSW1-091118	Units: mg/L	Analysis Date: 11-Sep-2018 09:03							
Client ID:	Run ID: ICS2100_323221	SeqNo: 4722481	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.68	0.500	20	0	103	90 - 110				
Fluoride	4.224	0.100	4	0	106	90 - 110				
Sulfate	19.95	0.500	20	0	99.7	90 - 110				

LCS D	Sample ID: WLCSDW1-091118	Units: mg/L	Analysis Date: 11-Sep-2018 09:17							
Client ID:	Run ID: ICS2100_323221	SeqNo: 4722482	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.8	0.500	20	0	104	90 - 110	20.68	0.617	20	
Fluoride	4.215	0.100	4	0	105	90 - 110	4.224	0.213	20	
Sulfate	19.95	0.500	20	0	99.8	90 - 110	19.95	0.01	20	

MS	Sample ID: HS18090360-01MS	Units: mg/L	Analysis Date: 11-Sep-2018 11:32							
Client ID:	Run ID: ICS2100_323221	SeqNo: 4722489	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	78.53	0.500	10	70.97	75.6	80 - 120				SO
Fluoride	2.399	0.100	2	0.258	107	80 - 120				
Sulfate	25.34	0.500	10	15.57	97.7	80 - 120				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323221		Instrument: ICS2100			Method: E300					
MS		Sample ID: HS18090269-02MS			Units: mg/L		Analysis Date: 11-Sep-2018 20:45			
Client ID: MW-3		Run ID: ICS2100_323221			SeqNo: 4724878		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2712	50.0	1000	1746	96.6	80 - 120				
Fluoride	192.2	10.0	200	0.05	96.1	80 - 120				
Sulfate	5013	50.0	1000	4153	86.0	80 - 120				O
MSD		Sample ID: HS18090360-01MSD			Units: mg/L		Analysis Date: 11-Sep-2018 11:47			
Client ID:		Run ID: ICS2100_323221			SeqNo: 4724890		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	77.23	0.500	10	70.97	62.6	80 - 120	78.53	1.68	20	SO
Fluoride	2.354	0.100	2	0.258	105	80 - 120	2.399	1.89	20	
Sulfate	24.92	0.500	10	15.57	93.5	80 - 120	25.34	1.67	20	
MSD		Sample ID: HS18090269-02MSD			Units: mg/L		Analysis Date: 11-Sep-2018 21:00			
Client ID: MW-3		Run ID: ICS2100_323221			SeqNo: 4724879		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2748	50.0	1000	1746	100	80 - 120	2712	1.32	20	
Fluoride	195.8	10.0	200	0.05	97.9	80 - 120	192.2	1.89	20	
Sulfate	5107	50.0	1000	4153	95.3	80 - 120	5013	1.85	20	O
The following samples were analyzed in this batch: HS18090269-01 HS18090269-02 HS18090269-03										

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323225	Instrument: Balance1	Method: M2540C
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MBLK	Sample ID: WBLK-091118	Units: mg/L	Analysis Date: 11-Sep-2018 08:20							
Client ID:	Run ID: Balance1_323225	SeqNo: 4722527	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-091118	Units: mg/L	Analysis Date: 11-Sep-2018 08:20							
Client ID:	Run ID: Balance1_323225	SeqNo: 4722528	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1014 10.0 1000 0 101 85 - 115

DUP	Sample ID: HS18090366-01DUP	Units: mg/L	Analysis Date: 11-Sep-2018 08:20							
Client ID:	Run ID: Balance1_323225	SeqNo: 4722526	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 6660 10.0 6980 4.69 5

DUP	Sample ID: HS18090269-02DUP	Units: mg/L	Analysis Date: 11-Sep-2018 08:20							
Client ID: MW-3	Run ID: Balance1_323225	SeqNo: 4723789	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 9780 10.0 9620 1.65 5

The following samples were analyzed in this batch:	HS18090269-01	HS18090269-02	HS18090269-03	HS18090269-04
	HS18090269-05	HS18090269-06	HS18090269-07	HS18090269-08
	HS18090269-09	HS18090269-10	HS18090269-11	HS18090269-12
	HS18090269-13	HS18090269-35		

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323237	Instrument: WetChem_HS	Method: SM4500H+ B
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DUP	Sample ID: HS18090269-19DUP	Units: pH Units	Analysis Date: 11-Sep-2018 18:36							
Client ID: EP-34	Run ID: WetChem_HS_323237	SeqNo: 4722730	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	6.32	0.100					6.28	0.635	10	
Temp Deg C @pH	24.8	0					24.7	0.404	10	

The following samples were analyzed in this batch:

HS18090269-09	HS18090269-10	HS18090269-11	HS18090269-12
HS18090269-13	HS18090269-14	HS18090269-15	HS18090269-16
HS18090269-17	HS18090269-18	HS18090269-19	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323356 **Instrument:** WetChem_HS **Method:** SM4500H+ B

DUP	Sample ID: HS18090270-02DUP	Units: pH Units		Analysis Date: 13-Sep-2018 10:20						
Client ID:	Run ID: WetChem_HS_323356	SeqNo: 4725167	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.53	0.100					6.52	0.153	10	
Temp Deg C @pH	21.1	0					21.1	0	10	

DUP	Sample ID: HS18090269-27DUP	Units: pH Units		Analysis Date: 13-Sep-2018 10:20						
Client ID: SP-34	Run ID: WetChem_HS_323356	SeqNo: 4725187	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.23	0.100					3.21	0.621	10	
Temp Deg C @pH	23.8	0					23.9	0.419	10	

The following samples were analyzed in this batch:

HS18090269-20	HS18090269-21	HS18090269-22	HS18090269-23
HS18090269-24	HS18090269-25	HS18090269-26	HS18090269-27
HS18090269-28	HS18090269-29	HS18090269-30	HS18090269-31
HS18090269-32	HS18090269-33	HS18090269-34	HS18090269-35

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323385	Instrument: Balance1	Method: M2540C
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MBLK	Sample ID: WBLK-091218	Units: mg/L	Analysis Date: 12-Sep-2018 16:50							
Client ID:	Run ID: Balance1_323385	SeqNo: 4725672	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-091218	Units: mg/L	Analysis Date: 12-Sep-2018 16:50							
Client ID:	Run ID: Balance1_323385	SeqNo: 4725673	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1006 10.0 1000 0 101 85 - 115

DUP	Sample ID: HS18090269-27DUP	Units: mg/L	Analysis Date: 12-Sep-2018 16:50							
Client ID: SP-34	Run ID: Balance1_323385	SeqNo: 4725666	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 8500 10.0 8420 0.946 5

DUP	Sample ID: HS18090269-19DUP	Units: mg/L	Analysis Date: 12-Sep-2018 16:50							
Client ID: EP-34	Run ID: Balance1_323385	SeqNo: 4725657	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 11760 10.0 11480 2.41 5

The following samples were analyzed in this batch:	HS18090269-14	HS18090269-15	HS18090269-16	HS18090269-17
	HS18090269-18	HS18090269-19	HS18090269-20	HS18090269-21
	HS18090269-22	HS18090269-23	HS18090269-24	HS18090269-25
	HS18090269-26	HS18090269-27	HS18090269-28	HS18090269-29
	HS18090269-30	HS18090269-31	HS18090269-32	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323404	Instrument: ICS2100	Method: E300
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MBLK	Sample ID: WBLKW1-091218	Units: mg/L	Analysis Date: 12-Sep-2018 13:36							
Client ID:	Run ID: ICS2100_323404	SeqNo: 4726302	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								

LCS	Sample ID: WLCSW1-091218	Units: mg/L	Analysis Date: 12-Sep-2018 13:51							
Client ID:	Run ID: ICS2100_323404	SeqNo: 4726303	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.08	0.500	20	0	105	90 - 110				
Fluoride	4.331	0.100	4	0	108	90 - 110				
Sulfate	20.52	0.500	20	0	103	90 - 110				

