

December 2023 Annual Groundwater Monitoring Report

Sandy Creek Energy Station
McLennan County, Texas

Sandy Creek Energy Station
2161 Rattlesnake Road
Riesel, Texas 76682

SCS ENGINEERS

SCS Project 16223032.00 | January 2024

1901 Central Drive, Suite 550
Bedford, TX 76021
817-571-2288

January 24, 2024
SCS Project No. 16223032.00

Mr. Luke Johnson
Compliance Manager
NAES Corporation
2161 Rattlesnake Road
Riesel, Texas 76682

Subject: Sandy Creek Energy Station
McLennan County, Texas
December 2023 Annual Groundwater Monitoring Report Submittal

Dear Mr. Johnson:

SCS Engineers (SCS) is pleased to submit the December 2023 Annual Groundwater Monitoring Report to the Sandy Creek Energy Station (SCES), in accordance with Title 40, Code of Federal Regulation (CFR) Part §257.105(h)(6), and the site Groundwater Sampling and Analysis Plan (GWSAP), prepared by SCS, dated January 13, 2022.

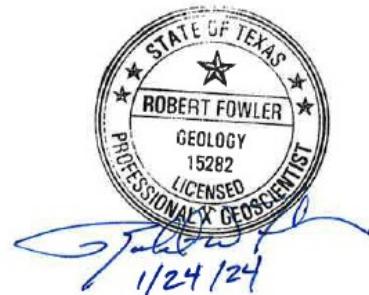
Please contact Robert Fowler at (501) 672-9320 if you have comments or require additional information.

Elizabeth Beall

Elizabeth Beall, G.I.T.
Associate Staff Professional
SCS ENGINEERS



Brett DeVries, Ph.D., P.E.
Senior Project Manager
SCS ENGINEERS



Robert Fowler, P.G.
Project Manager
SCS ENGINEERS

Attachment: December 2023 Annual Groundwater Monitoring Report

December 2023 Annual Groundwater Monitoring Report

Sandy Creek Energy Station McLennan County, Texas

Prepared For:

Sandy Creek Energy Station
2161 Rattlesnake Road
Riesel, Texas 76682

SCS ENGINEERS

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1901 Central Drive, Suite 550
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- Appendix E: Alternate Source Demonstration for Calcium in MW-1

1.0 INTRODUCTION AND BACKGROUND

SCS Engineers (SCS) is submitting this December 2023 Annual Groundwater Monitoring Report for the Sandy Creek Energy Station (SCES). This report is submitted in accordance with 40 CFR §257.105(h)(6), 30 TAC 352.931, and the site Groundwater Sampling and Analysis Plan (GWSAP) prepared by SCS and sealed on January 13, 2022. This report includes results for the December 2023 annual detection monitoring event at SCES, conducted on December 20, 2023.

SCES is a pulverized coal-fired electric generation facility which operates a landfill for disposal of dry scrubber ash and bottom ash generated during the coal combustion process at the facility. Incidental wastes generated during the operation of the facility may also be disposed in the landfill, as described in the initial registration notification to TCEQ and the most recent version of the Operations Plan for the facility. The landfill is currently comprised of CCR disposal cells, Cells 1 and 2, which commenced receiving waste in early 2013 and October 2014, respectively. Additionally, a portion of Cell 3 (includes subcells 2A through 3D) was constructed in 2021. The approximate area of currently constructed Cells 1, 2, and 3 are 10.0, 14.3, and 10.3 acres, respectively.

Sampling of groundwater monitoring wells is conducted in accordance with 40 CFR §257.93, 30 TAC §352.931, and the GWSAP. Groundwater monitoring of six wells must be performed (BW-1, MW-1, MW-2, MW-3, MW-4, MW-5; as depicted on Figure 1).

In accordance with 40 CFR §257.94(b), and 30 TAC 352.941 quarterly background monitoring must be performed for each well for eight consecutive quarters (i.e., eight independent samples collected for each well). The Appendix III and IV constituents monitored during the first eight quarters include 18 inorganic compounds, total dissolved solids, radium-226, and radium-228. The constituents monitored in subsequent events and during the December 2023 semiannual detection monitoring event include Appendix III constituents only. MW-1, MW-2, MW-3, MW-4, MW-5, and BW-1 are currently in detection monitoring.

2.0 GROUNDWATER MONITORING SUMMARY

2.1 GROUNDWATER MONITORING SYSTEM

The current groundwater monitoring system at the landfill consists of six wells, all of which are in detection monitoring (see **Table 1** below). Monitoring well BW-1 serves as an upgradient monitoring point and the remaining five monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5) serve as downgradient monitoring points. All wells are currently in detection monitoring. **Figure 1** depicts monitoring well locations at SCES.

Table 1 – Sandy Creek Energy Station Groundwater Monitoring System

Well ID (U/D) ¹	Status	Top of Casing Elevation (ft msl) ²	Well Depth (ft, bgs) ²	Screen Interval (ft, bgs) ²	Water Level Elevation (ft msl, on 12/20/2023)
BW-1 (U)	Detection	485.57	38.63	28.30-38.30	468.97
MW-1 (D)	Detection	465.87	34.23	23.90-33.90	454.33
MW-2 (D)	Detection	442.15	19.63	9.30-19.30	429.42
MW-3 (D)	Detection	430.06	16.23	5.98-15.98	418.34
MW-4 (D)	Detection	436.91	30.3	20.00-30.00	421.11
MW-5 (D)	Detection	454.52	35.3	25.00-35.00	438.72

¹ (U) = upgradient, (D) = downgradient; ² Top of Casing Elevation, Well Depth, and Screen Interval information obtained from Table 1 – Monitoring Well and Piezometer Construction Details and Groundwater Elevations prepared by Geosyntec Consultants, dated March 11, 2016 and the November 2020 Groundwater Monitoring Well Install Report prepared by SCS Engineers dated January 22, 2021; ft msl = feet above mean sea level; ft bgs = feet below ground surface

2.2 DECEMBER 2023 SEMIANNUAL MONITORING EVENT

All six wells (MW-1, MW-2, MW-3, MW-4, MW-5, and BW-1) were purged and sampled on December 20, 2023, using disposable PVC bailers. Quality Assurance/Quality Control (QA/QC) samples obtained included one duplicate (DUP). Field forms and laboratory results for this event are provided in **Appendices A & B**, respectively, and summarized in **Table 2**. The Laboratory Review Checklist was reviewed by SCS, and the data was determined to conform to the most current National Environmental Laboratory Accreditation Conference (NELAC) standards.

2.3 RESULTS AND STATISTICAL ANALYSIS

A summary of the December 2023 laboratory results and statistical limits in each well-constituent pair is provided in **Table 2**. Time series graphs of Appendix III constituent concentrations are provided in **Appendix D**. Statistical limits were determined in accordance with 40 CFR §257.93(f)(3 and 4)(g) and the GWSAP using the software program Sanitas®. Statistical limits were determined in the Background Evaluation Report Update completed on October 6, 2023. Statistical limits were presented using Shewhart-CUSUM control charts, non-parametric prediction limits, or parametric prediction limits as deemed appropriate by background data distributions.

Table 2 – Sandy Creek Energy Station December 2023 Sampling Results and Statistical Limits

MW-ID	Constituent	Lab Result (mg/L)	Statistical Limit*	Exceedance
MW-1 (D)	Boron (mg/L)	1.20	1.661	No
	Calcium (mg/L)	660	603.5	Yes
	Chloride (mg/L)	150	253	No
	pH at 25 °C	7.20	6.2 - 8.3	No
	Sulfate (mg/L)	2300	3299	No
	TDS (mg/L)	4100	5444	No
	Fluoride (mg/L)	ND	1.2	No
MW-2 (D)	Boron (mg/L)	1.20	3.533	No
	Calcium (mg/L)	690	827.1	No
	Chloride (mg/L)	1400	3709	No
	pH at 25 °C	7.10	6.7 - 7.5	No
	Sulfate (mg/L)	2400	4671	No
	TDS (mg/L)	8000	13374	No
	Fluoride (mg/L)	ND	1.3	No
MW-3 (D)	Boron (mg/L)	1.10	1.565	No
	Calcium (mg/L)	580	697.5	No
	Chloride (mg/L)	320	595.7	No
	pH at 25 °C	6.80	6.5 - 7.3	No
	Sulfate (mg/L)	2800	3926	No
	TDS (mg/L)	6200	8507	No
	Fluoride (mg/L)	ND	0.662	No
MW-4 (D)	Boron (mg/L)	4.70	6.58	No
	Calcium (mg/L)	550	641.8	No
	Chloride (mg/L)	760	1892	No
	pH at 25 °C	7.40	5.7 - 9.1	No
	Sulfate (mg/L)	2600	3416	No
	TDS (mg/L)	6900	7432	No
	Fluoride (mg/L)	ND	0.55	No
MW-5 (D)	Boron (mg/L)	3.30	4.5	No

MW-ID	Constituent	Lab Result (mg/L)	Statistical Limit*	Exceedance
MW-1	Calcium (mg/L)	650	706.6	No
	Chloride (mg/L)	1200	1986	No
	pH at 25 °C	7.50	6.2 - 8.2	No
	Sulfate (mg/L)	3100	4154	No
	TDS (mg/L)	7000	9806	No
	Fluoride (mg/L)	ND	1.139	No
BW-1 (U)	Boron (mg/L)	3.30	4.837	No
	Calcium (mg/L)	710	738.4	No
	Chloride (mg/L)	1100	1502	No
	pH at 25 °C	7.1	6.2 - 7.9	No
	Sulfate (mg/L)	2700	3770	No
	TDS (mg/L)	6800	7320	No
	Fluoride (mg/L)	ND	0.94	No

*Calculated in 2023 Background Evaluation Report Update
(U)=upgradient, (D)=downgradient

3.0 RECOMMENDATIONS

No statistically significant increases (SSIs) were indicated for any Appendix III constituents during the December 2023 detection monitoring event at the SCES with the exception of calcium in MW-1. As outlined in the attached ASD (see Appendix E) for calcium in MW-1, the SSI was not confirmed by comparing upgradient to downgradient data and calculating an interwell parametric prediction limit in accordance with 40 CFR §257.94(e)(2). Since the detection of calcium falls below the interwell statistical limit, this is evidence that the detection is from an upgradient source and not from the landfill, resulting in a natural variation in groundwater quality and is representative of background data within the boundary of the facility. Due to the lack of confirmed SSIs for Appendix III constituents during the December 2023 detection monitoring event, the facility will continue monitoring for all constituents listed in 40 CFR §257 Appendix III during semiannual groundwater monitoring events, in accordance with 40 CFR §257.94(a). The Appendix IV constituent list will be analyzed if any confirmed statistical exceedances of the Appendix III list are indicated in future events. The next planned groundwater monitoring event is a semiannual detection monitoring event scheduled for the second quarter of 2024.

4.0 GROUNDWATER FLOW RATE AND DIRECTION CALCULATIONS

In accordance with 40 CFR Part §257.93(c), the groundwater flow rate and direction in the uppermost aquifer in the area of the existing groundwater monitoring wells were calculated.

Flow Rate Calculation

$$V_a = \frac{Kl}{7.5N} \quad (\text{Driscoll, 1986, Groundwater and Wells})$$

Where:

- V_a = Actual Velocity of Groundwater Flow (ft/day)
- K = Hydraulic Conductivity (gpd/ft²)
- l = Hydraulic Gradient (ft/ft)
- N = Effective Porosity (%)

Then:

$$K = 2.0 \times 10^{-4} \text{ cm/sec} \quad (\text{geometric mean hydraulic conductivity obtained from slug tests performed by Geosyntec in 2010})$$

Find K equivalent in units of gpd/ft²:

$$(1 \text{ cm/sec} = 21,200 \text{ gallons/day/ft}^2)$$

$$2.0 \times 10^{-4} \text{ cm/sec} \times 21,200 \text{ gallons/day/ft}^2 = 4.24 \text{ gpd/ft}^2$$

Find l: BW-1 elevation – MW-3 elevation: 468.97 ft – 418.34 ft = 0.0215 ft/ft
distance between wells: 2,350 ft

I = 0.0215 ft/ft (ave. gradient across the site, from June 2023 water levels)
N = 6% (representative effective porosity for clay from Morris and Johnson, 1967)

Therefore:

$$V_a = \frac{4.24 \text{ gpd/ft}^2 \times (0.0215 \text{ ft/ft})}{7.5 (0.06)} = 0.203 \text{ ft/day}$$

$$(0.203 \text{ ft/day})(365 \text{ days/year}) = 74.095 \text{ ft/year}$$

Conclusion

The December 2023 site groundwater flow rate is **74.095 ft/year**. The gradient was measured using BW-1 and MW-3. The December 2023 groundwater flow direction is to the south-southwest. The groundwater flow rate and direction are consistent with conditions previously observed at the site. See **Figure 1** for details, provided in accordance with 40 CFR Part §257.93(c).

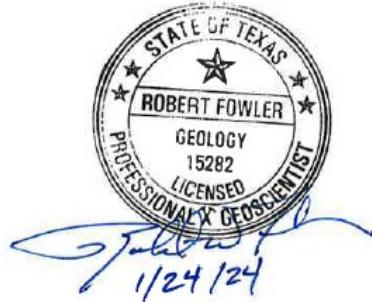
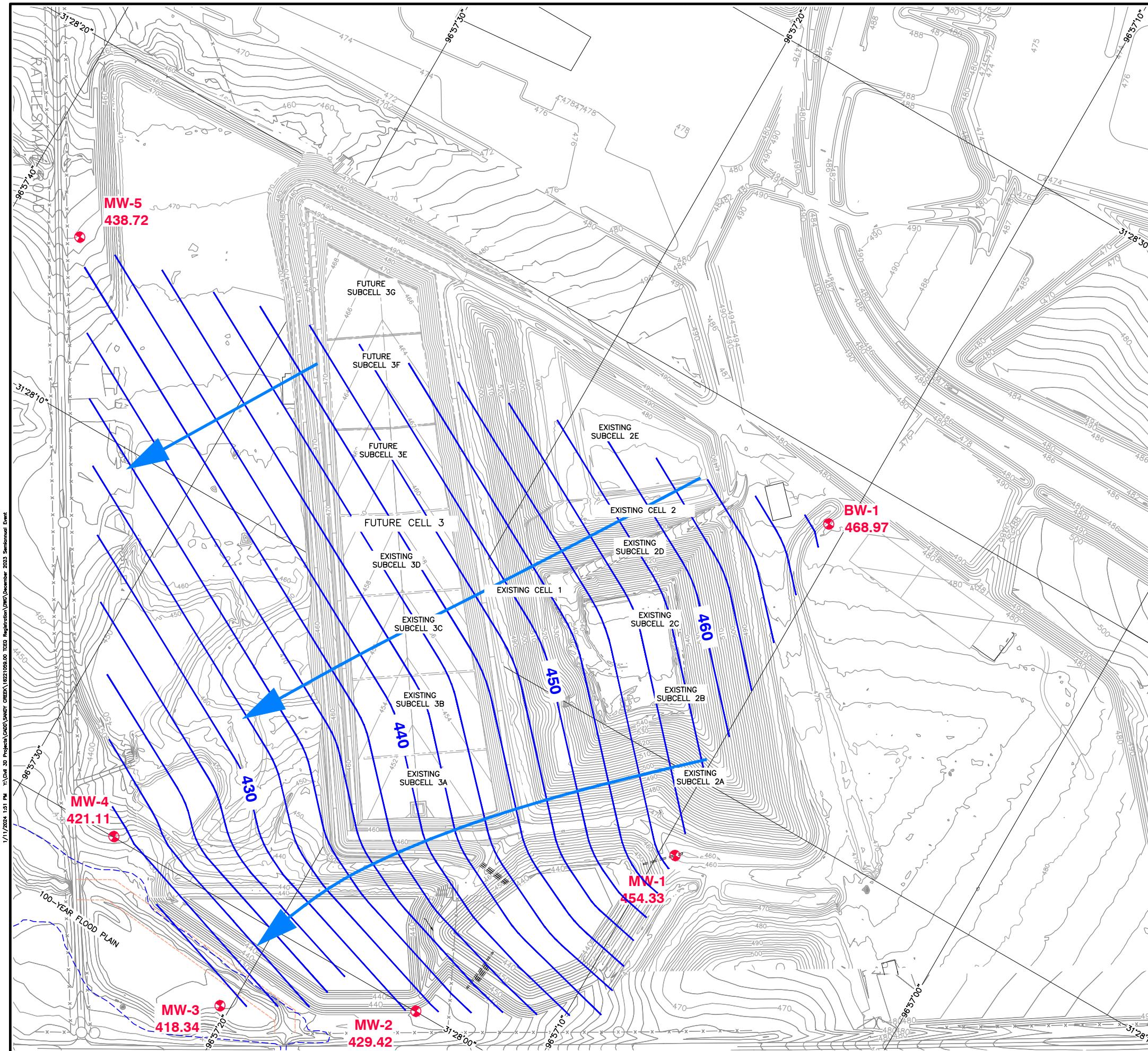


Figure 1. Groundwater Contour Map



0 150 300
SCALE IN FEET

LEGEND

- 96°57'10" — LATITUDE/LONGITUDE LINES
- 100-YEAR FLOOD PLAIN
- EXISTING MONITORING WELL
- PROPOSED/EXISTING EXCAVATION CONTOURS (SEE NOTE 3)
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

MW-1

450

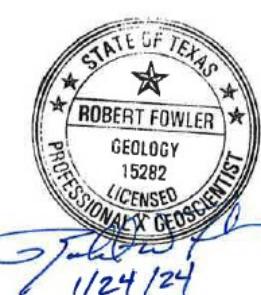
460

NOTES:

- THE EXISTING CONTOUR MAP SHOWN ON THIS DRAWING WAS COMPILED FROM AN AERIAL SURVEY CONDUCTED BY DALLAS AERIAL SURVEY, INC. IN NOVEMBER, 2020 AND EXISTING TOPOGRAPHY BY BLACK & VEATCH CORPORATION DATED APRIL 2006. STATE PLANE COORDINATE GRID CORRESPONDS TO TEXAS STATE PLAN COORDINATE SYSTEM, TEXAS CENTRAL ZONE (4203), NORTH AMERICAN DATUM 83 (NAD83) 1983.
- ELEVATION ARE IN FEET ABOVE MEAN SEA LEVEL (FT, MSL) AS DEFINED BY THE USGS NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1988. STATE PLANE COORDINATE GRID CORRESPONDS TO TEXAS STATE COORDINATE SYSTEM, TEXAS CENTRAL ZONE (4203), NORTH AMERICAN DATUM OF 1983 (NAD-83).
- EXISTING FEATURES IN SUBCELLS 3A THROUGH 3D ARE EXISTING AND SUBCELLS 3E THROUGH 3G ARE PROPOSED AT THE TIME OF THIS REGISTRATION APPLICATION DEVELOPMENT.
- WATER LEVEL ELEVATIONS WERE TAKEN IN DECEMBER 20, 2023.



