

June 2018 Semiannual Groundwater Monitoring Report

Sandy Creek Energy Station McLennan County, Texas

Prepared For:

Sandy Creek Energy Station
2161 Rattlesnake Road
Riesel, Texas 76682

SCS ENGINEERS

SCS Project 16215106.00 | August 20, 2018

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Bedford, TX 76021
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Table of Contents

Section	Page
1.0 Introduction and Background.....	1
2.0 Groundwater Monitoring Summary.....	2
2.1 Groundwater Monitoring System.....	2
2.2 June 2018 Semiannual Monitoring Event.....	2
2.3 Results and Statistical Analysis.....	2
3.0 Recommendations	4

Figures

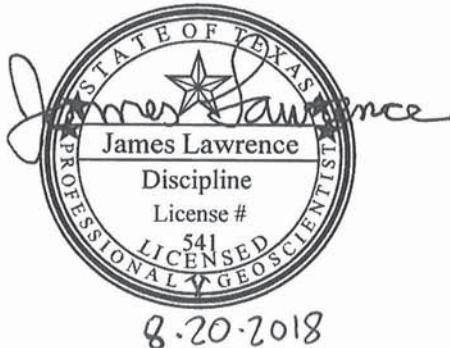
Figure 1. Monitoring Well Location Map	5
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Tables

Table 1. Sandy Creek Energy Station Groundwater Monitoring System.....	2
Table 2. Sandy Creek Energy Station June 2018 Sampling Results and Statistical Limits	3

Appendices

- Appendix A: June 2018 Groundwater Monitoring Field Forms
- Appendix B: June 2018 Laboratory Report with Chain of Custody
- Appendix C: Historical Analytical Data
- Appendix D: Time Series Graphs



1.0 INTRODUCTION AND BACKGROUND

SCS Engineers (SCS) is herein submitting this June 2018 Semiannual Groundwater Monitoring Report for the Sandy Creek Energy Station (SCES). This report is submitted in accordance with Coal Combustion Residual Rule (CCR) 40 CFR §257.105(h)(6) and the site Groundwater Sampling and Analysis Plan (GWSAP) prepared by SCS, dated March 2, 2016. This report includes results for the June 2018 semiannual detection monitoring event at SCES, conducted on June 21, 2018.

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 two CCR disposal cells, Cells 1 and 2, which commenced receiving waste in early 2013 and October 2014, respectively. The approximate area of Cells 1 and 2 are 10.0 and 14.3 acres, respectively.

Sampling of groundwater monitoring wells is conducted in accordance with 40 CFR §257.93 and the GWSAP. Background monitoring of four wells (MW-1, MW-2, MW-3, and BW-1; as depicted on Figure 1) was performed for eight consecutive quarters in accordance with 40 CFR §257.94(b) (i.e., eight independent samples were collected for each well). The background monitoring described above commenced in December 2015 and was completed in August 2017. The constituents monitored during the first eight quarters and the first semiannual detection monitoring event included 18 inorganic compounds, total dissolved solids, radium-226, and radium-228, while the constituents monitored during the June 2018 semiannual detection monitoring event included Appendix III constituents only, in accordance with 40 CFR §257.

2.0 GROUNDWATER MONITORING SUMMARY

2.1 GROUNDWATER MONITORING SYSTEM

The current groundwater monitoring system at the SCES landfill consists of four wells (see Table 1 below). One (BW-1) is upgradient and three (MW-1, -2, & -3) are downgradient. All four wells are currently in detection monitoring. Figure 1 shows monitoring well locations at SCES.

Table 1. Sandy Creek Energy Station Groundwater Monitoring System						
Well Name (U/D) ¹	Completion Date	Status	Top of Casing Elevation (ft msl) ²	Well Depth (ft bgs) ²	Screen Interval (ft bgs) ²	Water Level Elevation (ft msl on 06/21/2018)
MW-1 (D)	9/21/2015	Detection	465.87	34.23	23.90 - 33.90	453.85
MW-2 (D)	9/23/2015	Detection	442.15	19.63	9.30 - 19.30	430.02
MW-3 (D)	9/1/2010	Detection	430.06	16.23	5.98 - 15.98	418.68
BW-1 (U)	9/22/2015	Detection	485.57	38.63	28.30 - 38.30	466.13

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; ft msl = feet above mean sea level; ft bgs = feet below ground surface

2.2 JUNE 2018 SEMIANNUAL MONITORING EVENT

All four wells (MW-1, MW-2, MW-3, and BW-1) were purged and sampled on June 21, 2018 using the conventional purge and sampling method with disposable PVC bailers. This sampling event marks the second semiannual detection monitoring event following the collection of eight independent quarterly samples, in accordance with 40 CFR §257.94(b). Quality Assurance/Quality Control (QA/QC) samples obtained included one duplicate (DUP1) collected at BW-1. Field forms and laboratory results for this event are provided in Appendices A & B, respectively.