LCS D	Sample ID: WLCSDW1-091218	Units: mg/L	Analysis Date: 12-Sep-2018 14:12							
Client ID:	Run ID: ICS2100_323404	SeqNo: 4726304	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.31	0.500	20	0	107	90 - 110	21.08	1.09	20	
Fluoride	4.305	0.100	4	0	108	90 - 110	4.331	0.602	20	
Sulfate	20.55	0.500	20	0	103	90 - 110	20.52	0.146	20	

MS	Sample ID: HS18090269-19MS	Units: mg/L	Analysis Date: 12-Sep-2018 17:09							
Client ID: EP-34	Run ID: ICS2100_323404	SeqNo: 4726315	PrepDate: DF: 100							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	4672	50.0	1000	3608	106	80 - 120				
Fluoride	204	10.0	200	0	102	80 - 120				
Sulfate	4300	50.0	1000	3280	102	80 - 120				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323404		Instrument: ICS2100			Method: E300					
MS		Sample ID: HS18090269-19MS			Units: mg/L		Analysis Date: 12-Sep-2018 16:25			
Client ID: EP-34		Run ID: ICS2100_323404			SeqNo: 4726312		PrepDate:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3633	2.50	50	3693	-121	80 - 120				SEO
Fluoride	10.12	0.500	10	-0.074	102	80 - 120				
Sulfate	3306	2.50	50	3383	-152	80 - 120				SEO
MS		Sample ID: HS18090269-02MS			Units: mg/L		Analysis Date: 12-Sep-2018 15:24			
Client ID: MW-3		Run ID: ICS2100_323404			SeqNo: 4726309		PrepDate:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1791	2.50	50	1751	80.0	80 - 120				EO
Fluoride	11.1	0.500	10	0.817	103	80 - 120				
Sulfate	4049	2.50	50	4047	3.75	80 - 120				SEO
MSD		Sample ID: HS18090269-19MSD			Units: mg/L		Analysis Date: 12-Sep-2018 16:40			
Client ID: EP-34		Run ID: ICS2100_323404			SeqNo: 4726313		PrepDate:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3573	2.50	50	3693	-241	80 - 120	3633	1.67	20	SEO
Fluoride	10.02	0.500	10	-0.074	101	80 - 120	10.12	0.953	20	
Sulfate	3264	2.50	50	3383	-238	80 - 120	3306	1.31	20	SEO
MSD		Sample ID: HS18090269-19MSD			Units: mg/L		Analysis Date: 12-Sep-2018 17:24			
Client ID: EP-34		Run ID: ICS2100_323404			SeqNo: 4726316		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	4680	50.0	1000	3608	107	80 - 120	4672	0.172	20	
Fluoride	205.2	10.0	200	0	103	80 - 120	204	0.601	20	
Sulfate	4303	50.0	1000	3280	102	80 - 120	4300	0.0809	20	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323404 **Instrument:** ICS2100 **Method:** E300

MSD Sample ID: **HS18090269-02MSD** Units: **mg/L** Analysis Date: **12-Sep-2018 15:39**
Client ID: **MW-3** Run ID: **ICS2100_323404** SeqNo: **4726310** PrepDate: DF: **5**
Analyte **Result** **PQL** **SPK Val** **SPK Ref Value** **%REC** **Control Limit** **RPD Ref Value** **%RPD** **RPD Limit** **Qual**

Chloride	1792	2.50	50	1751	82.8	80 - 120	1791	0.0781	20	EO
Fluoride	11.18	0.500	10	0.817	104	80 - 120	11.1	0.646	20	
Sulfate	4051	2.50	50	4047	7.86	80 - 120	4049	0.0508	20	SEO

The following samples were analyzed in this batch: HS18090269-01 HS18090269-02 HS18090269-14 HS18090269-19
 HS18090269-24 HS18090269-35

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323473		Instrument: Balance1		Method: M2540C					
MBLK	Sample ID: WBLK-091318	Units: mg/L		Analysis Date: 13-Sep-2018 16:50					
Client ID:	Run ID: Balance1_323473	SeqNo: 4727428		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) ND 10.0

LCS	Sample ID: WLCS-091318	Units: mg/L		Analysis Date: 13-Sep-2018 16:50					
Client ID:	Run ID: Balance1_323473	SeqNo: 4727429		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 1024 10.0 1000 0 102 85 - 115

DUP	Sample ID: HS18090546-01DUP	Units: mg/L		Analysis Date: 13-Sep-2018 16:50					
Client ID:	Run ID: Balance1_323473	SeqNo: 4727427		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 37560 10.0 36260 3.52 5

The following samples were analyzed in this batch: HS18090269-33 HS18090269-34

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323688	Instrument: ICS2100	Method: E300
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MBLK	Sample ID: WBLKW1-091418	Units: mg/L	Analysis Date: 14-Sep-2018 07:15							
Client ID:	Run ID: ICS2100_323688	SeqNo: 4731705	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								

LCS	Sample ID: WLCSW1-091418	Units: mg/L	Analysis Date: 14-Sep-2018 07:30							
Client ID:	Run ID: ICS2100_323688	SeqNo: 4731706	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Chloride	20.86	0.500	20	0	104	90 - 110				
Fluoride	4.281	0.100	4	0	107	90 - 110				
Sulfate	20.22	0.500	20	0	101	90 - 110				

LCS D	Sample ID: WLCSDW1-091418	Units: mg/L	Analysis Date: 14-Sep-2018 07:44							
Client ID:	Run ID: ICS2100_323688	SeqNo: 4731707	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Chloride	21.3	0.500	20	0	107	90 - 110	20.86	2.13	20	
Fluoride	4.37	0.100	4	0	109	90 - 110	4.281	2.06	20	
Sulfate	20.66	0.500	20	0	103	90 - 110	20.22	2.11	20	

MS	Sample ID: HS18090663-04MS	Units: mg/L	Analysis Date: 14-Sep-2018 22:59							
Client ID:	Run ID: ICS2100_323688	SeqNo: 4731754	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Chloride	12.98	0.500	10	3.015	99.7	80 - 120				
Fluoride	2.194	0.100	2	0.193	100	80 - 120				
Sulfate	98.71	0.500	10	89.32	93.9	80 - 120				O

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323688 **Instrument:** ICS2100 **Method:** E300

MS		Sample ID: HS18090592-01MS			Units: mg/L		Analysis Date: 14-Sep-2018 08:28			
Client ID:		Run ID: ICS2100_323688			SeqNo: 4731710		PrepDate:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	981.2	25.0	500	453.1	106	80 - 120				
Fluoride	101.8	5.00	100	0	102	80 - 120				
Sulfate	800.1	25.0	500	270.1	106	80 - 120				

MSD		Sample ID: HS18090663-04MSD			Units: mg/L		Analysis Date: 14-Sep-2018 23:14			
Client ID:		Run ID: ICS2100_323688			SeqNo: 4731755		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13.08	0.500	10	3.015	101	80 - 120	12.98	0.729	20	
Fluoride	2.215	0.100	2	0.193	101	80 - 120	2.194	0.953	20	
Sulfate	99.09	0.500	10	89.32	97.7	80 - 120	98.71	0.391	20	O

MSD		Sample ID: HS18090592-01MSD			Units: mg/L		Analysis Date: 14-Sep-2018 08:43			
Client ID:		Run ID: ICS2100_323688			SeqNo: 4731711		PrepDate:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	975.3	25.0	500	453.1	104	80 - 120	981.2	0.596	20	
Fluoride	101.3	5.00	100	0	101	80 - 120	101.8	0.428	20	
Sulfate	794.1	25.0	500	270.1	105	80 - 120	800.1	0.757	20	

The following samples were analyzed in this batch:

HS18090269-04	HS18090269-05	HS18090269-06	HS18090269-07
HS18090269-08	HS18090269-09	HS18090269-10	HS18090269-11
HS18090269-12	HS18090269-13	HS18090269-15	HS18090269-16

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323700 **Instrument:** ICS2100 **Method:** E300