Brett Devries 1/23/24



Robert Fowler 1/24/24

SCS ENGINEERS		NAES CORPORATION		GROUNDWATER CONTOUR MAP		PROJECT TITLE		DRAWING TITLE		REV. DATE		DESCRIPTION	
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS 1901 CENTRAL DRIVE, SUITE 550, BEDFORD, TX 76021 PH (817) 571-2288 FAX NO. (817) 571-2188 PROJ. NO. 623032.00		ROBERT FOWLER GEOLOGY 15282 LICENSED PROFESSIONAL GEOLOGIST		J.C. AB	✓/RW GG	✓/RW GG	✓/RW GG	✓/RW GG	✓/RW GG	✓/RW GG	✓/RW GG	✓/RW GG	✓/RW GG

CADD FILE: DECEMBER 2023 SEMIANNUAL EVENT
DATE: 6/2023
SCALE: AS SHOWN
DRAWING NO. 1

FOR INFORMATION PURPOSES ONLY

Appendix A

December 2023 Groundwater Monitoring Field Forms

Groundwater Monitoring Form

Facility name: Sandy Creek Energy Station
 Permittee: Sandy Creek Energy Associates, L.P.
 County: McLennan

1. Facility Type: Power Station
 2. Monitor well no.: BW-1
 3. Date of sampling: 12/20/2023

Name of sampler: Elizabeth Beall
 Affiliation of sampler: SCS Engineers
 If split sampled, with whom? N/A
 Integrity of well: Good
 Installation date: 9/22/2015

Most recent previous sampling: 6/1/2023
 Date of water level measurements: 12/20/2023
 Datum reference point: Top of Casing
 Datum elevation*: 485.57
 Depth to water(below datum)*: 16.60
 4. Water level elevation*: 468.97

5. Purgging/Sampling method: Bailer (Enter bailer or pump)
 Were low-flow methods used? yes no (check one)
 If yes, what volume was purged? N/A gal.
 6. Well volumes purged: 3.0
 7. Was the well dry before purging? yes no (check one)
 8. Was the well dry after purging? yes no (check one)
 9. How long before sampling? 3
 10. Unit of measure? hours (Enter value as days, hours, or mins.)

11. Sample event: Detection
 - Background - Corrective Action
 - Detection - Other
 - Assessment
 12. Sample schedule: Semi-Annual
 - Quarterly - Fourth Year
 - Semi-Annual - Other
 - Annual
 13. Sample type: Regular
 - Regular - Split
 - Duplicate - Other
 - Resample

Field Measurements:	3 gallons	5 gallons	10 gallons	Sample
14. pH	6.25	6.93	7.02	7.15
15. Spec. cond.	8.72	8.97	8.85	8.43 (mS/cm)
17. Temp.	19.50	20.15	20.31	23.01 (C)
19. Turbidity	568	919	912	164 (NTU)

Laboratory:

20. Name Eurofins Test America
 Address: 4145 Greenbriar Drive, Stafford, TX 77477

Phone: (281) 530-5656
 Date: 1/2/2024

Representative's Signature: Anita Patel

Date: 1/2/24

Site Operator's Signature: Luke Johnson

* Report depth to water and elevations to nearest 0.01 foot relative to mean sea level (msl).

Groundwater Monitoring Form

Facility name: Sandy Creek Energy Station

Permittee: Sandy Creek Energy Associates, L.P.

County: McLennan

1. Facility Type: Power Station

2. Monitor well no.: MW-1

3. Date of sampling: 12/20/2023

Name of sampler: Elizabeth Beall

Affiliation of sampler: SCS Engineers

If split sampled, with whom? N/A

Integrity of well: Good

Installation date: 9/21/2015

Most recent previous sampling: 6/1/2023

Date of water level measurements: 12/20/2023

Datum reference point: Top of Casing

Datum elevation*: 465.87

Depth to water(below datum)*: 11.54

4. Water level elevation*: 454.33

5. Purgging/Sampling method: Bailer (Enter bailer or pump)

Were low-flow methods used? yes no (check one)

If yes, what volume was purged? N/A gal.

6. Well volumes purged: 1.94

7. Was the well dry before purging? yes no (check one)

8. Was the well dry after purging? yes no (check one)

9. How long before sampling? 2

10. Unit of measure? hours (Enter value as days, hours, or mins.)

11. Sample event: Detection

- Background
- Corrective Action
- Detection
- Other
- Assessment

12. Sample schedule: Semi-Annual

- Quarterly
- Fourth Year
- Semi-Annual
- Other
- Annual

13. Sample type: Regular

- Regular
- Split
- Duplicate
- Other

- Resample

Field Measurements:

	4 gallons	7 gallons	8 gallons	Sample
14. pH	6.97	6.94	6.95	7.17
15. Spec. cond.	4.53	4.58	4.76	4.69
17. Temp.	21.22	21.45	21.36	23.31
19. Turbidity	22.1	171	443	8.8

(mS/cm)

(C)

(NTU)

Laboratory:

20. Name Eurofins Test America Phone: (281) 530-5656
Address: 4145 Greenbriar Drive, Stafford, TX 77477

Representative's Signature: Anita Patel

Date: 1/2/2024

Site Operator's Signature: Luke Johnson

Date: 1/2/24

* Report depth to water and elevations to nearest 0.01 foot relative to mean sea level (msl).

Groundwater Monitoring Form

Facility name: Sandy Creek Energy Station
 Permittee: Sandy Creek Energy Associates, L.P.
 County: McLennan

1. Facility Type: Power Station
 2. Monitor well no.: MW-2
 3. Date of sampling: 12/20/2023

Name of sampler: Elizabeth Beall
 Affiliation of sampler: SCS Engineers
 If split sampled, with whom? N/A
 Integrity of well: Good
 Installation date: 9/23/2015

Most recent previous sampling: 6/1/2023
 Date of water level measurements: 12/20/2023
 Datum reference point: Top of Casing
 Datum elevation*: 442.15
 Depth to water(below datum)*: 12.73
 4. Water level elevation*: 429.42

5. Purgging/Sampling method: Bailer (Enter bailer or pump)
 Were low-flow methods used? yes no (check one)
 If yes, what volume was purged? N/A gal.
 6. Well volumes purged: 2.53
 7. Was the well dry before purging? yes no (check one)
 8. Was the well dry after purging? yes no (check one)
 9. How long before sampling? 2
 10. Unit of measure? hours (Enter value as days, hours, or mins.)

11. Sample event: Detection
 - Background - Corrective Action
 - Detection - Other
 - Assessment
 12. Sample schedule: Semi-Annual
 - Quarterly - Fourth Year
 - Semi-Annual - Other
 - Annual
 13. Sample type: Regular
 - Regular - Split
 - Duplicate - Other
 - Resample

Field Measurements:	2 gallons	3 gallons	4 gallons	Sample
14. pH	6.56	6.57	6.69	6.84
15. Spec. cond.	7.47	12.40	13.90	8.81 (mS/cm)
17. Temp.	22.23	22.58	21.98	23.24 (C)
19. Turbidity	4.8	3.4	177	11.7 (NTU)

Laboratory:

20. Name Eurofins Test America Phone: (281) 530-5656
 Address: 4145 Greenbriar Drive, Stafford, TX 77477

Representative's Signature: Anita Patel Date: 1/2/2024

Site Operator's Signature: Luke Johnson Date: 1/2/24

* Report depth to water and elevations to nearest 0.01 foot relative to mean sea level (msl).

Groundwater Monitoring Form

Facility name: Sandy Creek Energy Station 1. Facility Type: Power Station
 Permittee: Sandy Creek Energy Associates, L.P. 2. Monitor well no.: MW-3
 County: McLennan 3. Date of sampling: 12/20/2023

Name of sampler: Elizabeth Beall Most recent previous sampling: 6/1/2023
 Affiliation of sampler: SCS Engineers Date of water level measurements: 12/20/2023
 If split sampled, with whom? N/A Datum reference point: Top of Casing
 Integrity of well: Good Datum elevation*: 430.06
 Installation date: 9/1/2010 Depth to water(below datum)*: 11.72
 4. Water level elevation*: 418.34

5. Purgging/Sampling method: Bailer (Enter bailer or pump)
 Were low-flow methods used? yes no (check one)
 If yes, what volume was purged? N/A gal.
 6. Well volumes purged: 3.0
 7. Was the well dry before purging? yes no (check one)
 8. Was the well dry after purging? yes no (check one)
 9. How long before sampling? 2
 10. Unit of measure? hours (Enter value as days, hours, or mins.)

11. Sample event: Detection
 - Background - Corrective Action
 - Detection - Other
 - Assessment
 12. Sample schedule: Semi-Annual
 - Quarterly - Fourth Year
 - Semi-Annual - Other
 - Annual
 13. Sample type: Regular
 - Regular - Split
 - Duplicate - Other
 - Resample

Field Measurements:	1 gallons	2 gallons	3 gallons	Sample
14. pH	6.94	6.54	6.57	6.45
15. Spec. cond.	7.73	7.37	7.26	7.09 (mS/cm)
17. Temp.	22.27	22.65	22.76	22.54 (C)
19. Turbidity	6.2	19.4	36.2	9.2 (NTU)

Laboratory:

20. Name Eurofins Test America Phone: (281) 530-5656
 Address: 4145 Greenbriar Drive, Stafford, TX 77477

Representative's Signature: Anita Patel Date: 1/2/2024

Site Operator's Signature: Luke Johnson Date: 1/2/24

* Report depth to water and elevations to nearest 0.01 foot relative to mean sea level (msl).

Groundwater Monitoring Form

Facility name: Sandy Creek Energy Station
 Permittee: Sandy Creek Energy Associates, L.P.
 County: McLennan

Name of sampler: Elizabeth Beall
 Affiliation of sampler: SCS Engineers
 If split sampled, with whom? N/A
 Integrity of well: Good
 Installation date: 11/2/2020

5. Purgging/Sampling method: Bailer (Enter bailer or pump)
 Were low-flow methods used? yes no (check one)
 If yes, what volume was purged? N/A gal.
 6. Well volumes purged: 3.0
 7. Was the well dry before purging? yes no (check one)
 8. Was the well dry after purging? yes no (check one)
 9. How long before sampling? 2
 10. Unit of measure? hours (Enter value as days, hours, or mins.)

Field Measurements:	2 gallons	4 gallons	6 gallons	Sample	
14. pH	6.91	6.89	6.89	7.33	
15. Spec. cond.	8.55	8.48	8.62	7.83	(mS/cm)
17. Temp.	21.41	21.38	21.49	22.28	(C)
19. Turbidity	2.9	0.9	8.4	0.0	(NTU)

Laboratory:

20. Name Eurofins Test America Phone: (281) 530-5656
 Address: 4145 Greenbriar Drive, Stafford, TX 77477

Representative's Signature: Anita Patel

Date: 1/2/2024

Site Operator's Signature: Luke Johnson

Date: 1/2/24

* Report depth to water and elevations to nearest 0.01 foot relative to mean sea level (msl)

1. Facility Type: Power Station
 2. Monitor well no.: MW-4
 3. Date of sampling: 12/20/2023

Most recent previous sampling: 6/1/2023
 Date of water level measurements: 12/20/2023
 Datum reference point: Top of Casing
 Datum elevation*: 436.91
 Depth to water(below datum)*: 15.80
 4. Water level elevation*: 421.11

11. Sample event: Background
 - Background - Corrective Action
 - Detection - Other
 - Assessment
12. Sample schedule: Semi-Annual
 - Quarterly - Fourth Year
 - Semi-Annual - Other
 - Annual
13. Sample type: Regular
 - Regular - Split
 - Duplicate - Other
 - Resample

Groundwater Monitoring Form

Facility name: Sandy Creek Energy Station 1. Facility Type: Power Station
 Permittee: Sandy Creek Energy Associates, L.P. 2. Monitor well no.: MW-5
 County: McLennan 3. Date of sampling: 12/20/2023

Name of sampler: Elizabeth Beall Most recent previous sampling: 6/1/2023
 Affiliation of sampler: SCS Engineers Date of water level measurements: 12/20/2023
 If split sampled, with whom? N/A Datum reference point: Top of Casing
 Integrity of well: Good Datum elevation*: 454.52
 Installation date: 11/2/2020 Depth to water(below datum)*: 15.80
 4. Water level elevation*: 438.72

5. Purgging/Sampling method: Bailer (Enter bailer or pump)
 Were low-flow methods used? yes no (check one)
 If yes, what volume was purged? N/A gal.
 6. Well volumes purged: 2.56
 7. Was the well dry before purging? yes no (check one)
 8. Was the well dry after purging? yes no (check one)
 9. How long before sampling? 2
 10. Unit of measure? hours (Enter value as days, hours, or mins.)
11. Sample event: Background
 - Background - Corrective Action
 - Detection - Other
 - Assessment
12. Sample schedule: Semi-Annual
 - Quarterly - Fourth Year
 - Semi-Annual - Other
 - Annual

13. Sample type: Regular
 - Regular - Split
 - Duplicate - Other
 - Resample

Field Measurements:	3 gallons	6 gallons	7.5 gallons	Sample	
14. pH	7.42	7.11	7.02	7.27	
15. Spec. cond.	9.00	9.91	11.00	9.19	(mS/cm)
17. Temp.	21.56	21.72	21.91	21.92	(C)
19. Turbidity	10.6	5.5	52.5	10.6	(NTU)

Laboratory:

20. Name Eurofins Test America Phone: (281) 530-5656
 Address: 4145 Greenbriar Drive, Stafford, TX 77477

Representative's Signature: Anita Patel Date: 1/2/024

Site Operator's Signature: Luke Johnson Date: 1/2/24

* Report depth to water and elevations to nearest 0.01 foot relative to mean sea level (msl).

Groundwater Monitoring Form

Facility name: Sandy Creek Energy Station
 Permittee: Sandy Creek Energy Associates, L.P.
 County: McLennan

1. Facility Type: Power Station
 2. Monitor well no.: DUP
 3. Date of sampling: 12/20/2023

Name of sampler: Elizabeth Beall
 Affiliation of sampler: SCS Engineers
 If split sampled, with whom? N/A
 Integrity of well: N/A
 Installation date: N/A

Most recent previous sampling: N/A
 Date of water level measurements: N/A
 Datum reference point: Top of Casing
 Datum elevation*: N/A
 Depth to water(below datum)*: N/A
 4. Water level elevation*: N/A

5. Purgging/Sampling method: N/A (Enter bailer or pump)
 Were low-flow methods used? yes no (check one)
 If yes, what volume was purged? N/A gal.
 6. Well volumes purged: N/A
 7. Was the well dry before purging? yes no (check one)
 8. Was the well dry after purging? yes no (check one)
 9. How long before sampling? N/A
 10. Unit of measure? N/A (Enter value as days, hours, or mins.)

11. Sample event: Background
 - Background - Corrective Action
 - Detection - Other
 - Assessment
 12. Sample schedule: Semi-Annual
 - Quarterly - Fourth Year
 - Semi-Annual - Other
 - Annual
 13. Sample type: Duplicate
 - Regular - Split
 - Duplicate - Other
 - Resample

Field Measurements:

14. pH	<u>N/A</u>	
15. Spec. cond.	<u>N/A</u>	
17. Temp.	<u>N/A</u>	
19. Turbidity	<u>N/A</u>	

16. mS/cm
 18. F or C (check one)
 20. NTU

Laboratory:

20. Name	<u>Eurofins Test America</u>	Phone: <u>(281) 530-5656</u>
Address:	<u>4145 Greenbriar Drive, Stafford, TX 77477</u>	

Representative's Signature: Anita Patel

Date: 1/2/2024

Site Operator's Signature: Luke Johnson

Date: 1/2/24

* Report depth to water and elevations to nearest 0.01 foot relative to mean sea level (msl).

Appendix B

December 2023 Laboratory Report with Chain of Custody

ANALYTICAL REPORT

PREPARED FOR

Attn: Asher Boudreaux
SCS Engineers
1901 Central Avenue
Suite 550
Bedford, Texas 76021

Generated 1/9/2024 3:53:29 PM

JOB DESCRIPTION

Sandy Creek Groundwater

JOB NUMBER

860-64152-1

Eurofins Houston

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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1/9/2024 3:53:29 PM

Authorized for release by
Anita Patel, Project Manager
Anita.Patel@et.eurofinsus.com
(832)776-2275

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Definitions/Glossary

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: SCS Engineers
Project: Sandy Creek Groundwater

Job ID: 860-64152-1

Job ID: 860-64152-1

Eurofins Houston

Job Narrative 860-64152-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/21/2023 4:59 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.9°C and 3.6°C

HPLC/IC

Method 9056A_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 860-136466 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) recovery was within acceptance limits.

Method 9056A_ORGFM_28D: The following samples were diluted to bring the concentration of target analytes within the calibration range: BW-1 (860-64152-1), MW-1 (860-64152-2), MW-2 (860-64152-3), MW-3 (860-64152-4), MW-4 (860-64152-5), MW-5 (860-64152-6) and DUP (860-64152-7). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The instrument blank/CCB for analytical batch 860-136466 contained Chloride greater than the method detection limit (MDL), and were not reanalyzed because associated sample(s) results were greater than 10X the value found in the instrument blank/CCB. The data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 6020B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-138506 and 860-138612 and analytical batch 860-139077 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) recoveries are within acceptance limits.

Method 6020B: The following samples were diluted to bring the concentration of target analytes within the calibration range: BW-1 (860-64152-1), MW-1 (860-64152-2), MW-4 (860-64152-5) and MW-5 (860-64152-6). Elevated reporting limits (RLs) are provided.