MBLK		Sample ID: WBLKW2-091418			Units: mg/L		Analysis Date: 15-Sep-2018 01:39			
Client ID:		Run ID: ICS2100_323700			SeqNo: 4731910		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								

LCS		Sample ID: WLCSW2-091418			Units: mg/L		Analysis Date: 15-Sep-2018 01:54			
Client ID:		Run ID: ICS2100_323700			SeqNo: 4731911		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.57	0.500	20	0	103	90 - 110				
Fluoride	4.195	0.100	4	0	105	90 - 110				
Sulfate	19.88	0.500	20	0	99.4	90 - 110				

LCS D		Sample ID: WLCSDW2-091418			Units: mg/L		Analysis Date: 15-Sep-2018 02:08			
Client ID:		Run ID: ICS2100_323700			SeqNo: 4731912		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.71	0.500	20	0	109	90 - 110	20.57	5.36	20	
Fluoride	4.396	0.100	4	0	110	90 - 110	4.195	4.68	20	
Sulfate	20.85	0.500	20	0	104	90 - 110	19.88	4.74	20	

MS		Sample ID: HS18090693-01MS			Units: mg/L		Analysis Date: 15-Sep-2018 03:21			
Client ID:		Run ID: ICS2100_323700			SeqNo: 4731917		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.06	0.500	10	0.71	103	80 - 120				
Fluoride	2.15	0.100	2	0.046	105	80 - 120				
Sulfate	11.24	0.500	10	1.359	98.8	80 - 120				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323700 **Instrument:** ICS2100 **Method:** E300

MS		Sample ID: HS18090689-01MS			Units: mg/L		Analysis Date: 15-Sep-2018 02:37			
Client ID:		Run ID: ICS2100_323700			SeqNo: 4731914		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	37.67	0.500	10	27.56	101	80 - 120				
Fluoride	2.163	0.100	2	0.083	104	80 - 120				
Sulfate	26.53	0.500	10	15.89	106	80 - 120				

MSD		Sample ID: HS18090693-01MSD			Units: mg/L		Analysis Date: 15-Sep-2018 03:35			
Client ID:		Run ID: ICS2100_323700			SeqNo: 4731918		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.94	0.500	10	0.71	102	80 - 120	11.06	1.06	20	
Fluoride	2.108	0.100	2	0.046	103	80 - 120	2.15	1.97	20	
Sulfate	11.46	0.500	10	1.359	101	80 - 120	11.24	1.91	20	

MSD		Sample ID: HS18090689-01MSD			Units: mg/L		Analysis Date: 15-Sep-2018 02:52			
Client ID:		Run ID: ICS2100_323700			SeqNo: 4731915		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	36.57	0.500	10	27.56	90.1	80 - 120	37.67	2.95	20	
Fluoride	2.097	0.100	2	0.083	101	80 - 120	2.163	3.1	20	
Sulfate	25.24	0.500	10	15.89	93.6	80 - 120	26.53	4.95	20	

The following samples were analyzed in this batch:

HS18090269-17	HS18090269-18	HS18090269-20	HS18090269-21
HS18090269-22	HS18090269-23	HS18090269-25	HS18090269-26
HS18090269-28	HS18090269-29	HS18090269-30	HS18090269-31
HS18090269-32	HS18090269-33		

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323715	Instrument: ICS2100	Method: E300
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MBLK	Sample ID: WBLKW1-091518	Units: mg/L	Analysis Date: 16-Sep-2018 19:48							
Client ID:	Run ID: ICS2100_323715	SeqNo: 4732185	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Fluoride	ND	0.100								
Sulfate	ND	0.500								

LCS	Sample ID: WLCSW1-091518	Units: mg/L	Analysis Date: 16-Sep-2018 20:03							
Client ID:	Run ID: ICS2100_323715	SeqNo: 4732186	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.08	0.500	20	0	105	90 - 110				
Fluoride	4.291	0.100	4	0	107	90 - 110				
Sulfate	20.51	0.500	20	0	103	90 - 110				

LCSD	Sample ID: WLCSDW1-091518	Units: mg/L	Analysis Date: 16-Sep-2018 20:17							
Client ID:	Run ID: ICS2100_323715	SeqNo: 4732187	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.02	0.500	20	0	105	90 - 110	21.08	0.276	20	
Fluoride	4.218	0.100	4	0	105	90 - 110	4.291	1.72	20	
Sulfate	20.3	0.500	20	0	101	90 - 110	20.51	1.05	20	

MS	Sample ID: HS18090269-27MS	Units: mg/L	Analysis Date: 15-Sep-2018 16:27							
Client ID: SP-34	Run ID: ICS2100_323715	SeqNo: 4732161	PrepDate: DF: 100							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3294	50.0	1000	2117	118	80 - 120				
Fluoride	200.4	10.0	200	1.43	99.5	80 - 120				
Sulfate	4044	50.0	1000	2775	127	80 - 120				S

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323715		Instrument: ICS2100			Method: E300					
MS		Sample ID: HS18090269-27MS			Units: mg/L		Analysis Date: 15-Sep-2018 15:14			
Client ID: SP-34		Run ID: ICS2100_323715			SeqNo: 4732156		PrepDate:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2330	2.50	50	2256	147	80 - 120				SEO
Fluoride	16.6	0.500	10	4.975	116	80 - 120				
Sulfate	3016	2.50	50	2942	148	80 - 120				SEO
MS		Sample ID: HS18090269-23MS			Units: mg/L		Analysis Date: 15-Sep-2018 14:30			
Client ID: EP-31		Run ID: ICS2100_323715			SeqNo: 4732153		PrepDate:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	244.9	5.00	100	145.9	99.0	80 - 120				
Fluoride	20.67	1.00	20	2.187	92.4	80 - 120				
Sulfate	3442	5.00	100	3592	-150	80 - 120				SEO
MS		Sample ID: HS18090269-23MS			Units: mg/L		Analysis Date: 16-Sep-2018 21:01			
Client ID: EP-31		Run ID: ICS2100_323715			SeqNo: 4732190		PrepDate:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	253.4	5.00	100	145.9	107	80 - 120				
Fluoride	21.82	1.00	20	2.187	98.2	80 - 120				
Sulfate	3583	5.00	100	3592	-8.94	80 - 120				SEO
MSD		Sample ID: HS18090269-27MSD			Units: mg/L		Analysis Date: 15-Sep-2018 15:28			
Client ID: SP-34		Run ID: ICS2100_323715			SeqNo: 4732157		PrepDate:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2304	2.50	50	2256	94.8	80 - 120	2330	1.12	20	EO
Fluoride	16.37	0.500	10	4.975	114	80 - 120	16.6	1.41	20	
Sulfate	2978	2.50	50	2942	70.5	80 - 120	3016	1.29	20	SEO

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323715		Instrument: ICS2100			Method: E300					
MSD		Sample ID: HS18090269-27MSD			Units: mg/L		Analysis Date: 15-Sep-2018 16:41			
Client ID: SP-34		Run ID: ICS2100_323715			SeqNo: 4732162		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3068	50.0	1000	2117	95.1	80 - 120	3294	7.13	20	
Fluoride	186.2	10.0	200	1.43	92.4	80 - 120	200.4	7.34	20	
Sulfate	3655	50.0	1000	2775	88.1	80 - 120	4044	10.1	20	
MSD		Sample ID: HS18090269-23MSD			Units: mg/L		Analysis Date: 15-Sep-2018 14:45			
Client ID: EP-31		Run ID: ICS2100_323715			SeqNo: 4732154		PrepDate:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	248.6	5.00	100	145.9	103	80 - 120	253.4	1.9	20	
Fluoride	21.38	1.00	20	2.187	96.0	80 - 120	21.82	2.05	20	
Sulfate	3511	5.00	100	3592	-81.1	80 - 120	3583	2.04	20	SEO
MSD		Sample ID: HS18090269-23MSD			Units: mg/L		Analysis Date: 16-Sep-2018 21:15			
Client ID: EP-31		Run ID: ICS2100_323715			SeqNo: 4732191		PrepDate:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	256.3	5.00	100	145.9	110	80 - 120	253.4	1.16	20	
Fluoride	22.08	1.00	20	2.187	99.5	80 - 120	21.82	1.18	20	
Sulfate	3566	5.00	100	3592	-26.0	80 - 120	3583	0.478	20	SEO

The following samples were analyzed in this batch: HS18090269-23 HS18090269-27 HS18090269-34

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323882 **Instrument:** ICS3K2 **Method:** E300

MBLK		Sample ID: WBLKW1-092018			Units: mg/L		Analysis Date: 20-Sep-2018 18:58			
Client ID:		Run ID: ICS3K2_323882			SeqNo: 4735657		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Sulfate	ND	0.500								

LCS		Sample ID: WLCSW1-092018			Units: mg/L		Analysis Date: 20-Sep-2018 19:20			
Client ID:		Run ID: ICS3K2_323882			SeqNo: 4735658		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.97	0.500	20	0	99.9	90 - 110				
Sulfate	19.48	0.500	20	0	97.4	90 - 110				

LCSD		Sample ID: WLCSDW1-092018			Units: mg/L		Analysis Date: 20-Sep-2018 19:41			
Client ID:		Run ID: ICS3K2_323882			SeqNo: 4735659		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.98	0.500	20	0	99.9	90 - 110	19.97	0.02	20	
Sulfate	19.6	0.500	20	0	98.0	90 - 110	19.48	0.589	20	

MS		Sample ID: HS18090737-03MS			Units: mg/L		Analysis Date: 21-Sep-2018 04:01			
Client ID:		Run ID: ICS3K2_323882			SeqNo: 4735680		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	52.31	0.500	10	42.08	102	80 - 120				O
Sulfate	38.07	0.500	10	27.96	101	80 - 120				

MS		Sample ID: HS18090675-01MS			Units: mg/L		Analysis Date: 20-Sep-2018 23:40			
Client ID:		Run ID: ICS3K2_323882			SeqNo: 4735670		PrepDate:		DF: 20	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	976.3	10.0	200	773.3	101	80 - 120				
Sulfate	403	10.0	200	202.5	100	80 - 120				

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

QC BATCH REPORT

Batch ID: R323882		Instrument: ICS3K2			Method: E300					
MSD	Sample ID: HS18090737-03MSD	Units: mg/L			Analysis Date: 21-Sep-2018 04:22					
Client ID:	Run ID: ICS3K2_323882	SeqNo: 4735681			PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	52.16	0.500	10	42.08	101	80 - 120	52.31	0.276	20	O
Sulfate	38.02	0.500	10	27.96	101	80 - 120	38.07	0.139	20	

MSD	Sample ID: HS18090675-01MSD	Units: mg/L			Analysis Date: 21-Sep-2018 00:02					
Client ID:	Run ID: ICS3K2_323882	SeqNo: 4735671			PrepDate:			DF: 20		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	974.1	10.0	200	773.3	100	80 - 120	976.3	0.225	20	
Sulfate	400.8	10.0	200	202.5	99.1	80 - 120	403	0.553	20	

The following samples were analyzed in this batch:

HS18090269-22	HS18090269-26	HS18090269-29	HS18090269-30
HS18090269-31	HS18090269-32	HS18090269-33	

Client: Source Environmental Sciences Inc.
Project: San Miguel Electric CCR Well Monitoring
WorkOrder: HS18090269

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	ANAB L2231	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

Sample Receipt Checklist

Client Name: Source
 Work Order: HS18090269

Date/Time Received: **07-Sep-2018 10:24**
 Received by: **JRM**

Checklist completed by: Jared R. Makan 7-Sep-2018 Reviewed by: Nicole Edwards 7-Sep-2018
 eSignature Date eSignature Date

Matrices: **Water** Carrier name: **Client**

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- TX1005 solids received in hermetically sealed vials? Yes No N/A
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s): 3.1c/2.7c, 3.5c/3.1c, 3.2c/2.8c, 4.6c/4.2, 5.6c/5.2, 5.4c/5.0c UC/C IR11

Cooler(s)/Kit(s): 44263, 44160, 43805, 44142, 44258, 44260

Date/Time sample(s) sent to storage: 09/07/2018 16:30

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes: **Equipment blank received, not listed on the COCs. Logged in for analysis.**

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



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COC ID: 189875

HS18090269

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	San Miguel Electric CCR Well Moni
Work Order		Project Number	
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018
Phone	(713) 621-4474	Phone	(713) 621-4474
Fax	(713) 621-4588	Fax	(713) 621-4588
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	AP-31	9/4/18	10:23	H ₂ O	2, S	6	X	X	X	X	X	X	X				
2	MW-3		11:05														
3	MW-3 MS		11:12														
4	FIELD BLANK		11:00														
5	AP-32		11:58														
6	AP-33		12:42														
7	PZ-5		13:27														
8	DUP-1	N/A	N/A														
9	DUP-2																
10	DUP-3					4	X	X	X	X			X				

Sampler(s) Please Print & Sign <i>Josh Mitchell</i>		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
Relinquished by: <i>Josh Mitchell</i>		Date: 9/7/18	Time: 10:24	Received by: <i>J. Williams</i>		Notes: San Miguel Electric CCR Well Monitoring			
Relinquished by: _____		Date: 9/7/18	Time: 10:24	Checked by (Laboratory): _____		QC Package: (Check One Box Below)			
Logged by (Laboratory): _____		Date: _____	Time: _____	Checked by (Laboratory): _____		Cooler ID: 44263	Cooler Temp: 3.1	<input checked="" type="checkbox"/> Level II Std QC	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						Cooler ID: 44160	Cooler Temp: 3.5	<input type="checkbox"/> TRRP Checklist	
						Cooler ID: 43805	Cooler Temp: 3.2	<input type="checkbox"/> TRRP Level IV	
								<input type="checkbox"/> Level III Std QC/Raw Data	
								<input type="checkbox"/> Level IV SW846/CLP	
								<input type="checkbox"/> Other	

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COC ID: 189929

HS18090269

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



ALS Project Manager: _____

Customer Information		Project Information		
Purchase Order		Project Name	San Miguel Electric CCR Well Moni	A 300_W (Cl, FI, SO4)
Work Order		Project Number		B HG_W
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc	C ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D PH_W M4500H+B
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140	E Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H
Fax	(713) 621-4588	Fax	(713) 621-4588	I
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	AP-34	9/5/18	9:55	H2O	Z.S	6	X	X	X	X	X	X	X				
2	AP-35		10:30														
3	AP-36		11:03														
4	PZ-6		11:37														
5	FIELD BLANK 2		11:30														
6	EP-38		12:25														
7	MW-4		13:15														
8	EP-32		14:05														
9	EP-33		14:39														
10	EP-34		15:23														

Sampler(s) Please Print & Sign: Josh Mitchell

Shipment Method: _____

Required Turnaround Time: (Check Box) STD 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour

Results Due Date: _____

Relinquished by: [Signature] Date: 9/7/18 Time: 10:24

Received by: _____

Relinquished by: [Signature] Date: 9/7/18 Time: 10:24

Received by (Laboratory): J. [Signature]

Logged by (Laboratory): _____ Date: _____ Time: _____

Checked by (Laboratory): _____

Notes: San Miguel Electric CCR Well Monitoring

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
44142	4.6	<input checked="" type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRRP Checklist
44258	5.6	<input type="checkbox"/> Level III Std QC/Raw Date	<input type="checkbox"/> TRRP Level IV
44260	5.4	<input type="checkbox"/> Level IV SW846/CLP	<input type="checkbox"/> Other

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

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COC ID: **189933**

HS18090269

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



ALS Project Manager:

Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	San Miguel Electric CCR Well Moni	A	300_W (Cl, FI, SO4)
Work Order		Project Number		B	HG_W
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc	C	ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D	PH_W M4500H+B
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140	E	Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F	Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G	TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H	
Fax	(713) 621-4588	Fax	(713) 621-4588	I	
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	EP-34 MS	9/5/18	15:30	H ₂ O	Z, S	6	X	X	X	X	X	X	X				
2	EP-35	9/6/18	9:15 ²⁵														
3	EP-36		10:30														
4	EP-37		10:51														
5	EP-31		12:05														
6	FIELD BLANK 3		12:00														
7	PZ-2		12:51														
8	PZ-3		13:13														
9	SP-34		14:26			4											
10	SP-34 MS		14:34														

Sampler(s) Please Print & Sign: Josh Mitchell

Shipment Method: _____ Required Turnaround Time: (Check Box) STD 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour

Results Due Date: _____

Relinquished by: [Signature] Date: 9/7/18 Time: 10:24 Received by: _____

Relinquished by: _____ Date: 9/7/18 Time: 10:24 Received by (Laboratory): [Signature]

Logged by (Laboratory): _____ Date: _____ Time: _____ Checked by (Laboratory): _____

Notes: San Miguel Electric CCR Well Monitoring

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
<u>Return</u>	<u>Cooler</u>	<input checked="" type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRRP Checklist
	<u>44261</u>	<input type="checkbox"/> Level III Std QC/Raw Data	<input type="checkbox"/> TRRP Level IV
	<u>44259</u>	<input type="checkbox"/> Level IV SW846/CLP	
	<u>43944</u>	<input type="checkbox"/> Other	
	<u>44262</u>		

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

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COC ID: 189928

HS18090269

wv

Source Environmental Sciences Inc.
San Miguel Electric CCR Well Monitoring



Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	San Miguel Electric CCR Well Moni	A	300_W (Cl, FI, SO4)
Work Order		Project Number		B	HG_W
Company Name	Source Environmental Sciences Inc	Bill To Company	Source Environmental Sciences Inc	C	ICP_TW (13 ICP-MS metals)
Send Report To	Josh Mitchell	Invoice Attn	Josh Mitchell	D	PH_W M4500H+B
Address	2060 North Loop West, Suite 140	Address	2060 North Loop West, Suite 140	E	Radium 226 by Method 903 (ALS-Fort Collins, CO)
				F	Radium 228 by Method 904 (ALS-Fort Collins, CO)
City/State/Zip	Houston, TX 77018	City/State/Zip	Houston TX 77018	G	TDS_W 2540C
Phone	(713) 621-4474	Phone	(713) 621-4474	H	
Fax	(713) 621-4588	Fax	(713) 621-4588	I	
e-Mail Address	josh@source-environmental.com	e-Mail Address	josh@source-environmental.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SP-3	9/6/18	15:12	H ₂ O	2, S	4	X	X	X	X			X				
2	SP-32	↓	15:44	↓	↓	↓	↓	↓	↓	↓							
3	SP-1	↓	16:13	↓	↓	↓	↓	↓	↓	↓							
4	SP-2	↓	17:07	↓	↓	↓	↓	↓	↓	↓							
5	MS Dup-1	N/A	N/A	↓	↓	6	↓	↓	↓	↓	X	X					
6	MS Dup-2	↓	↓	↓	↓	4	↓	↓	↓	↓							
7	MS Dup-3	↓	↓	↓	↓	6	↓	↓	↓	↓	X	X					
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Joshua Mitchell</i>		Shipment Method		Required Turnaround Time: (Check Box)			Results Due Date:	
Relinquished by: <i>[Signature]</i>		Date: 9/7/18	Time: 10:24	Received by:		<input checked="" type="checkbox"/> STD 10 Wk Days		<input type="checkbox"/> 5 Wk Days
Relinquished by: <i>[Signature]</i>		Date: 9/7/18	Time: 10:24	Received by (Laboratory): <i>S. [Signature]</i>		<input type="checkbox"/> 2 Wk Days		<input type="checkbox"/> 24 Hour
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Notes: San Miguel Electric CCR Well Monitoring		
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						Cooler ID		
						Cooler Temp.		
						QC Package: (Check One Box Below)		
						<input checked="" type="checkbox"/> Level II Std QC		
						<input type="checkbox"/> Level III Std QC/Raw Data		
						<input type="checkbox"/> Level IV SW846/CLP		
						<input type="checkbox"/> Other		
						<input type="checkbox"/> TRRP Checklist		
						<input type="checkbox"/> TRRP Level IV		

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.



Friday, October 26, 2018

Nicole Edwards
ALS Environmental
10450 Stancliff Rd, Suite 210
Houston, TX 77099

Re: ALS Workorder: 1809175
Project Name:
Project Number: HS18090269

Dear Ms. Edwards:

Twenty eight water samples were received from ALS Environmental, on 9/11/2018. The samples were scheduled for the following analyses:

Radium-226

Radium-228

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Jeff R. Kujawa
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



1809175

Radium-228:

The samples were analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac , which is the ingrown progeny of ^{228}Ra , according to the current revision of SOP 724.

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to the current revision of SOP 783.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1809175

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS18090269

Client PO Number: HS18090269

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
AP-31	1809175-1		WATER	04-Sep-18	10:23
MW-3	1809175-2		WATER	04-Sep-18	11:05
Field Blank 1	1809175-3		WATER	04-Sep-18	11:00
AP-32	1809175-4		WATER	04-Sep-18	11:58
AP-33	1809175-5		WATER	04-Sep-18	12:42
PZ-5	1809175-6		WATER	04-Sep-18	13:27
Dup-1	1809175-7		WATER	04-Sep-18	
Dup-2	1809175-8		WATER	04-Sep-18	
AP-34	1809175-9		WATER	04-Sep-18	9:55
AP-35	1809175-10		WATER	05-Sep-18	10:30
AP-36	1809175-11		WATER	05-Sep-18	11:03
PZ-6	1809175-12		WATER	05-Sep-18	11:37
Field Blank 2	1809175-13		WATER	05-Sep-18	11:30
EP-38	1809175-14		WATER	05-Sep-18	12:25
MW-4	1809175-15		WATER	05-Sep-18	13:15
EP-32	1809175-16		WATER	05-Sep-18	14:05
EP-33	1809175-17		WATER	05-Sep-18	14:39
EP-34	1809175-18		WATER	05-Sep-18	15:23
EP-35	1809175-19		WATER	06-Sep-18	9:25
EP-36	1809175-20		WATER	06-Sep-18	10:30
EP-37	1809175-21		WATER	06-Sep-18	10:51
EP-31	1809175-22		WATER	06-Sep-18	12:05
Field Blank 3	1809175-23		WATER	06-Sep-18	12:00
PX-2	1809175-24		WATER	06-Sep-18	12:51
PZ-3	1809175-25		WATER	06-Sep-18	13:13
MS Dup-1	1809175-26		WATER	06-Sep-18	
MS Dup-3	1809175-27		WATER	06-Sep-18	
Equipment Blank	1809175-28		WATER	04-Sep-18	9:58



1809175

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

COC ID: 9772

SUBCONTRACT TO:

ALS Environmental, Fort Collins
225 Commerce Drive
Fort Collins, CO 80524

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

Company: ALS Houston
Contact: Nicole Edwards
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: Nicole.Edwards@alsglobal.com
Alternate Contact: Jumoke M. Lawal
Email: jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS18090269
TSR: Jennifer Bell

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	HS18090269-01	AP-31	Water	04 Sep 2018 10:23
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
2.	HS18090269-02	MW-3	Water	04 Sep 2018 11:05
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
3.	HS18090269-03	Field Blank 1	Water	04 Sep 2018 11:00
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
4.	HS18090269-04	AP-32	Water	04 Sep 2018 11:58
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
5.	HS18090269-05	AP-33	Water	04 Sep 2018 12:42
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
6.	HS18090269-06	PZ-5	Water	04 Sep 2018 13:27
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018