Method 6020B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-139489 and analytical batch 860-139906 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020B: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-2 (860-64152-3), MW-3 (860-64152-4) and DUP (860-64152-7). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Client Sample ID: BW-1

Lab Sample ID: 860-64152-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	1100		2.5	2.5	mg/L	10		9056A	Total/NA
Sulfate - DL	2700		2.0	2.0	mg/L	10		9056A	Total/NA
Boron	3.3		0.40	0.40	mg/L	100		6020B	Total/NA
Calcium	710		3.0	3.0	mg/L	100		6020B	Total/NA
pH	7.1	HF			SU		1	9040C	Total/NA
Temperature	17.0	HF			Degrees C		1	9040C	Total/NA
Corrosivity	7.1	HF			SU		1	9040C	Total/NA
Total Dissolved Solids	6800		40	40	mg/L		1	SM 2540C	Total/NA

Client Sample ID: MW-1

Lab Sample ID: 860-64152-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	150		0.50	0.25	mg/L	1		9056A	Total/NA
Sulfate - DL	2300		2.0	2.0	mg/L	10		9056A	Total/NA
Boron	1.2		0.40	0.40	mg/L	100		6020B	Total/NA
Calcium	660		3.0	3.0	mg/L	100		6020B	Total/NA
pH	7.2	HF			SU		1	9040C	Total/NA
Temperature	17.0	HF			Degrees C		1	9040C	Total/NA
Corrosivity	7.2	HF			SU		1	9040C	Total/NA
Total Dissolved Solids	4100		40	40	mg/L		1	SM 2540C	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 860-64152-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	1400		2.5	2.5	mg/L	10		9056A	Total/NA
Sulfate - DL	2400		2.0	2.0	mg/L	10		9056A	Total/NA
Boron	1.6		0.20	0.20	mg/L	50		6020B	Total/NA
Calcium	690		3.0	3.0	mg/L	100		6020B	Total/NA
pH	7.1	HF			SU		1	9040C	Total/NA
Temperature	16.9	HF			Degrees C		1	9040C	Total/NA
Corrosivity	7.1	HF			SU		1	9040C	Total/NA
Total Dissolved Solids	8000		40	40	mg/L		1	SM 2540C	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 860-64152-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	320		0.50	0.25	mg/L	1		9056A	Total/NA
Sulfate - DL	2800		2.0	2.0	mg/L	10		9056A	Total/NA
Boron	1.1		0.20	0.20	mg/L	50		6020B	Total/NA
Calcium	580		3.0	3.0	mg/L	100		6020B	Total/NA
pH	6.8	HF			SU		1	9040C	Total/NA
Temperature	17.5	HF			Degrees C		1	9040C	Total/NA
Corrosivity	6.8	HF			SU		1	9040C	Total/NA
Total Dissolved Solids	6200		40	40	mg/L		1	SM 2540C	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 860-64152-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	760		2.5	2.5	mg/L	10		9056A	Total/NA
Sulfate - DL	2600		2.0	2.0	mg/L	10		9056A	Total/NA
Boron	4.7		0.40	0.40	mg/L	100		6020B	Total/NA
Calcium	550		3.0	3.0	mg/L	100		6020B	Total/NA
pH	7.4	HF			SU		1	9040C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Detection Summary

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Client Sample ID: MW-4 (Continued)

Lab Sample ID: 860-64152-5

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Temperature	16.9	HF			Degrees C	1		9040C	Total/NA
Corrosivity	7.4	HF			SU	1		9040C	Total/NA
Total Dissolved Solids	6900		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 860-64152-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - DL	1200		2.5	2.5	mg/L	10		9056A	Total/NA
Sulfate - DL	3100		2.0	2.0	mg/L	10		9056A	Total/NA
Boron	3.3		0.40	0.40	mg/L	100		6020B	Total/NA
Calcium	650		3.0	3.0	mg/L	100		6020B	Total/NA
pH	7.5	HF			SU	1		9040C	Total/NA
Temperature	17.5	HF			Degrees C	1		9040C	Total/NA
Corrosivity	7.5	HF			SU	1		9040C	Total/NA
Total Dissolved Solids	7000		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP

Lab Sample ID: 860-64152-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	320		0.50	0.25	mg/L	1		9056A	Total/NA
Sulfate - DL	2700		2.0	2.0	mg/L	10		9056A	Total/NA
Boron	1.1		0.20	0.20	mg/L	50		6020B	Total/NA
Calcium	550		3.0	3.0	mg/L	100		6020B	Total/NA
pH	7.0	HF			SU	1		9040C	Total/NA
Temperature	17.3	HF			Degrees C	1		9040C	Total/NA
Corrosivity	7.0	HF			SU	1		9040C	Total/NA
Total Dissolved Solids	5700		40	40	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Client Sample Results

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Client Sample ID: BW-1

Date Collected: 12/20/23 13:20
Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-1

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.10	mg/L			12/23/23 21:00	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1100		2.5	2.5	mg/L			12/23/23 21:12	10
Sulfate	2700		2.0	2.0	mg/L			12/23/23 21:12	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.3		0.40	0.40	mg/L		12/29/23 10:00	01/03/24 17:08	100
Calcium	710		3.0	3.0	mg/L		12/29/23 10:00	01/03/24 17:08	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9040C)	7.1	HF			SU			01/03/24 13:10	1
Temperature (SW846 9040C)	17.0	HF			Degrees C			01/03/24 13:10	1
Corrosivity (SW846 9040C)	7.1	HF			SU			01/03/24 13:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	6800		40	40	mg/L			12/22/23 09:49	1

Client Sample ID: MW-1

Date Collected: 12/20/23 13:35
Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-2

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		0.50	0.25	mg/L			12/23/23 21:25	1
Fluoride	ND		0.50	0.10	mg/L			12/23/23 21:25	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2300		2.0	2.0	mg/L			12/23/23 21:38	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.2		0.40	0.40	mg/L		12/29/23 10:00	01/03/24 17:10	100
Calcium	660		3.0	3.0	mg/L		12/29/23 10:00	01/03/24 17:10	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9040C)	7.2	HF			SU			01/03/24 13:10	1
Temperature (SW846 9040C)	17.0	HF			Degrees C			01/03/24 13:10	1
Corrosivity (SW846 9040C)	7.2	HF			SU			01/03/24 13:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	4100		40	40	mg/L			12/22/23 09:49	1

Eurofins Houston

Client Sample Results

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Client Sample ID: MW-2

Date Collected: 12/20/23 13:50
Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.10	mg/L			12/23/23 21:50	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1400		2.5	2.5	mg/L			12/23/23 22:03	10
Sulfate	2400		2.0	2.0	mg/L			12/23/23 22:03	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.6		0.20	0.20	mg/L		01/06/24 11:54	01/08/24 21:36	50
Calcium	690		3.0	3.0	mg/L		01/06/24 11:54	01/08/24 21:59	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9040C)	7.1	HF			SU			01/03/24 13:10	1
Temperature (SW846 9040C)	16.9	HF			Degrees C			01/03/24 13:10	1
Corrosivity (SW846 9040C)	7.1	HF			SU			01/03/24 13:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	8000		40	40	mg/L			12/22/23 09:49	1

Client Sample ID: MW-3

Date Collected: 12/20/23 14:25
Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-4

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	320		0.50	0.25	mg/L			12/23/23 22:15	1
Fluoride	ND		0.50	0.10	mg/L			12/23/23 22:15	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2800		2.0	2.0	mg/L			12/23/23 22:28	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.20	0.20	mg/L		01/06/24 11:54	01/08/24 21:34	50
Calcium	580		3.0	3.0	mg/L		01/06/24 11:54	01/08/24 21:57	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9040C)	6.8	HF			SU			01/03/24 13:10	1
Temperature (SW846 9040C)	17.5	HF			Degrees C			01/03/24 13:10	1
Corrosivity (SW846 9040C)	6.8	HF			SU			01/03/24 13:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	6200		40	40	mg/L			12/22/23 09:49	1

Eurofins Houston

Client Sample Results

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Client Sample ID: MW-4

Date Collected: 12/20/23 14:00
Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-5

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.10	mg/L			12/23/23 22:41	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	760		2.5	2.5	mg/L			12/23/23 22:53	10
Sulfate	2600		2.0	2.0	mg/L			12/23/23 22:53	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.7		0.40	0.40	mg/L		12/29/23 10:00	01/03/24 17:12	100
Calcium	550		3.0	3.0	mg/L		12/29/23 10:00	01/03/24 17:12	100

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9040C)	7.4	HF			SU			01/03/24 13:10	1
Temperature (SW846 9040C)	16.9	HF			Degrees C			01/03/24 13:10	1
Corrosivity (SW846 9040C)	7.4	HF			SU			01/03/24 13:10	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	6900		40	40	mg/L			12/22/23 09:49	1

Client Sample ID: MW-5

Date Collected: 12/20/23 14:40
Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.10	mg/L			12/23/23 03:08	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1200		2.5	2.5	mg/L			12/23/23 03:20	10
Sulfate	3100		2.0	2.0	mg/L			12/23/23 03:20	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.3		0.40	0.40	mg/L		12/29/23 10:00	01/03/24 17:14	100
Calcium	650		3.0	3.0	mg/L		12/29/23 10:00	01/03/24 17:14	100

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9040C)	7.5	HF			SU			01/03/24 13:10	1
Temperature (SW846 9040C)	17.5	HF			Degrees C			01/03/24 13:10	1
Corrosivity (SW846 9040C)	7.5	HF			SU			01/03/24 13:10	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	7000		40	40	mg/L			12/22/23 09:49	1

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Client Sample Results

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Client Sample ID: DUP

Date Collected: 12/20/23 14:25
Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-7

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	320		0.50	0.25	mg/L			12/23/23 03:33	1
Fluoride	ND		0.50	0.10	mg/L			12/23/23 03:33	1

Method: SW846 9056A - Anions, Ion Chromatography - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2700		2.0	2.0	mg/L			12/23/23 03:45	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.20	0.20	mg/L		01/06/24 11:54	01/08/24 21:42	50
Calcium	550		3.0	3.0	mg/L		01/06/24 11:54	01/08/24 22:01	100

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9040C)	7.0	HF			SU			01/03/24 13:10	1
Temperature (SW846 9040C)	17.3	HF			Degrees C			01/03/24 13:10	1
Corrosivity (SW846 9040C)	7.0	HF			SU			01/03/24 13:10	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	5700		40	40	mg/L			12/22/23 11:00	1

QC Sample Results

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 860-136466/3

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136466

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride		ND			0.50	0.25	mg/L			12/22/23 17:14	1
Fluoride		ND			0.50	0.10	mg/L			12/22/23 17:14	1
Sulfate		ND			0.50	0.20	mg/L			12/22/23 17:14	1

Lab Sample ID: MB 860-136466/47

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136466

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride		ND			0.50	0.25	mg/L			12/23/23 02:30	1
Fluoride		ND			0.50	0.10	mg/L			12/23/23 02:30	1
Sulfate		ND			0.50	0.20	mg/L			12/23/23 02:30	1

Lab Sample ID: MB 860-136466/92

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136466

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride		ND			0.50	0.25	mg/L			12/23/23 11:57	1
Fluoride		ND			0.50	0.10	mg/L			12/23/23 11:57	1
Sulfate		ND			0.50	0.20	mg/L			12/23/23 11:57	1

Lab Sample ID: LCS 860-136466/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136466

Analyte	Spike Added	LCN	LCN	Result	Qualifier	Unit	D	%Rec	Limits	%Rec
Bromide	5.00	4.71				mg/L		94	90 - 110	
Chloride	5.00	4.84				mg/L		97	90 - 110	
Fluoride	5.00	5.10				mg/L		102	90 - 110	
Sulfate	5.00	4.72				mg/L		94	90 - 110	
Sulfur	1.67	1.57				mg/L		94	90 - 110	

Lab Sample ID: LCS 860-136466/48

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136466

Analyte	Spike Added	LCN	LCN	Result	Qualifier	Unit	D	%Rec	Limits	%Rec
Bromide	5.00	4.69				mg/L		94	90 - 110	
Chloride	5.00	4.83				mg/L		97	90 - 110	
Fluoride	5.00	5.11				mg/L		102	90 - 110	
Sulfate	5.00	4.70				mg/L		94	90 - 110	
Sulfur	1.67	1.57				mg/L		94	90 - 110	

Lab Sample ID: LCS 860-136466/93

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 136466

Analyte	Spike Added	LCN	LCN	Result	Qualifier	Unit	D	%Rec	Limits	%Rec
Bromide	5.00	4.68				mg/L		94	90 - 110	

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QC Sample Results

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-136466/93

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
Chloride	5.00	4.83		mg/L		97	90 - 110		
Fluoride	5.00	5.04		mg/L		101	90 - 110		
Sulfate	5.00	4.68		mg/L		94	90 - 110		
Sulfur	1.67	1.56		mg/L		94	90 - 110		

Lab Sample ID: LCSD 860-136466/49

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
Bromide	5.00	4.60		mg/L		92	90 - 110	2	20
Chloride	5.00	4.75		mg/L		95	90 - 110	1	20
Fluoride	5.00	5.00		mg/L		100	90 - 110	2	20
Sulfate	5.00	4.62		mg/L		92	90 - 110	2	20
Sulfur	1.67	1.54		mg/L		92	90 - 110	2	30

Lab Sample ID: LCSD 860-136466/5

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
Bromide	5.00	4.62		mg/L		92	90 - 110	2	20
Chloride	5.00	4.77		mg/L		95	90 - 110	2	20
Fluoride	5.00	4.99		mg/L		100	90 - 110	2	20
Sulfate	5.00	4.65		mg/L		93	90 - 110	2	20
Sulfur	1.67	1.55		mg/L		93	90 - 110	2	30

Lab Sample ID: LCSD 860-136466/94

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
Bromide	5.00	4.58		mg/L		92	90 - 110	2	20
Chloride	5.00	4.75		mg/L		95	90 - 110	2	20
Fluoride	5.00	4.95		mg/L		99	90 - 110	2	20
Sulfate	5.00	4.61		mg/L		92	90 - 110	2	20
Sulfur	1.67	1.54		mg/L		92	90 - 110	2	30

Lab Sample ID: LLCS 860-136466/7

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
Bromide	0.500	0.523		mg/L		105	50 - 150		
Chloride	0.500	0.521		mg/L		104	50 - 150		
Fluoride	0.500	0.475	J	mg/L		95	50 - 150		
Sulfate	0.500	0.401	J	mg/L		80	50 - 150		
Sulfur	0.167	ND		mg/L		80	50 - 150		

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QC Sample Results

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 870-23259-A-1 MS

Matrix: Water

Analysis Batch: 136466

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits	
	Result	Qualifier	Added	Result	Qualifier						
Bromide	ND		5.00	5.23		mg/L		98	90 - 110		
Chloride	54		5.00	58.7	4	mg/L		98	90 - 110		
Fluoride	ND	F1	5.00	5.93	F1	mg/L		112	90 - 110		
Sulfate	83		5.00	87.4	4	mg/L		93	90 - 110		
Sulfur	28		1.67	29.1	4	mg/L		93	90 - 110		

Lab Sample ID: 870-23259-A-1 MSD

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analysis Batch: 136466

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Bromide	ND		5.00	5.24		mg/L		99	90 - 110	0	15
Chloride	54		5.00	58.8	4	mg/L		99	90 - 110	0	15
Fluoride	ND	F1	5.00	5.95	F1	mg/L		112	90 - 110	0	15
Sulfate	83		5.00	87.4	4	mg/L		93	90 - 110	0	15
Sulfur	28		1.67	29.1	4	mg/L		93	90 - 110	0	30

Lab Sample ID: 880-37095-A-1 MS

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analysis Batch: 136466

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier						
Bromide	0.53		5.00	5.65		mg/L		102	90 - 110		
Chloride	60		5.00	65.3	4	mg/L		101	90 - 110		
Fluoride	2.1		5.00	7.44		mg/L		107	90 - 110		
Sulfate	410		5.00	409	4	mg/L		77	90 - 110		
Sulfur	140		1.67	136	4	mg/L		77	90 - 110		

Lab Sample ID: 880-37095-A-1 MSD

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analysis Batch: 136466

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
Bromide	0.53		5.00	5.69		mg/L		103	90 - 110	1	15
Chloride	60		5.00	65.3	4	mg/L		101	90 - 110	0	15
Fluoride	2.1		5.00	7.41		mg/L		106	90 - 110	0	15
Sulfate	410		5.00	409	4	mg/L		74	90 - 110	0	15
Sulfur	140		1.67	136	4	mg/L		74	90 - 110	0	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: LB 860-138506/1-C

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 138930

Prep Batch: 138612

Analyte	LB	LB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Calcium	ND		0.15	0.15	mg/L		12/29/23 10:00	12/30/23 02:56	1

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QC Sample Results

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 860-138612/1-A

Matrix: Water

Analysis Batch: 138930

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 138612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		0.10	0.030	mg/L		12/29/23 10:00	12/30/23 02:50	1

Lab Sample ID: MB 860-138612/1-A

Matrix: Water

Analysis Batch: 139077

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 138612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.010	0.0040	mg/L		12/29/23 10:00	01/03/24 16:55	1
Calcium	ND		0.10	0.030	mg/L		12/29/23 10:00	01/03/24 16:55	1

Lab Sample ID: LCS 860-138612/2-A

Matrix: Water

Analysis Batch: 138930

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 138612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.50	2.37		mg/L		95	80 - 120

Lab Sample ID: LCS 860-138612/2-A

Matrix: Water

Analysis Batch: 139077

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 138612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.100	0.0926		mg/L		93	80 - 120
Calcium	2.50	2.59		mg/L		104	80 - 120

Lab Sample ID: LCSD 860-138612/3-A

Matrix: Water

Analysis Batch: 138930

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 138612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	2.50	2.36		mg/L		94	80 - 120	0	20

Lab Sample ID: LCSD 860-138612/3-A

Matrix: Water

Analysis Batch: 139077

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 138612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.100	0.0961		mg/L		96	80 - 120	4	20
Calcium	2.50	2.52		mg/L		101	80 - 120	3	20

Lab Sample ID: 830-4643-A-1-E MS ^2

Matrix: Water

Analysis Batch: 139077

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 138612

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.087	F1	0.100	0.159	F1	mg/L		72	75 - 125
Calcium	19		2.50	19.8	4	mg/L		38	75 - 125