1809175

Subcontract Chain of Custody

COC ID: 9772

	LAB SAMPLE ID ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE DUE DATE
7.	HS18090269-07 SUB_RA 226 SUB_RA 228	Dup-1	Water	04 Sep 2018 00:00 17 Sep 2018 17 Sep 2018
8.	HS18090269-08 SUB_RA 226 SUB_RA 228	Dup-2	Water	04 Sep 2018 00:00 17 Sep 2018 17 Sep 2018
9.	HS18090269-10 SUB_RA 226 SUB_RA 228	AP-34	Water	04 Sep 2018 09:55 17 Sep 2018 17 Sep 2018
10.	HS18090269-11 SUB_RA 226 SUB_RA 228	AP-35	Water	05 Sep 2018 10:30 17 Sep 2018 17 Sep 2018
11.	HS18090269-12 SUB_RA 226 SUB_RA 228	AP-36	Water	05 Sep 2018 11:03 17 Sep 2018 17 Sep 2018
12.	HS18090269-13 SUB_RA 226 SUB_RA 228	PZ-6	Water	05 Sep 2018 11:37 17 Sep 2018 17 Sep 2018
13.	HS18090269-14 SUB_RA 226 SUB_RA 228	Field Blank 2	Water	05 Sep 2018 11:30 17 Sep 2018 17 Sep 2018
14.	HS18090269-15 SUB_RA 226 SUB_RA 228	EP-38	Water	05 Sep 2018 12:25 17 Sep 2018 17 Sep 2018
15.	HS18090269-16 SUB_RA 226 SUB_RA 228	MW-4	Water	05 Sep 2018 13:15 17 Sep 2018 17 Sep 2018
16.	HS18090269-17 SUB_RA 226 SUB_RA 228	EP-32	Water	05 Sep 2018 14:05 17 Sep 2018 17 Sep 2018
17.	HS18090269-18	EP-33	Water	05 Sep 2018 14:39



1809175

Subcontract Chain of Custody

COC ID: 9772

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
18.	HS18090269-19	EP-34	Water	05 Sep 2018 15:23
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
19.	HS18090269-20	EP-35	Water	06 Sep 2018 09:25
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
20.	HS18090269-21	EP-36	Water	06 Sep 2018 10:30
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
21.	HS18090269-22	EP-37	Water	06 Sep 2018 10:51
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
22.	HS18090269-23	EP-31	Water	06 Sep 2018 12:05
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
23.	HS18090269-24	Field Blank 3	Water	06 Sep 2018 12:00
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
24.	HS18090269-25	PZ-2	Water	06 Sep 2018 12:51
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
25.	HS18090269-26	PZ-3	Water	06 Sep 2018 13:13
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
26.	HS18090269-32	MS Dup-1	Water	06 Sep 2018 00:00
	SUB_RA 226			17 Sep 2018
	SUB_RA 228			17 Sep 2018
27.	HS18090269-34	MS Dup-3	Water	06 Sep 2018 00:00
	SUB_RA 226			17 Sep 2018



1809175

Subcontract Chain of Custody

COC ID: 9772

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED		DUE DATE
SUB_RA 228			17 Sep 2018
28. HS18090269-35	Equipment Blank	Water	04 Sep 2018 09:58
SUB_RA 226			17 Sep 2018
SUB_RA 228			17 Sep 2018

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

MS/MSD - HS18090269-02
MS/MSD - HS18090269-19

QC Level: STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By: R Cigg

Received By: C Jumble

Cooler ID(s): _____

Date/Time: 9/10/18 18:00

Date/Time: 9-11-18 1100

Temperature(s): _____

1809175

RTN 617
15 15
11:00
15:00
A 4352



11-1
Auto

ORIGIN ID: SCRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

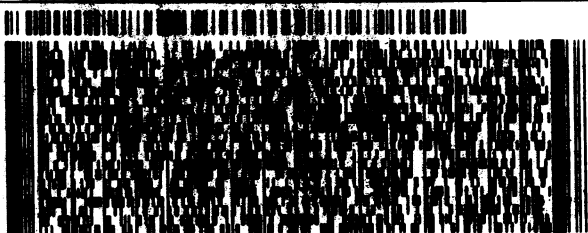
SHIP DATE: 10SEP18
ACTWGT: 43.80 LB
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN
BILL THIRD PARTY

TO JULIE ELLINGSON
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524

(970) 490-1611

REF: HS18090269/0302 NTRF SUB SX'S



FedEx
Express



4 of 4

TUE - 11 SEP 3:00P
STANDARD OVERNIGHT

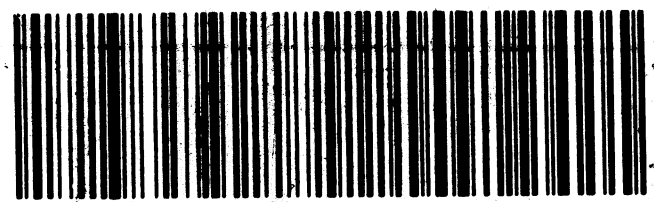
MPS# 4380 9532 4592

Mstr# 4380 9532 4560

0201

NA FTCA

80524
CO-US DEN



1809/75



11-2
Amb

ORIGIN ID: SCRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 10SEP18
ACTWGT: 43.80 LB
CAD: 300130/CAFE3211
DIMS: 28x14x14 IN
BILL THIRD PARTY

TO **JULIE ELLINGSON**
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524

(877) 400-1811
REF: HQ 18090269/0362 NE/BF SUB SX'S



3 of 4
MP# 4380 9532 4581
0263
Mstr# 4380 9532 4560

TUE - 11 SEP 3:00P
STANDARD OVERNIGHT

NA FTCA

80524
CO-US DEN



1 sample
on ice 5.4^a

1809175
10-2
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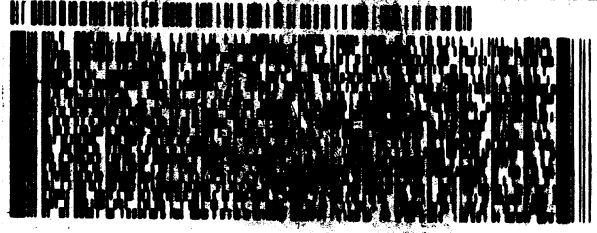
ORIGIN ID:SGRA (281) 530-5658
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 10SEP18
ACTWGT: 43.80 LB
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN
BILL THIRD PARTY

TO **JULIE ELLINGSON**
ALS ENVIRONMENTAL
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1611

REF: HS18090269/0362 N5/BF SUB SX'S



FedEx
Express



1 of 4
TRK# 4380 9532 4560
0201
MASTER

TUE - 11 SEP 3:00P
STANDARD OVERNIGHT

NA FTCA

80524
CO-US DEN



Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: AP-31

Lab ID: 1809175-1

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018 10:23

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.35 (+/- 0.27)	LT	0.32	pCi/l	NA	10/22/2018 12:43
Carr: BARIUM	96.4		40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	1.38 (+/- 0.53)		0.8	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	99.8		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: MW-3

Lab ID: 1809175-2

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018 11:05

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.38)	U	0.54	pCi/l	NA	10/22/2018 12:43
Carr: BARIUM	92.5		40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	5 (+/- 1.3)	Y1	0.8	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	101	Y1	40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: Field Blank 1

Lab ID: 1809175-3

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018 11:00

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 10/16/2018	PrepBy: ASZ
Ra-226	ND (+/- 0.26)	U	0.45	pCi/l	NA	10/22/2018 12:43
Carr: BARIUM	98.5		40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
Ra-228	ND (+/- 0.37)	Y1,U	0.8	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	100	Y1	40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: AP-32

Lab ID: 1809175-4

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018 11:58

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.99 (+/- 0.47)	LT	0.37	pCi/l	NA	10/22/2018 12:43
Carr: BARIUM	99.6		40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	11.3 (+/- 2.7)		0.8	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	97.6		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: AP-33

Lab ID: 1809175-5

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018 12:42

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.43 (+/- 0.28)	LT	0.24	pCi/l	NA	10/22/2018 12:43
Carr: BARIUM	96.6		40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	8.2 (+/- 2)		0.7	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	98.2		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: PZ-5