QC Sample Results

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 830-4643-A-1-F MSD ^2

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 139077

Prep Batch: 138612

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier			Limits		
Boron	0.087	F1	0.100	0.146	F1	mg/L	60	75 - 125	8	20
Calcium	19		2.50	19.9	4	mg/L	41	75 - 125	0	20

Lab Sample ID: MB 860-139489/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 139906

Prep Batch: 139489

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	ND	^1+	0.010	0.0040	mg/L		01/06/24 11:53	01/08/24 21:10	1
Calcium	ND		0.10	0.030	mg/L		01/06/24 11:53	01/08/24 21:10	1

Lab Sample ID: LCS 860-139489/2-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 139906

Prep Batch: 139489

Analyte	MB	MB	Spike	LCS	LCS	Unit	D	%Rec	Limits	Dil Fac
	Result	Qualifier	Added	Result	Qualifier					
Boron	ND	^1+	0.100	0.0994		mg/L		99	80 - 120	
Calcium	ND		2.50	2.62		mg/L		105	80 - 120	

Lab Sample ID: LCSD 860-139489/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 139906

Prep Batch: 139489

Analyte	MB	MB	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	Dil Fac
	Result	Qualifier	Added	Result	Qualifier					
Boron	ND	^1+	0.100	0.102		mg/L		102	80 - 120	
Calcium	ND		2.50	2.51		mg/L		100	80 - 120	

Lab Sample ID: 860-64524-G-1-B MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 139906

Prep Batch: 139489

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	Dil Fac
	Result	Qualifier	Added	Result	Qualifier					
Boron	0.022		0.100	0.105		mg/L		83	75 - 125	
Calcium	3.0	F1	2.50	4.78	F1	mg/L		73	75 - 125	

Lab Sample ID: 860-64524-G-1-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 139906

Prep Batch: 139489

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	Dil Fac
	Result	Qualifier	Added	Result	Qualifier					
Boron	0.022		0.100	0.117		mg/L		95	75 - 125	
Calcium	3.0	F1	2.50	5.31		mg/L		94	75 - 125	

Lab Sample ID: 830-4643-A-1-E MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: TCLP

Analysis Batch: 138930

Prep Batch: 138612

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	Dil Fac
	Result	Qualifier	Added	Result	Qualifier					
Calcium	15		2.50	15.5	4	mg/L		31	75 - 125	

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QC Sample Results

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 830-4643-A-1-F MSD Matrix: Water Analysis Batch: 138930					Client Sample ID: Matrix Spike Duplicate Prep Type: TCLP Prep Batch: 138612						
Analyte	Sample	Sample	Spike		MSD	MSD		%Rec	RPD		
	Result	Qualifier	Added		Result	Qualifier	Unit	D	%Rec	RPD	Limit
Calcium	15		2.50		15.4	4	mg/L	28	75 - 125	1	20

Method: 9040C - pH

Lab Sample ID: 860-64165-A-1 DU Matrix: Water Analysis Batch: 139036					Client Sample ID: Duplicate Prep Type: Total/NA						
Analyte	Sample	Sample	Spike		DU	DU		%Rec	RPD		
	Result	Qualifier	Added		Result	Qualifier	Unit	D	RPD	Limit	
pH	7.6				7.6		SU		0.1	20	
Temperature	17.8				17.9		Degrees C		0.6	20	
Corrosivity	7.6				7.6		SU		0.1		

Lab Sample ID: 880-37297-D-1 DU Matrix: Water Analysis Batch: 139036					Client Sample ID: Duplicate Prep Type: Total/NA						
Analyte	Sample	Sample	Spike		DU	DU		%Rec	RPD		
	Result	Qualifier	Added		Result	Qualifier	Unit	D	RPD	Limit	
pH	7.9				7.9		SU		0.3	20	
Temperature	17.3				17.3		Degrees C		0	20	
Corrosivity	7.9				7.9		SU		0.3		

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 860-136381/1 Matrix: Water Analysis Batch: 136381					Client Sample ID: Method Blank Prep Type: Total/NA						
Analyte	MB	MB	Spike		DU	DU		%Rec	RPD		
	Result	Qualifier	Added		Result	Qualifier	Unit	D	RPD	Limit	
Total Dissolved Solids	ND				5.0		mg/L				

Lab Sample ID: LCS 860-136381/2 Matrix: Water Analysis Batch: 136381					Client Sample ID: Lab Control Sample Prep Type: Total/NA						
Analyte	LCS	LCS	Spike		DU	DU		%Rec	RPD		
	Result	Qualifier	Added		Result	Qualifier	Unit	D	RPD	Limit	
Total Dissolved Solids	1000				1110		mg/L	111	80 - 120		

Lab Sample ID: LCSD 860-136381/3 Matrix: Water Analysis Batch: 136381					Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA						
Analyte	LCSD	LCSD	Spike		DU	DU		%Rec	RPD		
	Result	Qualifier	Added		Result	Qualifier	Unit	D	RPD	Limit	
Total Dissolved Solids	1000				1100		mg/L	110	80 - 120	0	10

QC Sample Results

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 880-37144-K-2 DU

Client Sample ID: Duplicate
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 136381

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	110000		111000		mg/L		2	10

Lab Sample ID: MB 860-136418/1

Client Sample ID: Method Blank
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 136418

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Total Dissolved Solids	ND		5.0	5.0 mg/L			12/22/23 11:00	1

Lab Sample ID: LCS 860-136418/2

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 136418

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	RPD
	Added	Result	Qualifier					
Total Dissolved Solids	1000	1110		mg/L	111	80 - 120		

Lab Sample ID: LCSD 860-136418/3

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 136418

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD
	Added	Result	Qualifier					
Total Dissolved Solids	1000	1110		mg/L	111	80 - 120		0

Lab Sample ID: 860-64152-7 DU

Client Sample ID: DUP
Prep Type: Total/NA

Matrix: Water

Analysis Batch: 136418

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	5700		5920		mg/L		5	10

QC Association Summary

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

HPLC/IC

Analysis Batch: 136466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-1	BW-1	Total/NA	Water	9056A	1
860-64152-1 - DL	BW-1	Total/NA	Water	9056A	2
860-64152-2	MW-1	Total/NA	Water	9056A	3
860-64152-2 - DL	MW-1	Total/NA	Water	9056A	4
860-64152-3	MW-2	Total/NA	Water	9056A	5
860-64152-3 - DL	MW-2	Total/NA	Water	9056A	6
860-64152-4	MW-3	Total/NA	Water	9056A	7
860-64152-4 - DL	MW-3	Total/NA	Water	9056A	8
860-64152-5	MW-4	Total/NA	Water	9056A	9
860-64152-5 - DL	MW-4	Total/NA	Water	9056A	10
860-64152-6	MW-5	Total/NA	Water	9056A	11
860-64152-6 - DL	MW-5	Total/NA	Water	9056A	12
860-64152-7	DUP	Total/NA	Water	9056A	13
860-64152-7 - DL	DUP	Total/NA	Water	9056A	14
MB 860-136466/3	Method Blank	Total/NA	Water	9056A	
MB 860-136466/47	Method Blank	Total/NA	Water	9056A	
MB 860-136466/92	Method Blank	Total/NA	Water	9056A	
LCS 860-136466/4	Lab Control Sample	Total/NA	Water	9056A	
LCS 860-136466/48	Lab Control Sample	Total/NA	Water	9056A	
LCS 860-136466/93	Lab Control Sample	Total/NA	Water	9056A	
LCSD 860-136466/49	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 860-136466/5	Lab Control Sample Dup	Total/NA	Water	9056A	
LCSD 860-136466/94	Lab Control Sample Dup	Total/NA	Water	9056A	
LLCS 860-136466/7	Lab Control Sample	Total/NA	Water	9056A	
870-23259-A-1 MS	Matrix Spike	Total/NA	Water	9056A	
870-23259-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	9056A	
880-37095-A-1 MS	Matrix Spike	Total/NA	Water	9056A	
880-37095-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	9056A	

Metals

Leach Batch: 138506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 860-138506/1-C	Method Blank	Total/NA	Water	1311	
830-4643-A-1-E MS	Matrix Spike	TCLP	Water	1311	
830-4643-A-1-E MS ^2	Matrix Spike	Total/NA	Water	1311	
830-4643-A-1-F MSD	Matrix Spike Duplicate	TCLP	Water	1311	
830-4643-A-1-F MSD ^2	Matrix Spike Duplicate	Total/NA	Water	1311	

Prep Batch: 138612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-1	BW-1	Total/NA	Water	3010A	
860-64152-2	MW-1	Total/NA	Water	3010A	
860-64152-5	MW-4	Total/NA	Water	3010A	
860-64152-6	MW-5	Total/NA	Water	3010A	
LB 860-138506/1-C	Method Blank	Total/NA	Water	3010A	138506
MB 860-138612/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-138612/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-138612/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
830-4643-A-1-E MS	Matrix Spike	TCLP	Water	3010A	138506
830-4643-A-1-E MS ^2	Matrix Spike	Total/NA	Water	3010A	138506

Eurofins Houston

QC Association Summary

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Metals (Continued)

Prep Batch: 138612 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
830-4643-A-1-F MSD	Matrix Spike Duplicate	TCLP	Water	3010A	138506
830-4643-A-1-F MSD ^2	Matrix Spike Duplicate	Total/NA	Water	3010A	138506

Analysis Batch: 138930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 860-138506/1-C	Method Blank	Total/NA	Water	6020B	138612
MB 860-138612/1-A	Method Blank	Total/NA	Water	6020B	138612
LCS 860-138612/2-A	Lab Control Sample	Total/NA	Water	6020B	138612
LCSD 860-138612/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	138612
830-4643-A-1-E MS	Matrix Spike	TCLP	Water	6020B	138612
830-4643-A-1-F MSD	Matrix Spike Duplicate	TCLP	Water	6020B	138612

Analysis Batch: 139077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-1	BW-1	Total/NA	Water	6020B	138612
860-64152-2	MW-1	Total/NA	Water	6020B	138612
860-64152-5	MW-4	Total/NA	Water	6020B	138612
860-64152-6	MW-5	Total/NA	Water	6020B	138612
MB 860-138612/1-A	Method Blank	Total/NA	Water	6020B	138612
LCS 860-138612/2-A	Lab Control Sample	Total/NA	Water	6020B	138612
LCSD 860-138612/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	138612
830-4643-A-1-E MS ^2	Matrix Spike	Total/NA	Water	6020B	138612
830-4643-A-1-F MSD ^2	Matrix Spike Duplicate	Total/NA	Water	6020B	138612

Prep Batch: 139489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-3	MW-2	Total/NA	Water	3010A	
860-64152-4	MW-3	Total/NA	Water	3010A	
860-64152-7	DUP	Total/NA	Water	3010A	
MB 860-139489/1-A	Method Blank	Total/NA	Water	3010A	
LCS 860-139489/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 860-139489/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
860-64524-G-1-B MS	Matrix Spike	Total/NA	Water	3010A	
860-64524-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 139906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-3	MW-2	Total/NA	Water	6020B	139489
860-64152-3	MW-2	Total/NA	Water	6020B	139489
860-64152-4	MW-3	Total/NA	Water	6020B	139489
860-64152-4	MW-3	Total/NA	Water	6020B	139489
860-64152-7	DUP	Total/NA	Water	6020B	139489
860-64152-7	DUP	Total/NA	Water	6020B	139489
MB 860-139489/1-A	Method Blank	Total/NA	Water	6020B	139489
LCS 860-139489/2-A	Lab Control Sample	Total/NA	Water	6020B	139489
LCSD 860-139489/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	139489
860-64524-G-1-B MS	Matrix Spike	Total/NA	Water	6020B	139489
860-64524-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6020B	139489

QC Association Summary

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

General Chemistry

Analysis Batch: 136381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-1	BW-1	Total/NA	Water	SM 2540C	1
860-64152-2	MW-1	Total/NA	Water	SM 2540C	2
860-64152-3	MW-2	Total/NA	Water	SM 2540C	3
860-64152-4	MW-3	Total/NA	Water	SM 2540C	4
860-64152-5	MW-4	Total/NA	Water	SM 2540C	5
860-64152-6	MW-5	Total/NA	Water	SM 2540C	6
MB 860-136381/1	Method Blank	Total/NA	Water	SM 2540C	7
LCS 860-136381/2	Lab Control Sample	Total/NA	Water	SM 2540C	8
LCSD 860-136381/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	9
880-37144-K-2 DU	Duplicate	Total/NA	Water	SM 2540C	10

Analysis Batch: 136418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-7	DUP	Total/NA	Water	SM 2540C	11
MB 860-136418/1	Method Blank	Total/NA	Water	SM 2540C	12
LCS 860-136418/2	Lab Control Sample	Total/NA	Water	SM 2540C	13
LCSD 860-136418/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	14
860-64152-7 DU	DUP	Total/NA	Water	SM 2540C	

Analysis Batch: 139036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-64152-1	BW-1	Total/NA	Water	9040C	
860-64152-2	MW-1	Total/NA	Water	9040C	
860-64152-3	MW-2	Total/NA	Water	9040C	
860-64152-4	MW-3	Total/NA	Water	9040C	
860-64152-5	MW-4	Total/NA	Water	9040C	
860-64152-6	MW-5	Total/NA	Water	9040C	
860-64152-7	DUP	Total/NA	Water	9040C	
860-64165-A-1 DU	Duplicate	Total/NA	Water	9040C	
880-37297-D-1 DU	Duplicate	Total/NA	Water	9040C	

Lab Chronicle

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Client Sample ID: BW-1

Date Collected: 12/20/23 13:20

Lab Sample ID: 860-64152-1

Matrix: Water

Date Received: 12/21/23 16:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1			136466	12/23/23 21:00	WP	EET HOU
Total/NA	Analysis	9056A	DL	10			136466	12/23/23 21:12	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	138612	12/29/23 10:00	MD	EET HOU
Total/NA	Analysis	6020B		100			139077	01/03/24 17:08	SHZ	EET HOU
Total/NA	Analysis	9040C		1			139036	01/03/24 13:10	SCI	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	136381	12/22/23 09:49	SA	EET HOU

Client Sample ID: MW-1

Date Collected: 12/20/23 13:35

Lab Sample ID: 860-64152-2

Matrix: Water

Date Received: 12/21/23 16:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1			136466	12/23/23 21:25	WP	EET HOU
Total/NA	Analysis	9056A	DL	10			136466	12/23/23 21:38	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	138612	12/29/23 10:00	MD	EET HOU
Total/NA	Analysis	6020B		100			139077	01/03/24 17:10	SHZ	EET HOU
Total/NA	Analysis	9040C		1			139036	01/03/24 13:10	SCI	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	136381	12/22/23 09:49	SA	EET HOU

Client Sample ID: MW-2

Date Collected: 12/20/23 13:50

Lab Sample ID: 860-64152-3

Matrix: Water

Date Received: 12/21/23 16:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1			136466	12/23/23 21:50	WP	EET HOU
Total/NA	Analysis	9056A	DL	10			136466	12/23/23 22:03	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	139489	01/06/24 11:54	AGR	EET HOU
Total/NA	Analysis	6020B		50			139906	01/08/24 21:36	DP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	139489	01/06/24 11:54	AGR	EET HOU
Total/NA	Analysis	6020B		100			139906	01/08/24 21:59	DP	EET HOU
Total/NA	Analysis	9040C		1			139036	01/03/24 13:10	SCI	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	136381	12/22/23 09:49	SA	EET HOU

Client Sample ID: MW-3

Date Collected: 12/20/23 14:25

Lab Sample ID: 860-64152-4

Matrix: Water

Date Received: 12/21/23 16:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1			136466	12/23/23 22:15	WP	EET HOU
Total/NA	Analysis	9056A	DL	10			136466	12/23/23 22:28	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	139489	01/06/24 11:54	AGR	EET HOU
Total/NA	Analysis	6020B		50			139906	01/08/24 21:34	DP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	139489	01/06/24 11:54	AGR	EET HOU
Total/NA	Analysis	6020B		100			139906	01/08/24 21:57	DP	EET HOU

Eurofins Houston

Lab Chronicle

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Client Sample ID: MW-3

Date Collected: 12/20/23 14:25

Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9040C		1			139036	01/03/24 13:10	SCI	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	136381	12/22/23 09:49	SA	EET HOU

Client Sample ID: MW-4

Date Collected: 12/20/23 14:00

Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1			136466	12/23/23 22:41	WP	EET HOU
Total/NA	Analysis	9056A	DL	10			136466	12/23/23 22:53	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	138612	12/29/23 10:00	MD	EET HOU
Total/NA	Analysis	6020B		100			139077	01/03/24 17:12	SHZ	EET HOU
Total/NA	Analysis	9040C		1			139036	01/03/24 13:10	SCI	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	136381	12/22/23 09:49	SA	EET HOU

Client Sample ID: MW-5

Date Collected: 12/20/23 14:40

Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1			136466	12/23/23 03:08	WP	EET HOU
Total/NA	Analysis	9056A	DL	10			136466	12/23/23 03:20	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	138612	12/29/23 10:00	MD	EET HOU
Total/NA	Analysis	6020B		100			139077	01/03/24 17:14	SHZ	EET HOU
Total/NA	Analysis	9040C		1			139036	01/03/24 13:10	SCI	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	136381	12/22/23 09:49	SA	EET HOU

Client Sample ID: DUP

Date Collected: 12/20/23 14:25

Date Received: 12/21/23 16:59

Lab Sample ID: 860-64152-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1			136466	12/23/23 03:33	WP	EET HOU
Total/NA	Analysis	9056A	DL	10			136466	12/23/23 03:45	WP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	139489	01/06/24 11:54	AGR	EET HOU
Total/NA	Analysis	6020B		50			139906	01/08/24 21:42	DP	EET HOU
Total/NA	Prep	3010A			50 mL	50 mL	139489	01/06/24 11:54	AGR	EET HOU
Total/NA	Analysis	6020B		100			139906	01/08/24 22:01	DP	EET HOU
Total/NA	Analysis	9040C		1			139036	01/03/24 13:10	SCI	EET HOU
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	136418	12/22/23 11:00	SA	EET HOU

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Eurofins Houston

Accreditation/Certification Summary

Client: SCS Engineers

Job ID: 860-64152-1

Project/Site: Sandy Creek Groundwater

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-03-24
Florida	NELAP	E871002	06-30-24
Louisiana (All)	NELAP	03054	06-30-24
Oklahoma	NELAP	1306	08-31-24
Oklahoma	State	2023-139	08-31-24
Texas	NELAP	T104704215-23-53	06-30-24
Texas	TCEQ Water Supply	T104704215	12-28-25
USDA	US Federal Programs	525-23-79-79507	03-20-26

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Method Summary

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET HOU
6020B	Metals (ICP/MS)	SW846	EET HOU
9040C	pH	SW846	EET HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET HOU
3010A	Preparation, Total Metals	SW846	EET HOU

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: SCS Engineers
Project/Site: Sandy Creek Groundwater

Job ID: 860-64152-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-64152-1	BW-1	Water	12/20/23 13:20	12/21/23 16:59
860-64152-2	MW-1	Water	12/20/23 13:35	12/21/23 16:59
860-64152-3	MW-2	Water	12/20/23 13:50	12/21/23 16:59
860-64152-4	MW-3	Water	12/20/23 14:25	12/21/23 16:59
860-64152-5	MW-4	Water	12/20/23 14:00	12/21/23 16:59
860-64152-6	MW-5	Water	12/20/23 14:40	12/21/23 16:59
860-64152-7	DUP	Water	12/20/23 14:25	12/21/23 16:59

Chain of Custody Record



Client Information							
Address:		Sampler: KARINA NUNA		Lab P.M.: Anita Patel		Carier Tracking No(s): 870-6718-1735.1	
Client Contact:		Phone: Asher Boudreux		E-Mail: Anita.Patel@ef.eurofinsus.com		State of Origin:	
Company:		SCS Engineers				Page: 1 of 1	
Address:		1901 Central Avenue Suite 550 Bedford		Date/Time Requested:		Analysis Requested	
City, State, Zip:		TX, 76021		TA Requested (days):		Preservation Codes:	
Phone:				Compliance Project: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Ammonium H Ascorbic Acid I Ice J DI Water K EDTA L EDA M Hexane N None O AsNaO2 P Na2OAS Q Na2SO3 R Na2SO4 S H2SO4 T TSP Dodecahydrate U Acetone V MCRAA W pH 4-5 Y Trizma Z other (specify)	
Email:		aboudreaux@scsengineers.com		PO #:			
Project Name:		Sandy Creek Groundwater		WO #:			
Site:				Project#:			
				SSON#:			
Sample Identification							
Sample Date:		Sample Time		Sample Type (C=Comp., G=Grab, O=Onsite, D=Drill Hole)		Matrix (Mineral, Organic, Inorganic, Aqueous)	
BW-1		12/20/13 13:35		G		Water	
MW-1		12/20/13 13:35		G		Water	
MW-2		12/20/13 13:50		G		Water	
MW-3		12/20/13 14:25		G		Water	
MW-4		12/20/13 14:00		G		Water	
MW-5		12/20/13 14:40		G		Water	
DUP		12/20/13 14:25		G		Water	
Field Filtered Sample (Yes or No)							
Field Filtered Sample (Yes or No)							
pH 9040C, Anions-9056A_ORGFM_28D							
6010D Total Metals B and Ca							
2540C_Calcd Solids, Total Dissolved (TDS)							
Total Number of containers							
Special Instructions>Note:							
 860-64152 Chain of Custody							
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV Other (specify)							
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Special Instructions/QC Requirements: Empty Kit Relinquished by: Relinquished by: Date: 12/20/13 Time: 17:00 Company: SCS Engineers Received by: FedEx Method of Shipment: _____ Date/Time: 12/21/13 Received by: FedEx Date/Time: 12/21/13 Company: SCS Engineers Relinquished by: Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____ Custody Seals intact: <input checked="" type="checkbox"/> Custody Seal No. _____ △ Yes <input type="checkbox"/> No <input type="checkbox"/>							

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 860-64152-1

Login Number: 64152

List Source: Eurofins Houston

List Number: 1

Creator: Jimenez, Nicanor

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True		1
The cooler's custody seal, if present, is intact.	N/A		2
Sample custody seals, if present, are intact.	True		3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	True		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True		7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	True		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	True		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	True		

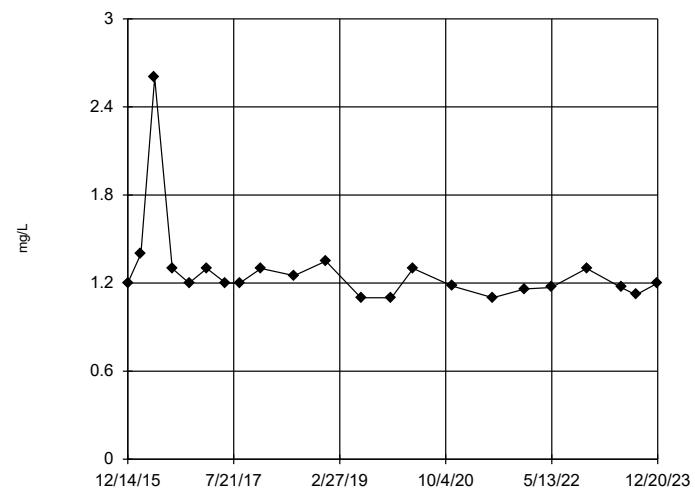
Appendix C

Historical Groundwater Analytical Data

Appendix D

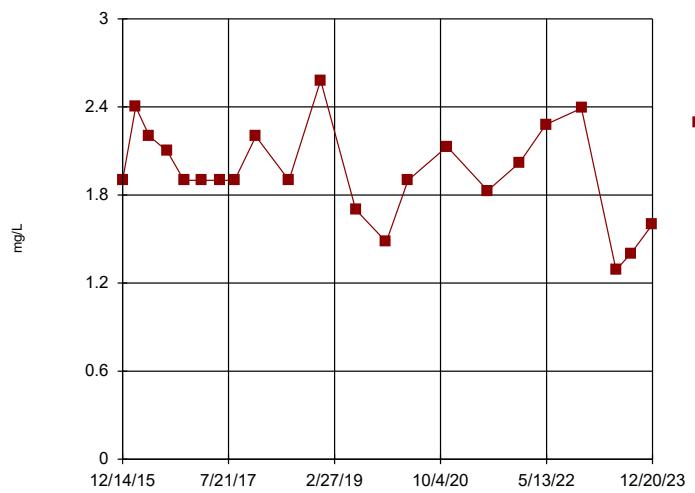
Time Series Graphs

Time Series



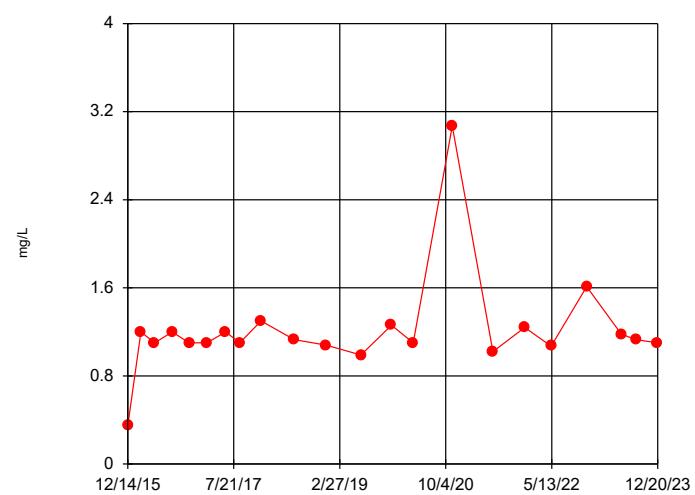
MW-1

Time Series



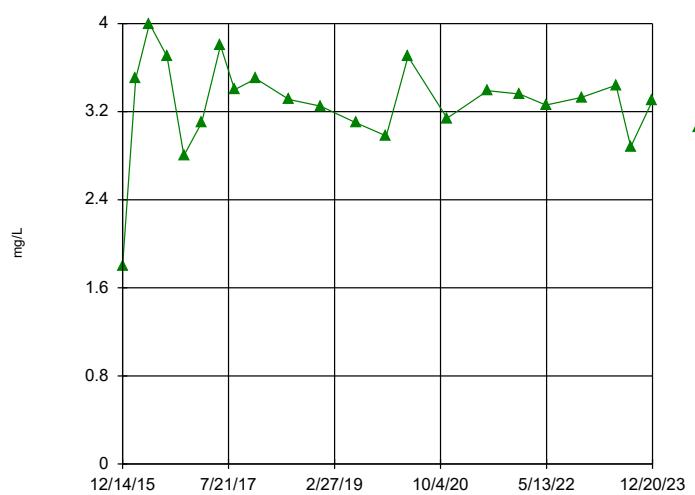
MW-2

Time Series

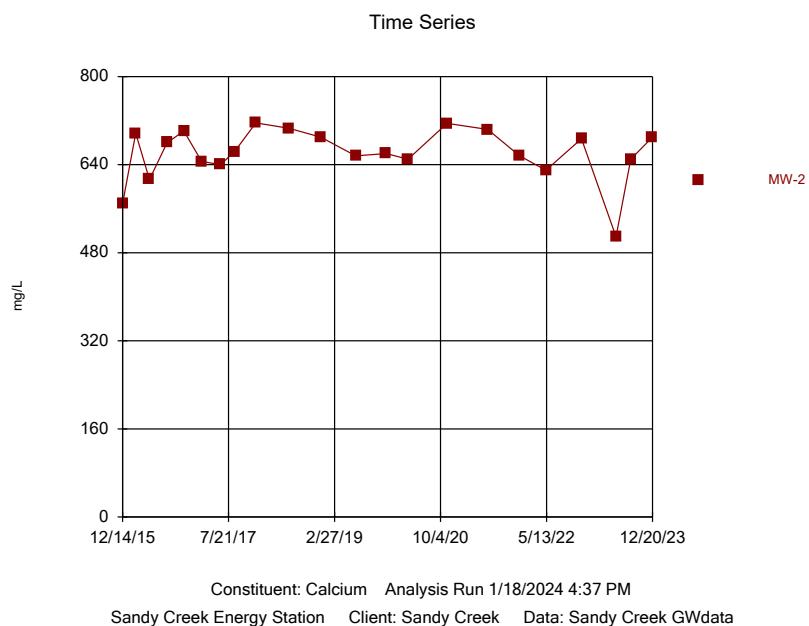
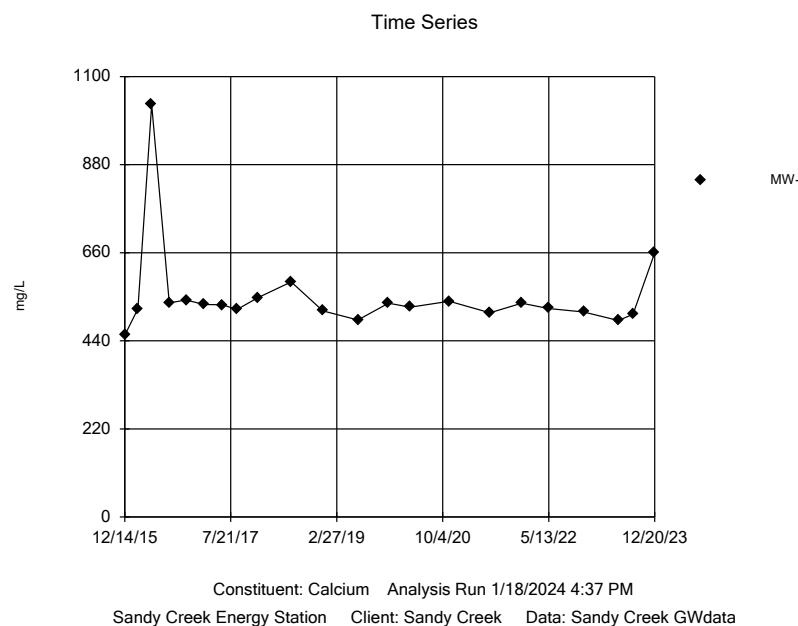
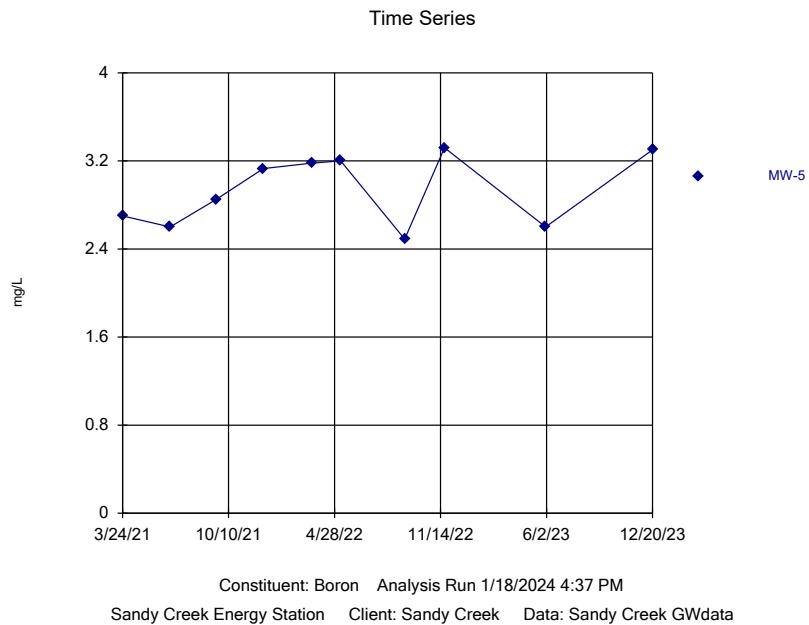
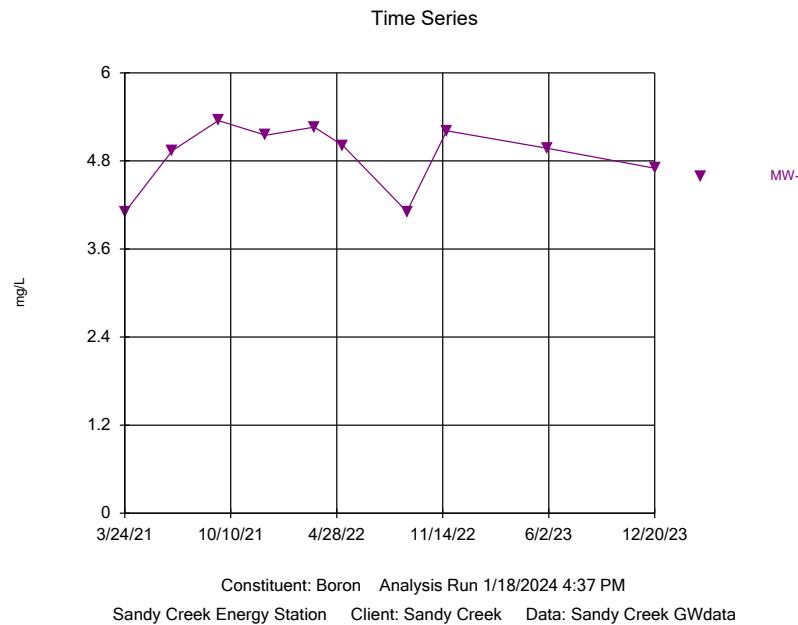