Lab ID: 1809175-6

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018 13:27

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.2)	U	0.24	pCi/l	NA	10/22/2018 12:43
Carr: BARIUM	97.9		40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	3.69 (+/- 0.98)		0.73	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	98.2		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: Dup-1

Lab ID: 1809175-7

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.29 (+/- 0.52)	Y1	0.24	pCi/l	NA	10/22/2018 12:43
<i>Carr: BARIUM</i>	<i>100</i>	Y1	<i>40-110</i>	<i>%REC</i>	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	9.5 (+/- 2.3)		0.7	pCi/l	NA	10/15/2018 10:15
<i>Carr: BARIUM</i>	<i>97.3</i>		<i>40-110</i>	<i>%REC</i>	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: Dup-2

Lab ID: 1809175-8

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	2.15 (+/- 0.79)		SOP 783		Prep Date: 10/16/2018	PrepBy: ASZ
<i>Carr: BARIUM</i>	99.3		0.29	pCi/l	NA	10/22/2018 12:43
			40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	1.46 (+/- 0.55)		SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
<i>Carr: BARIUM</i>	97.3		0.81	pCi/l	NA	10/15/2018 10:15
			40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: AP-34

Lab ID: 1809175-9

Legal Location:

Matrix: WATER

Collection Date: 9/4/2018 09:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.99 (+/- 0.8)		SOP 783		Prep Date: 10/16/2018	PrepBy: ASZ
<i>Carr: BARIUM</i>	99.8		0.59	pCi/l	NA	10/22/2018 12:43
			40-110	%REC	DL = NA	10/22/2018 12:43
Radium-228 Analysis by GFPC						
Ra-228	3.37 (+/- 0.91)		SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
<i>Carr: BARIUM</i>	99.6		0.77	pCi/l	NA	10/15/2018 10:15
			40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: AP-35

Lab ID: 1809175-10

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 10:30

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	3.4 (+/- 1.1)	Y1	0.5	pCi/l	NA	10/22/2018 13:05
<i>Carr: BARIUM</i>	<i>100</i>	Y1	<i>40-110</i>	<i>%REC</i>	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
Ra-228	30.1 (+/- 7)		0.7	pCi/l	NA	10/15/2018 10:15
<i>Carr: BARIUM</i>	<i>97.8</i>		<i>40-110</i>	<i>%REC</i>	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: AP-36

Lab ID: 1809175-11

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 11:03

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.4 (+/- 0.3)	LT	0.35	pCi/l	NA	10/22/2018 13:05
Carr: BARIUM	98.8		40-110	%REC	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
Ra-228	3.21 (+/- 0.86)		0.67	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	97.5		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: PZ-6

Lab ID: 1809175-12

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 11:37

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.25 (+/- 0.21)	LT	0.23	pCi/l	NA	10/22/2018 13:05
Carr: BARIUM	97.6		40-110	%REC	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
Ra-228	1.88 (+/- 0.58)		0.66	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	99.5		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: Field Blank 2

Lab ID: 1809175-13

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 11:30

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 10/16/2018	PrepBy: ASZ
Ra-226	ND (+/- 0.25)	Y1,U	0.58	pCi/l	NA	10/22/2018 13:05
Carr: BARIUM	102	Y1	40-110	%REC	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
Ra-228	ND (+/- 0.33)	U	0.64	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	98.5		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-38

Lab ID: 1809175-14

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 12:25

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.61 (+/- 0.37)	LT	SOP 783	0.4 pCi/l	NA	Prep Date: 10/16/2018 PrepBy: ASZ
Carr: BARIUM	98.9		40-110	%REC	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
Ra-228	1.22 (+/- 0.46)		SOP 724	0.68 pCi/l	NA	Prep Date: 10/9/2018 PrepBy: NCC
Carr: BARIUM	95.2		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: MW-4

Lab ID: 1809175-15

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 13:15

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.29)	U	0.42	pCi/l	NA	10/22/2018 13:05
Carr: BARIUM	98.5		40-110	%REC	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
Ra-228	1.92 (+/- 0.61)		0.73	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	96.4		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-32

Lab ID: 1809175-16

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 14:05

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.31)	U	0.45	pCi/l	NA	10/22/2018 13:05
Carr: BARIUM	84.6		40-110	%REC	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
Ra-228	1.76 (+/- 0.56)		0.69	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	96.9		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-33

Lab ID: 1809175-17

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 14:39

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 10/16/2018	PrepBy: ASZ
Ra-226	ND (+/- 0.28)	Y1,U	0.42	pCi/l	NA	10/22/2018 13:05
Carr: BARIUM	100	Y1	40-110	%REC	DL = NA	10/22/2018 13:05
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
Ra-228	0.97 (+/- 0.43)	LT	0.7	pCi/l	NA	10/15/2018 10:15
Carr: BARIUM	94.7		40-110	%REC	DL = NA	10/15/2018 10:15

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-34

Lab ID: 1809175-18

Legal Location:

Matrix: WATER

Collection Date: 9/5/2018 15:23

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.42 (+/- 0.6)		SOP 783		Prep Date: 10/17/2018	PrepBy: ASZ
<i>Carr: BARIUM</i>	91.1		0.29	pCi/l	NA	10/23/2018 12:16
			40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	5.4 (+/- 1.4)	Y1	SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
<i>Carr: BARIUM</i>	100	Y1	0.8	pCi/l	NA	10/18/2018 10:26
			40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-35

Lab ID: 1809175-19

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018 09:25

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.57 (+/- 0.39)	LT	0.4	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	92.8		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	ND (+/- 0.46)	U	0.86	pCi/l	NA	10/18/2018 10:26
Carr: BARIUM	93.8		40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-36

Lab ID: 1809175-20

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018 10:30

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.94 (+/- 0.51)	LT	0.54	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	93		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	2.7 (+/- 0.78)		0.77	pCi/l	NA	10/18/2018 10:26
Carr: BARIUM	97.2		40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-37

Lab ID: 1809175-21

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018 10:51

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.57 (+/- 0.38)	LT	0.35	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	93.8		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	3.22 (+/- 0.88)		0.74	pCi/l	NA	10/18/2018 10:26
Carr: BARIUM	95.6		40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: EP-31

Lab ID: 1809175-22

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018 12:05

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.23)	U	0.39	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	93.3		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	0.95 (+/- 0.44)	LT	0.74	pCi/l	NA	10/18/2018 10:26
Carr: BARIUM	97		40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: Field Blank 3

Lab ID: 1809175-23

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018 12:00

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.18)	U	0.4	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	88.6		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	ND (+/- 0.34)	U	0.72	pCi/l	NA	10/18/2018 10:26
Carr: BARIUM	96.6		40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: PX-2

Lab ID: 1809175-24

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018 12:51

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.6 (+/- 0.34)	LT	0.26	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	93.1		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	2.23 (+/- 0.7)		0.82	pCi/l	NA	10/18/2018 10:26
Carr: BARIUM	95.8		40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: PZ-3

Lab ID: 1809175-25

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018 13:13

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 10/17/2018	PrepBy: ASZ
Ra-226	ND (+/- 0.21)	U	0.31	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	93.7		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
Ra-228	ND (+/- 0.37)	U	0.79	pCi/l	NA	10/18/2018 10:26
Carr: BARIUM	96.1		40-110	%REC	DL = NA	10/18/2018 10:26

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: MS Dup-1

Lab ID: 1809175-26

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.26)	U	0.43	pCi/l	NA	10/23/2018 12:16
Carr: BARIUM	94.8		40-110	%REC	DL = NA	10/23/2018 12:16
Radium-228 Analysis by GFPC						
Ra-228	1.52 (+/- 0.52)		0.67	pCi/l	NA	10/18/2018 10:43
Carr: BARIUM	95.8		40-110	%REC	DL = NA	10/18/2018 10:43