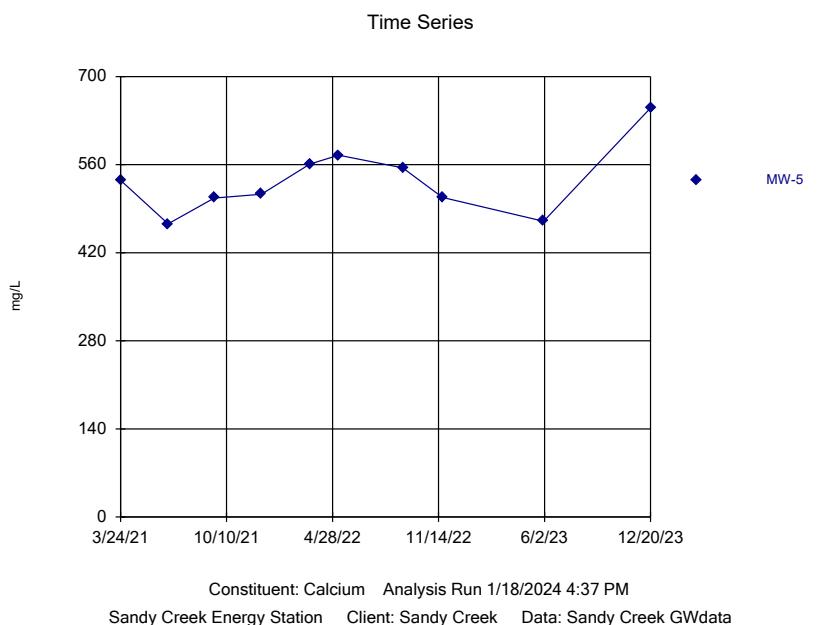
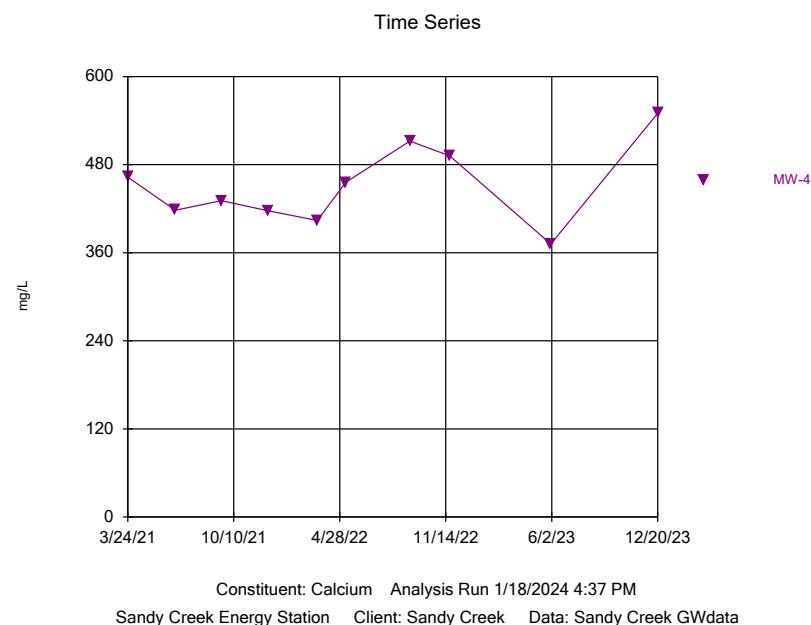
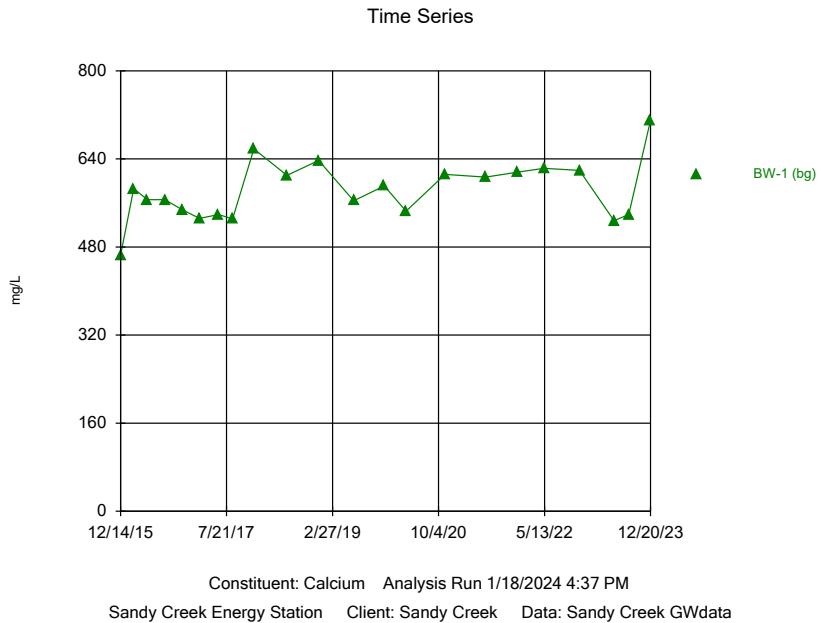
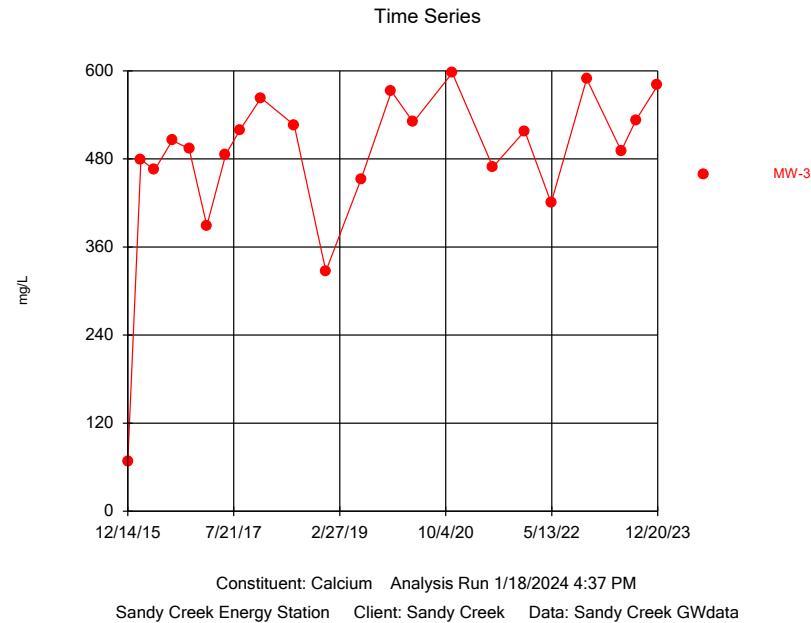
MW-3

Time Series

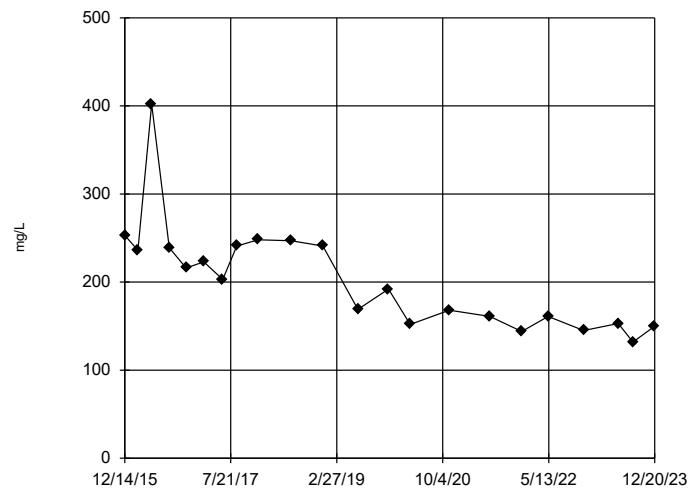


BW-1 (bg)



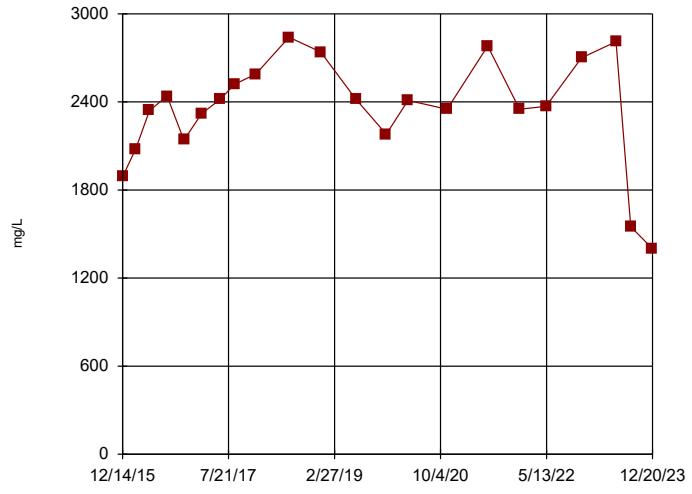


Time Series



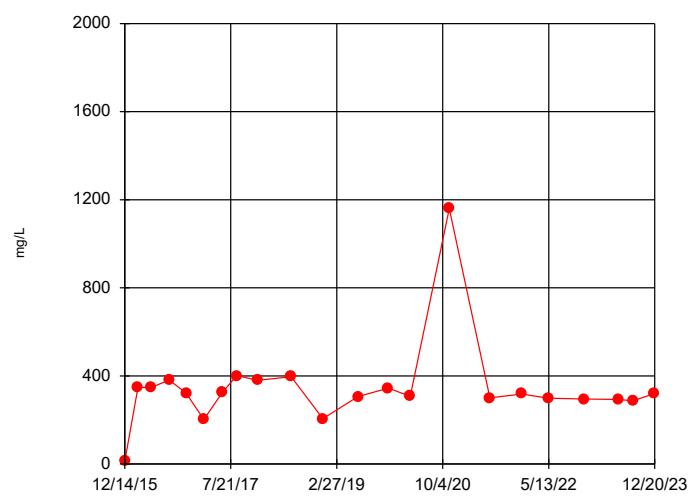
MW-1

Time Series



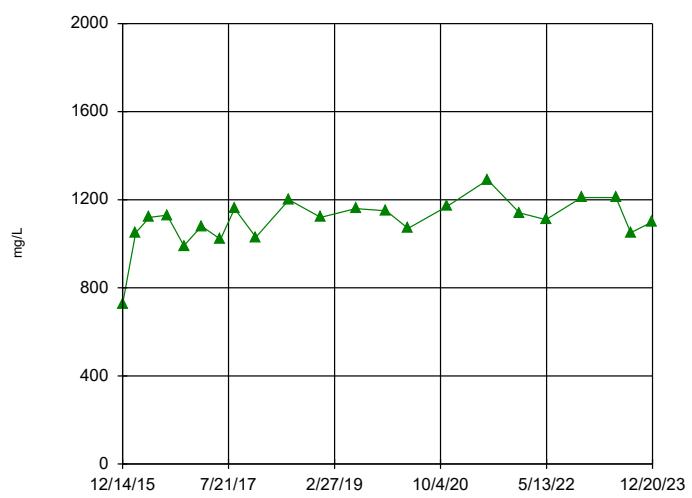
MW-2

Time Series

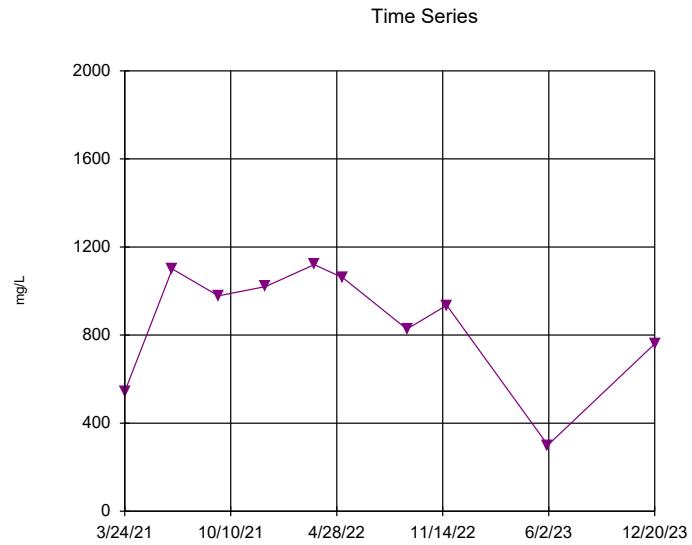


MW-3

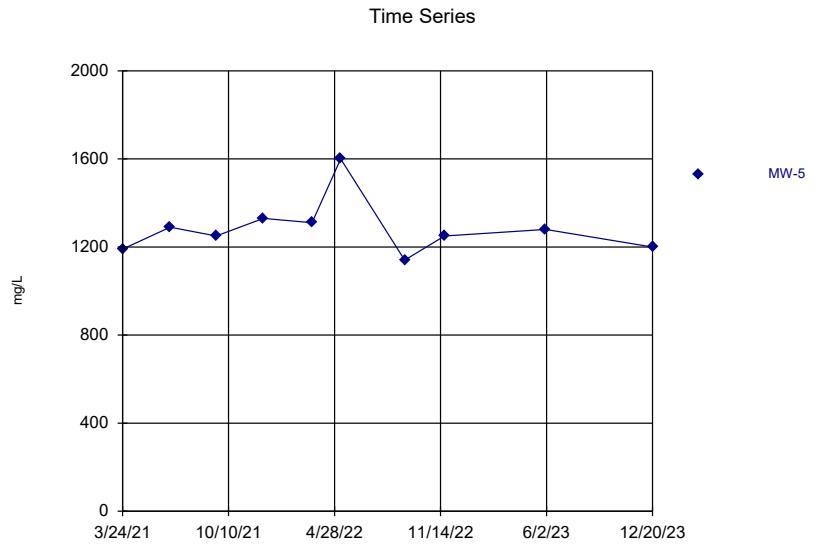
Time Series



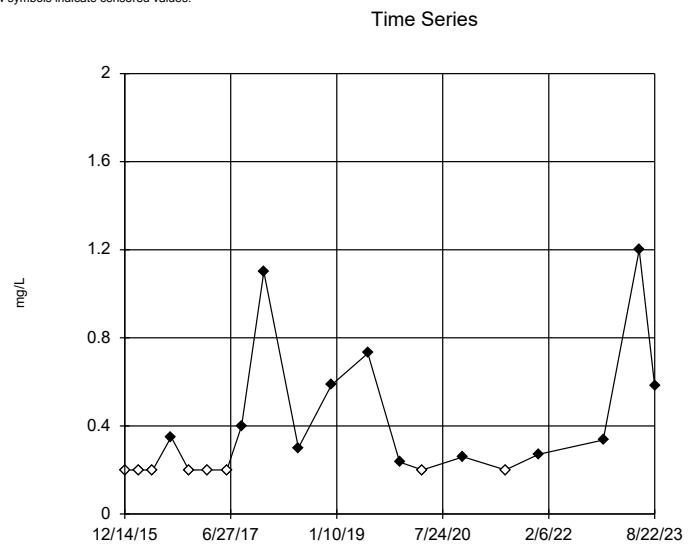
BW-1 (bg)



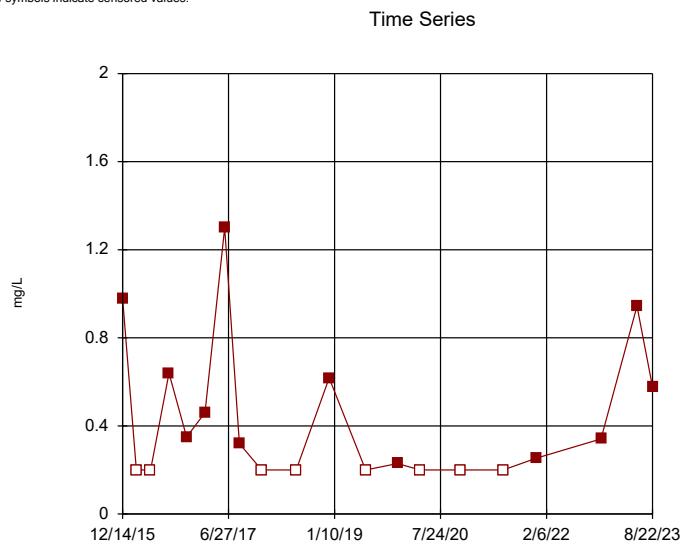
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Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata



Constituent: Chloride Analysis Run 1/18/2024 4:37 PM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata

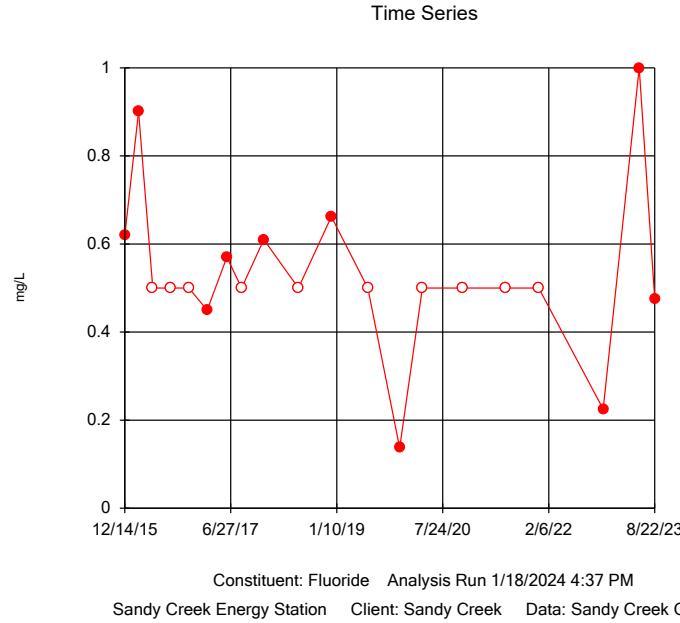


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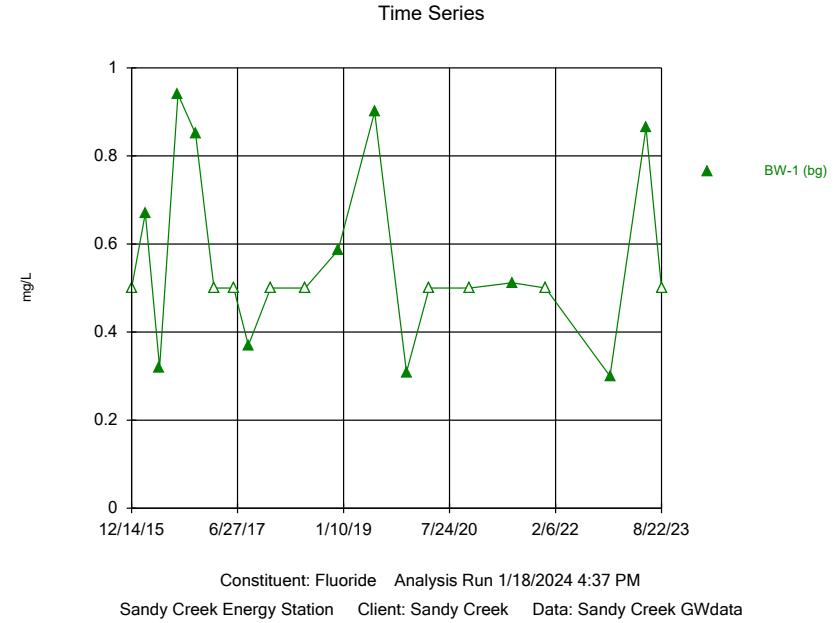


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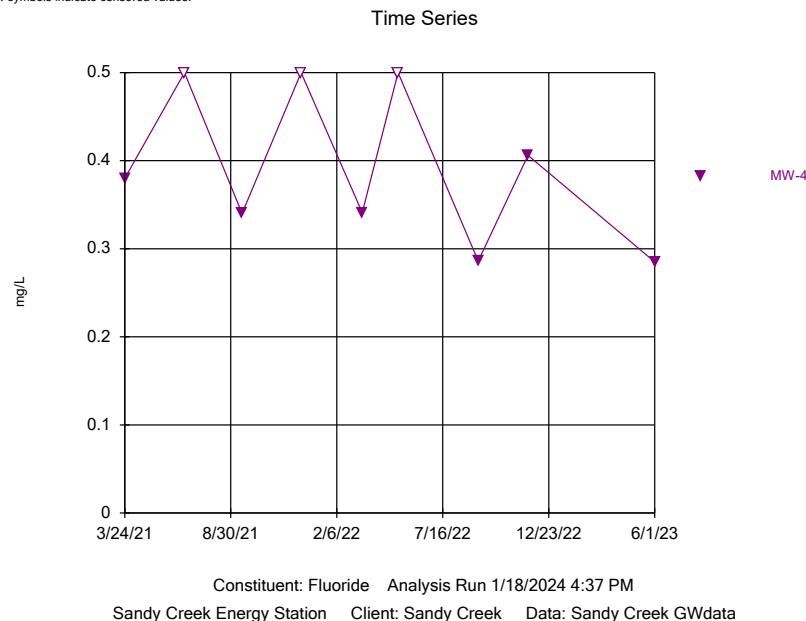
Sanitas™ v.9.6.37 Sanitas software licensed to SCS Engineers. EPA
Hollow symbols indicate censored values.



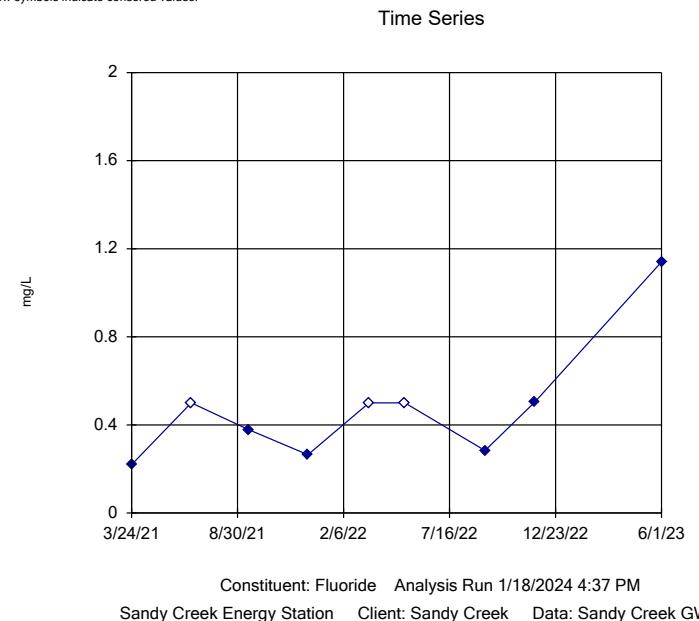
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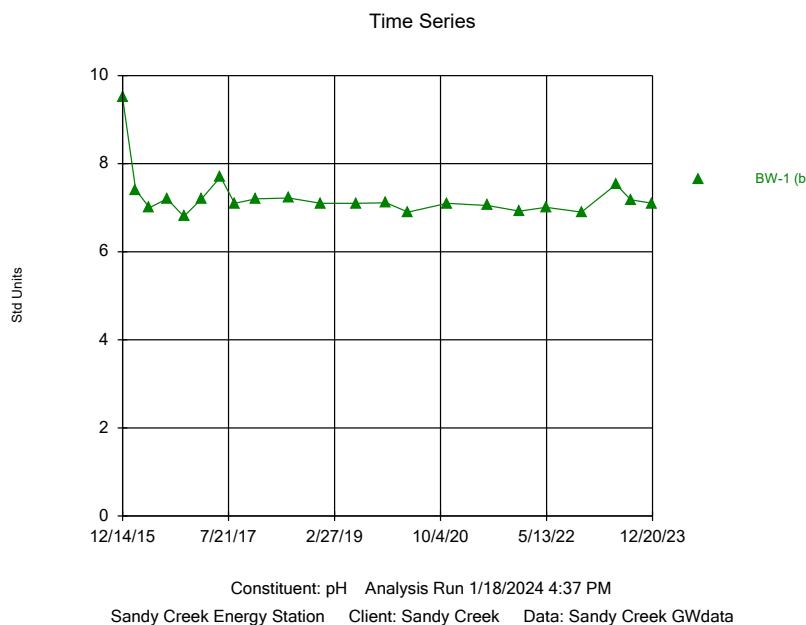
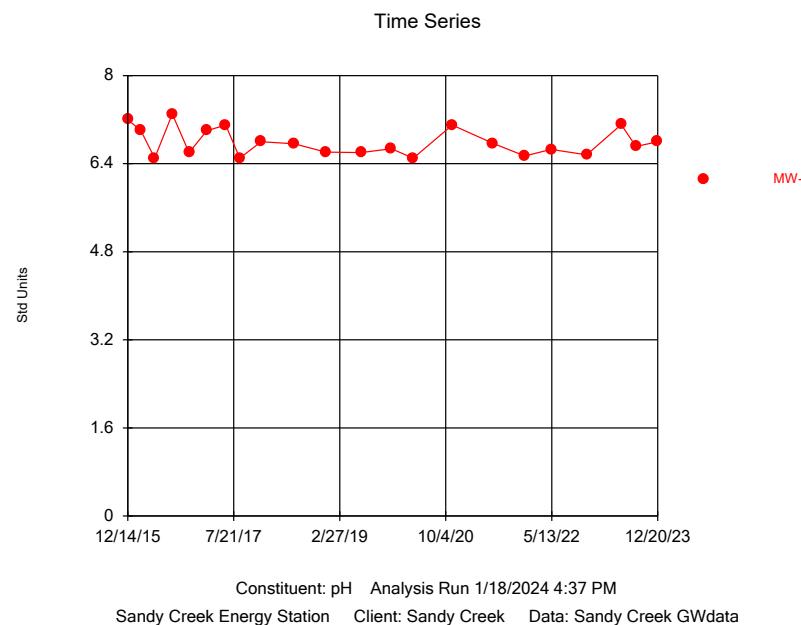
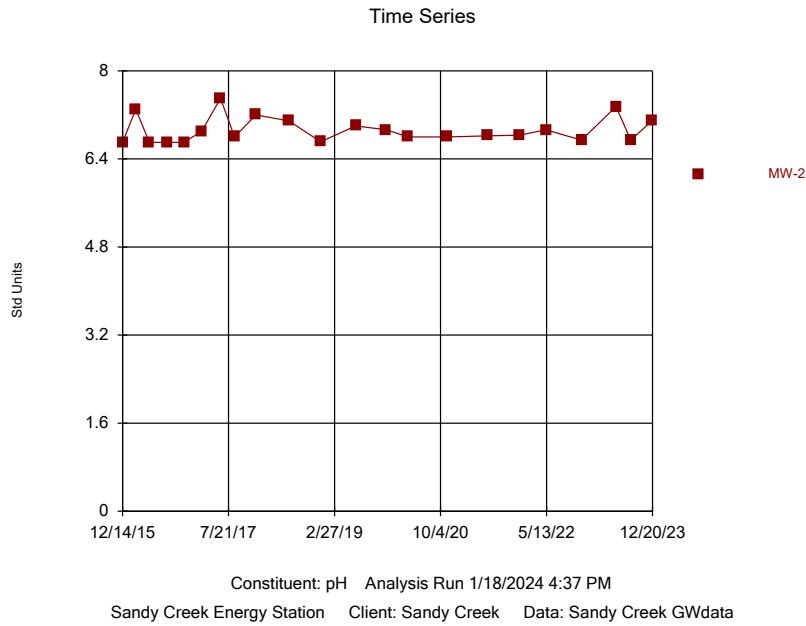
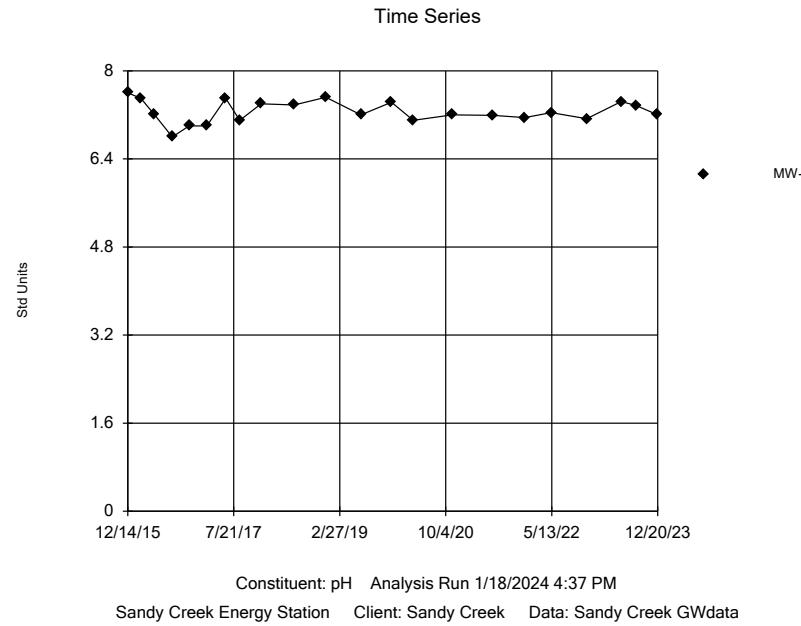


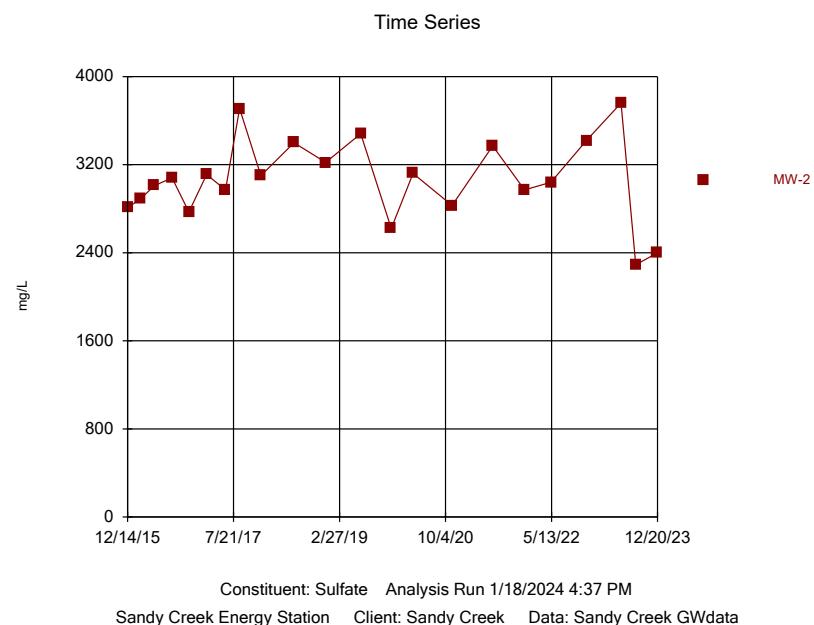
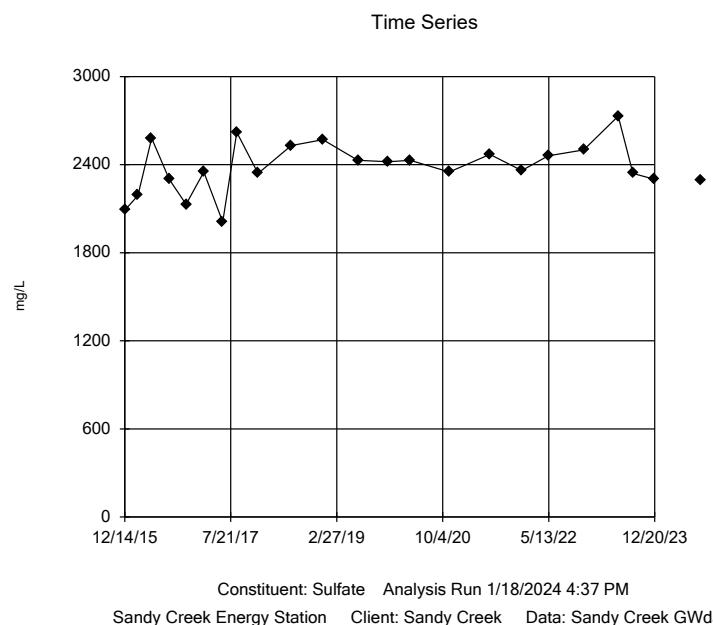
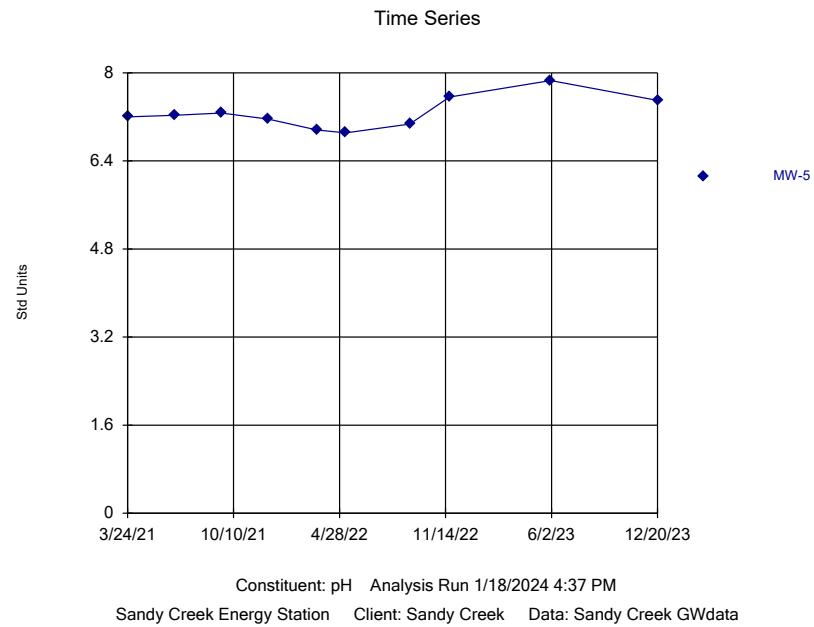
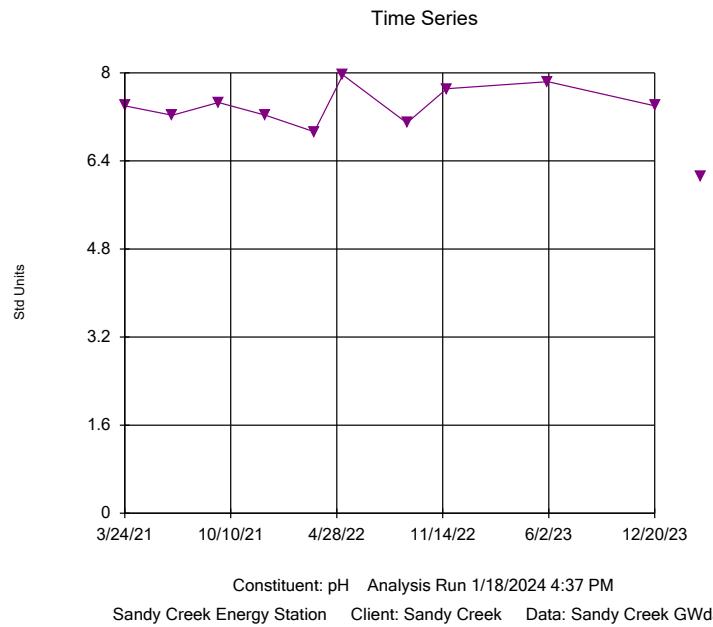
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Hollow symbols indicate censored values.



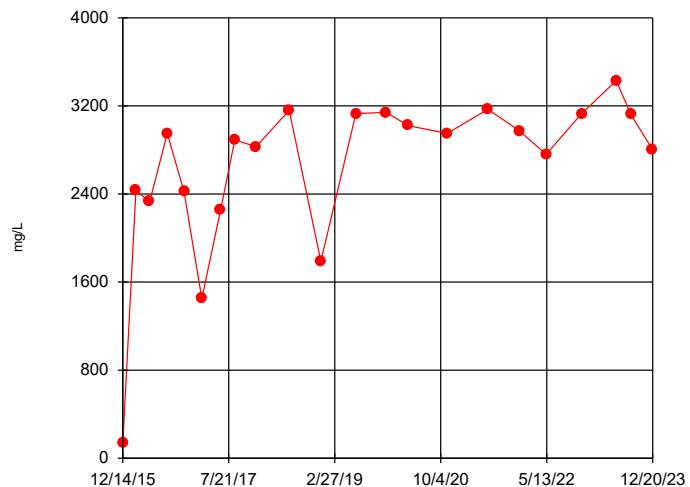
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Time Series

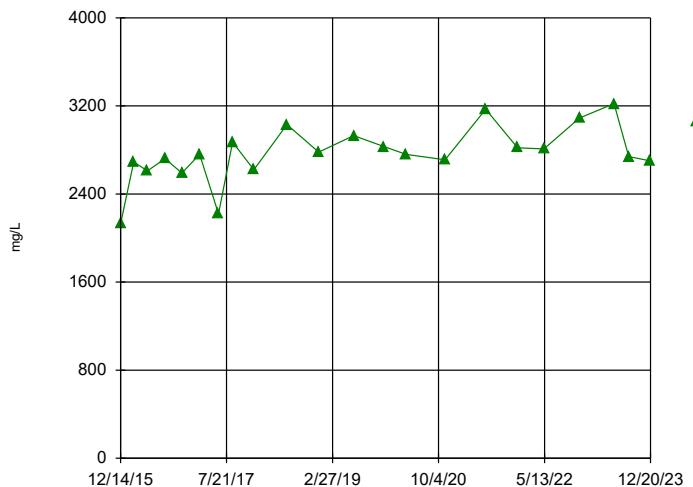


Constituent: Sulfate Analysis Run 1/18/2024 4:37 PM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata

MW-3

Time Series

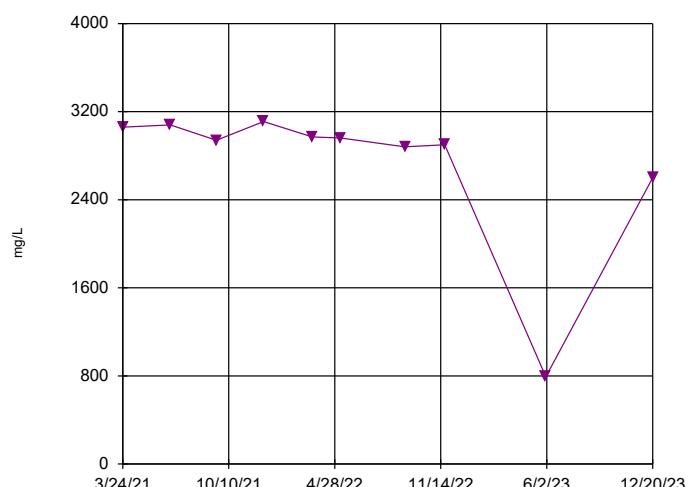


Constituent: Sulfate Analysis Run 1/18/2024 4:37 PM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata

BW-1 (bg)