Client: ALS Environmental

Date: 26-Oct-18

Project: HS18090269

Work Order: 1809175

Sample ID: MS Dup-3

Lab ID: 1809175-27

Legal Location:

Matrix: WATER

Collection Date: 9/6/2018

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	1.47 (+/- 0.63)		SOP 783		Prep Date: 10/17/2018	PrepBy: ASZ
<i>Carr: BARIUM</i>	92.3		0.42	pCi/l	NA	10/23/2018 12:48
			40-110	%REC	DL = NA	10/23/2018 12:48
Radium-228 Analysis by GFPC						
Ra-228	6.9 (+/- 1.7)		SOP 724		Prep Date: 10/9/2018	PrepBy: NCC
<i>Carr: BARIUM</i>	93.4		0.7	pCi/l	NA	10/18/2018 10:43
			40-110	%REC	DL = NA	10/18/2018 10:43

Client: ALS Environmental
Project: HS18090269
Sample ID: Equipment Blank
Legal Location:
Collection Date: 9/4/2018 09:58

Date: 26-Oct-18
Work Order: 1809175
Lab ID: 1809175-28
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			SOP 783			
Ra-226	1.1 (+/- 0.48)		0.25	pCi/l	NA	10/23/2018 12:48
<i>Carr: BARIUM</i>	92.2		40-110	%REC	DL = NA	10/23/2018 12:48
						Prep Date: 10/17/2018 PrepBy: ASZ
Radium-228 Analysis by GFPC			SOP 724			
Ra-228	5.2 (+/- 1.3)		0.7	pCi/l	NA	10/18/2018 10:43
<i>Carr: BARIUM</i>	95.2		40-110	%REC	DL = NA	10/18/2018 10:43
						Prep Date: 10/9/2018 PrepBy: NCC

Client: ALS Environmental
Project: HS18090269
Sample ID: Equipment Blank
Legal Location:
Collection Date: 9/4/2018 09:58

Date: 26-Oct-18
Work Order: 1809175
Lab ID: 1809175-28
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC
- U or ND - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- W - DER is greater than Warning Limit of 1.42
- * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
- # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
- G - Sample density differs by more than 15% of LCS density.
- D - DER is greater than Control Limit
- M - Requested MDC not met.
- LT - Result is less than requested MDC but greater than achieved MDC.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- * - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- * - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

ALS -- Fort Collins

Date: 10/26/2018 10:1

Client: ALS Environmental
 Work Order: 1809175
 Project: HS18090269

QC BATCH REPORT

Batch ID: **RE181016-2-1** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

DUP Sample ID: **1809175-2** Units: **pCi/l** Analysis Date: **10/22/2018 12:43**
 Client ID: **MW-3** Run ID: **RE181016-2A** Prep Date: **10/16/2018** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	0.48 (+/- 0.31)	0.27						0.41	0.1	2.1	Y1,LT
Carr: BARIUM	17780		17780		100	40-110		16310			Y1

LCS Sample ID: **RE181016-2** Units: **pCi/l** Analysis Date: **10/22/2018 13:23**
 Client ID: Run ID: **RE181016-2A** Prep Date: **10/16/2018** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	55 (+/- 14)	1	47.87		115	67-120					P
Carr: BARIUM	16910		17610		96	40-110					

MB Sample ID: **RE181016-2** Units: **pCi/l** Analysis Date: **10/22/2018 13:23**
 Client ID: Run ID: **RE181016-2A** Prep Date: **10/16/2018** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.51									U
Carr: BARIUM	17460		17620		99.1	40-110					

The following samples were analyzed in this batch:

1809175-1	1809175-2	1809175-3
1809175-4	1809175-5	1809175-6
1809175-7	1809175-8	1809175-9
1809175-10	1809175-11	1809175-12
1809175-13	1809175-14	1809175-15
1809175-16	1809175-17	

Client: ALS Environmental
 Work Order: 1809175
 Project: HS18090269

QC BATCH REPORT

Batch ID: RE181017-1-1 Instrument ID Alpha Scin Method: Radium-226 by Radon Emanation

DUP Sample ID: 1809175-18 Units: pCi/l Analysis Date: 10/23/2018 12:16
 Client ID: EP-34 Run ID: RE181017-1A Prep Date: 10/17/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	1.09 (+/- 0.54)	0.47						1.42	0.4	2.1	
Carr: BARIUM	17350		18260		95	40-110		16640			

LCS Sample ID: RE181017-1 Units: pCi/l Analysis Date: 10/23/2018 12:48
 Client ID: Run ID: RE181017-1A Prep Date: 10/17/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	56 (+/- 14)	0	47.87		117	67-120					P
Carr: BARIUM	16530		18240		90.6	40-110					

MB Sample ID: RE181017-1 Units: pCi/l Analysis Date: 10/23/2018 12:48
 Client ID: Run ID: RE181017-1A Prep Date: 10/17/2018 DF: NA

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.57									U
Carr: BARIUM	17130		18240		93.9	40-110					

The following samples were analyzed in this batch:

1809175-18	1809175-19	1809175-20
1809175-21	1809175-22	1809175-23
1809175-24	1809175-25	1809175-26
1809175-27	1809175-28	

Client: ALS Environmental
 Work Order: 1809175
 Project: HS18090269

QC BATCH REPORT

Batch ID: RA181009-2-1 Instrument ID LB4100-A Method: Radium-228 Analysis by GFPC

DUP		Sample ID: 1809175-2		Units: pCi/l			Analysis Date: 10/15/2018 10:15				
Client ID: MW-3		Run ID: RA181009-2A			Prep Date: 10/9/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	6 (+/- 1.5)	0.8							5	0.5	2.1
Carr: BARIUM	35040		35740		98	40-110		35940			

LCS		Sample ID: RA181009-2		Units: pCi/l			Analysis Date: 10/15/2018 10:16				
Client ID:		Run ID: RA181009-2A			Prep Date: 10/9/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	10.7 (+/- 2.9)	1.6	8.747		122	70-130					P,M3
Carr: BARIUM	32550		35720		91.1	40-110					

MB		Sample ID: RA181009-2		Units: pCi/l			Analysis Date: 10/15/2018 10:15				
Client ID:		Run ID: RA181009-2A			Prep Date: 10/9/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.73									U
Carr: BARIUM	32840		35730		91.9	40-110					

The following samples were analyzed in this batch:

1809175-1	1809175-2	1809175-3
1809175-4	1809175-5	1809175-6
1809175-7	1809175-8	1809175-9
1809175-10	1809175-11	1809175-12
1809175-13	1809175-14	1809175-15
1809175-16	1809175-17	

Client: ALS Environmental
 Work Order: 1809175
 Project: HS18090269

QC BATCH REPORT

Batch ID: RA181009-3-2 Instrument ID LB4100-A Method: Radium-228 Analysis by GFPC

DUP		Sample ID: 1809175-18		Units: pCi/l			Analysis Date: 10/18/2018 10:26				
Client ID: EP-34		Run ID: RA181009-3A			Prep Date: 10/9/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	6.7 (+/- 1.7)	0.8						5.4	0.6	2.1	
Carr: BARIUM	34920		36700		95.1	40-110		36710			

LCS		Sample ID: RA181009-3		Units: pCi/l			Analysis Date: 10/18/2018 10:33				
Client ID:		Run ID: RA181009-3A			Prep Date: 10/9/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	8.8 (+/- 2.4)	1.4	8.738		101	70-130					P,M3
Carr: BARIUM	36270		36690		98.9	40-110					

MB		Sample ID: RA181009-3		Units: pCi/l			Analysis Date: 10/18/2018 10:43				
Client ID:		Run ID: RA181009-3A			Prep Date: 10/9/2018			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-228	ND	0.76									U
Carr: BARIUM	34120		36680		93	40-110					

The following samples were analyzed in this batch:

1809175-18	1809175-19	1809175-20
1809175-21	1809175-22	1809175-23
1809175-24	1809175-25	1809175-26
1809175-27	1809175-28	