Time Series

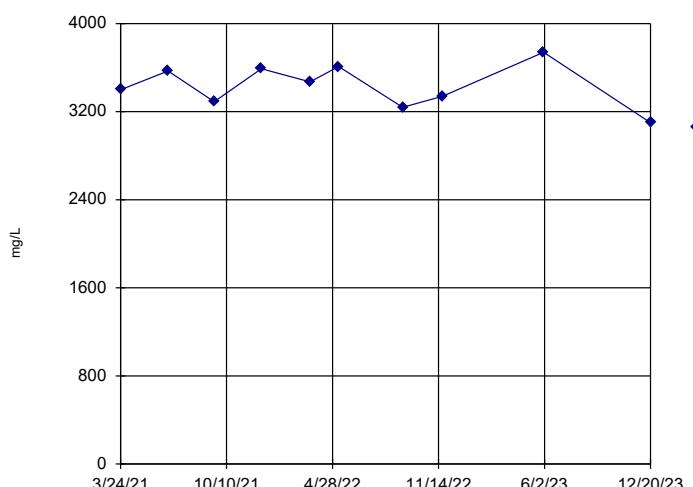


Constituent: Sulfate Analysis Run 1/18/2024 4:37 PM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata

MW-4

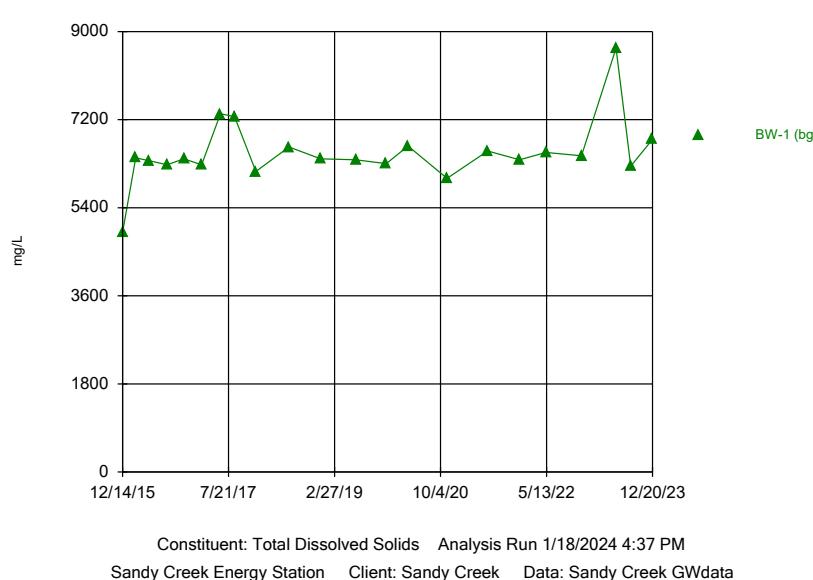
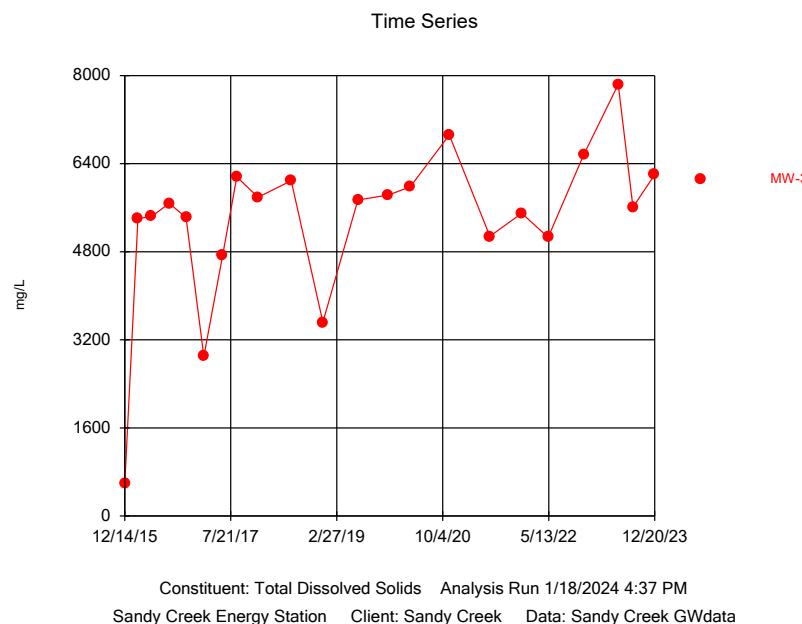
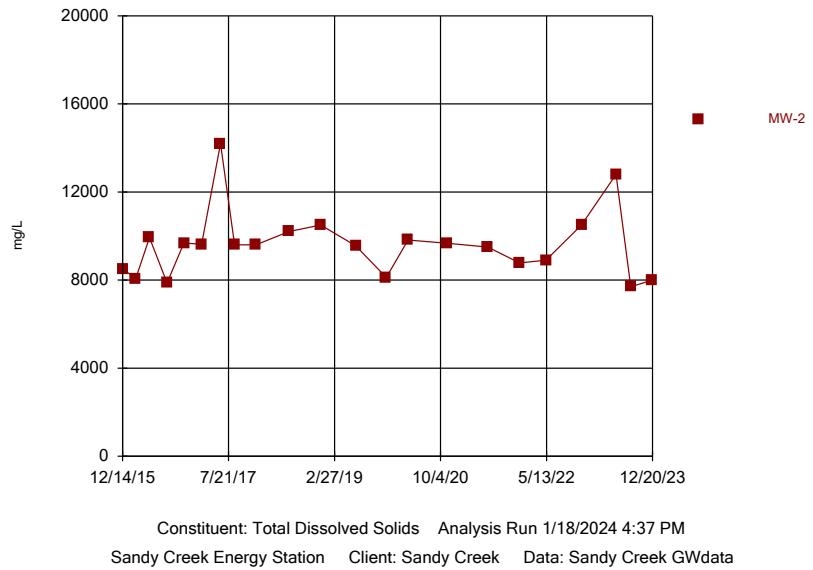
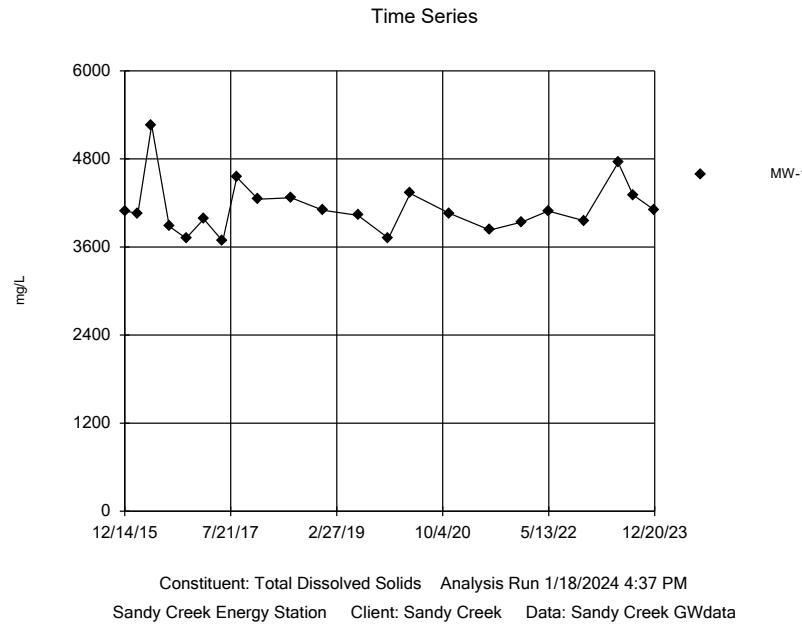
Time Series

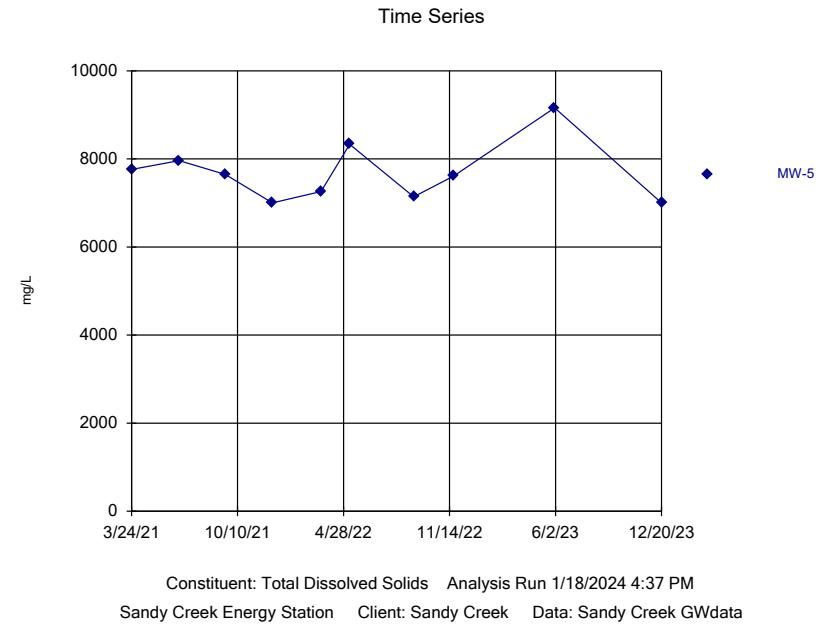
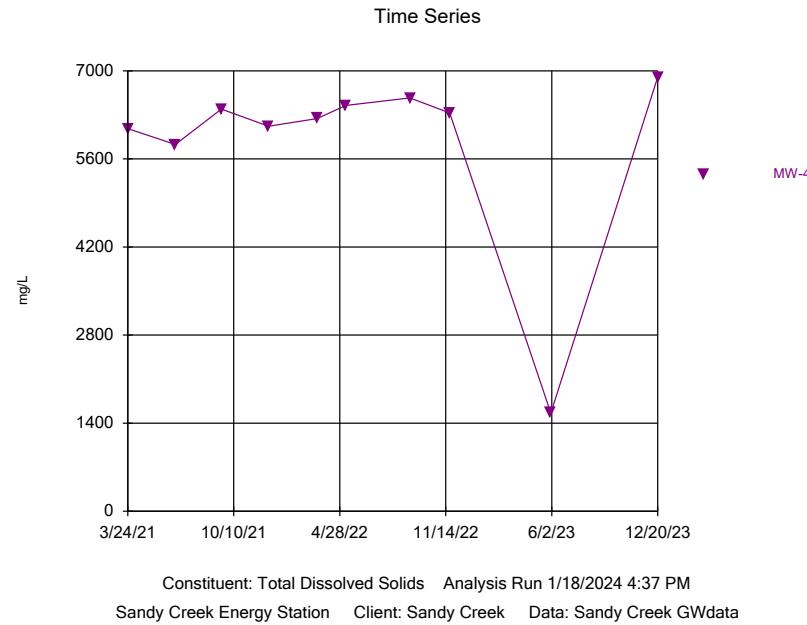


MW-5

Constituent: Sulfate Analysis Run 1/18/2024 4:37 PM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata





Appendix E

Alternate Source Demonstration for Calcium in MW-1

January 24, 2024
SCS Project 16223032.00

Mr. Luke Johnson
Compliance Manager
NAES Corporation
2161 Rattlesnake Road
Riesel, Texas 76682

Subject: Alternate Source Demonstration for Calcium in MW-1
2023 Annual Groundwater Monitoring Report
Sandy Creek Energy Station
Coal Combustion Residual Waste Management Facility
TCEQ Registration No. CCR107
McLennan County, Texas

Dear Mr. Johnson:

On behalf of the Sandy Creek Energy Station (SCES), SCS Engineers (SCS) is submitting this Alternate Source Demonstration (ASD) in accordance with the site Groundwater Sampling and Analysis Plan (GWSAP) prepared by SCS Engineers, dated January 13, 2023, and Coal Combustion Residual Rule Title 40 Code of Federal Regulations (CFR) §257.94(e)(2) for a calcium detection in groundwater monitoring well MW-1. During the December 2023 groundwater monitoring event, calcium was detected in MW-1 at 660 mg/L, above the statistical limit of 603.5 mg/L. This ASD was conducted to investigate the likely source of the calcium detection. In accordance with 40 CFR §257.94(e)(2) and 30 TAC §352.941, this ASD is being submitted within 90 days of detecting an unconfirmed statistically significant increase (SSI) above background values.

December 2023 Calcium Detection and Statistical Analysis

Calcium was detected in MW-1 at a concentration of 660 mg/L, which is above its statistical limit of 603.5 mg/L during the December 2023 annual groundwater monitoring event. Since the December 2023 laboratory result for calcium in MW-1 exceeded its respective introwell limit, additional statistical evaluation was performed in accordance with 40 CFR §257.94(e)(2).

The December reported concentration for calcium in MW-1 is less than that of upgradient well BW-1. SCS used this as a basis for an alternate source demonstration (ASD) by comparing data from upgradient well BW-1 to the downgradient well MW-1. This analysis consisted of calculating an interwell parametric prediction limit. As a result of this interwell analysis comparing upgradient to downgradient data, the statistical limit for calcium in MW-1 was raised to the value reported in Table 1. When performing an interwell analysis test, if the detection result falls below the interwell statistical limit, it can be inferred that the detection likely resulted from natural variations in groundwater quality at the site. It is SCS's opinion that the constituent, calcium, appears to be coming from an upgradient source and not from the landfill, resulting in a natural variation in groundwater quality and is representative of background data.



Table 1 – December 2023 Unconfirmed SSIs (mg/L)

MW- ID	Constituent	Lab Result	Intrawell Limit	Interwell Limit
MW-1	Calcium	660	603.5	672

Conclusion

As a result of this analysis comparing upgradient to downgradient data, the interwell statistical limit is higher than the December 2023 laboratory result for calcium in MW-1. Attached are the interwell statistical graph and data, demonstrating the comparison between the upgradient and downgradient wells. Since the detection of calcium falls below the interwell statistical limit, this is evidence that the detection is from an upgradient source and not from the landfill, resulting in a natural variation in groundwater quality and is representative of background data within the boundary of the facility. SCS proposes that no further action is necessary.

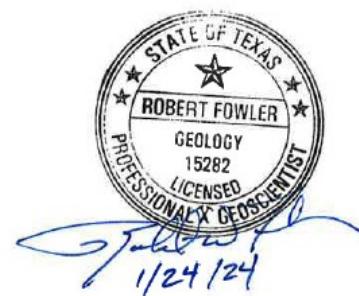
Closing

SCS recommends that the groundwater monitoring wells for the landfill (BW-1, MW-1, MW-2, MW-3, MW-4, MW-5) remain in detection monitoring, in accordance with 40 CFR §257.94, as this ASD satisfies the 90-day demonstration period requirement outlined in 40 CFR §257.94(e)(2). Please contact Robert Fowler at (501) 503-4779 if you have comments or require additional information.

Sincerely,



Asher Boudreaux, P.G.
Project Professional
SCS ENGINEERS
TBPE Registration No. F-3407



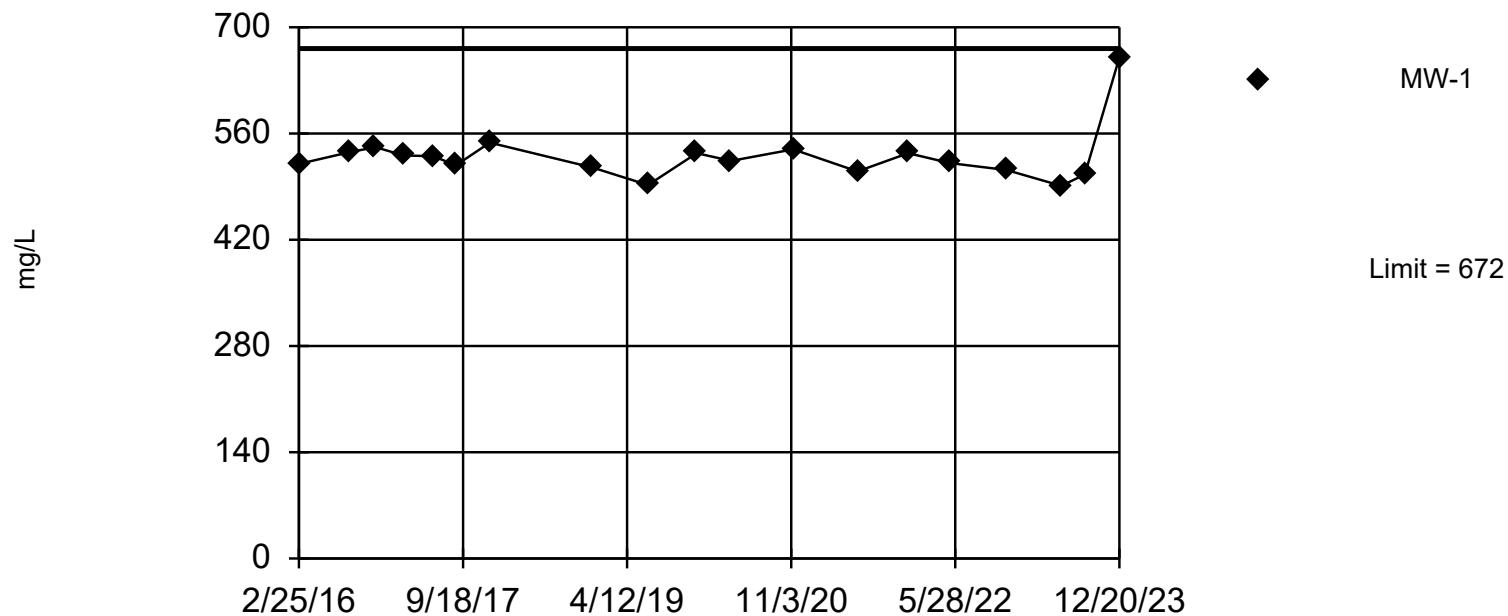
Robert Fowler, P.G.
Project Manager
SCS ENGINEERS

Attachments: Interwell Statistical Graph and Data

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=587, Std. Dev.=48.14, n=21. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9259, critical = 0.908. Report alpha = 0.05. Most recent point compared to limit.

Constituent: Calcium Analysis Run 1/18/2024 4:43 PM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/18/2024 4:44 PM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata

	MW-1	BW-1 (bg)
2/25/2016	520	586
5/11/2016		566
8/16/2016	535	566
11/17/2016	542	548
2/23/2017	531	532
6/7/2017	530	539
8/24/2017	518	531
12/20/2017	548	658
6/21/2018		610
12/13/2018	515	637
6/24/2019	492	564
12/10/2019	534	591
4/8/2020	524	545
11/10/2020	539	612
6/22/2021	510	607
12/15/2021	534	616
5/10/2022	521	623
11/22/2022	512	619
6/1/2023	491	528
8/22/2023	506	539
12/20/2023	660	710