2.3 RESULTS AND STATISTICAL ANALYSIS

A summary of June 2018 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 accordance with 40 CFR §257.93(f-g) and the GWSAP using the software program Sanitas ®. Statistical limits were determined in the 2017 Annual Groundwater Monitoring and Corrective Action report, and were presented using Shewhart-CUSUM control charts, non-parametric prediction limits, or parametric prediction limits as deemed appropriate by background data distributions. EPA primary drinking water MCLs are also presented in Table 2 for comparison to current data.

Table 2. Sandy Creek Energy Station June 2018 Sampling Results and Statistical Limits

MW-ID	Constituent	Lab Result	MCL	Statistical Limit
MW-1	Boron (mg/L)	1.25	n/a	2.6
	Calcium (mg/L)	587	n/a	1030
	Chloride (mg/L)	247	n/a	402
	pH at 25 °C	7.38	n/a	6.136 - 8.289
	Sulfate (mg/L)	2530	n/a	3402
	TDS (mg/L)	4270	n/a	6765
	Fluoride (mg/L)	0.3 J	4	0.4
MW-2	Boron (mg/L)	1.9	n/a	2.4
	Calcium (mg/L)	706	n/a	874.4
	Chloride (mg/L)	2840	n/a	3336
	pH at 25 °C	7.09	n/a	6.7 - 7.5
	Sulfate (mg/L)	3400	n/a	4635
	TDS (mg/L)	10200	n/a	23969
	Fluoride (mg/L)	<0.6	4	2.831
MW-3	Boron (mg/L)	1.13	n/a	1.2
	Calcium (mg/L)	526	n/a	688.1
	Chloride (mg/L)	396	n/a	606.9
	pH at 25 °C	6.76	n/a	5.71 - 8.09
	Sulfate (mg/L)	3160	n/a	4447
	TDS (mg/L)	6090	n/a	9375
	Fluoride (mg/L)	<0.3	4	2.201
BW-1	Boron (mg/L)	3.31	n/a	6.787
	Calcium (mg/L)	610	n/a	723.7
	Chloride (mg/L)	1200	n/a	1540
	pH at 25 °C	7.22	n/a	6.8 - 9.5
	Sulfate (mg/L)	3030	n/a	3884
	TDS (mg/L)	6640	n/a	10119
	Fluoride (mg/L)	<0.3	4	2.356

Bolded value indicates that constituent exceeded introwell statistical limit

"J" Indicates value is above method detection limit (MDL) but below laboratory reporting limit

No constituents were detected in any wells or Quality Assurance/Quality Control (QA/QC) samples at concentrations exceeding federally-promulgated maximum concentration limits (MCLs) during this event. No constituent exceeded its statistical limit during this event.

3.0 RECOMMENDATIONS

No statistically significant increases (SSIs) were indicated for any Appendix III constituents during the June 2018 detection monitoring event at the SCES. SCS recommends that the facility remain in semiannual detection monitoring, in accordance with 40 CFR §257.94.

Due to the lack of confirmed SSIs for Appendix III constituents during the June 2018 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 December 2018.

Figure 1. Monitoring Well Location Map

Appendix A

June 2018 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.: MW-1
3. Date of sampling: 6/21/2018

Name of sampler: Doug Steen
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: 12/20/2017
Date of water level measurements: 6/21/2018
Datum reference point: Top of Casing
Datum elevation*: 465.87
Depth to water(below datum)*: 12.02
4. Water level elevation*: 453.85

5. Purging/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: 2.1
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? 1.5
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:

14. pH 7.05
15. Spec. cond. 4,670
17. Temp. 26.38
19. Turbidity 681

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

Laboratory:

21. Name ALS
Address: 9143 Phillips Highway, Jacksonville, FL 32256

Phone: (904) 739-2277

* 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: 6/21/2018

Name of sampler: Doug Steen
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: 12/20/2017
Date of water level measurements: 6/21/2018
Datum reference point: Top of Casing
Datum elevation*: 442.15
Depth to water(below datum)*: 12.13
4. Water level elevation*: 430.02

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: 2.7
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? 1.5
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:

14. pH 6.80
15. Spec. cond. 12,660
17. Temp. 25.17
19. Turbidity 4.42

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

Laboratory:

21. Name ALS
Address: 9143 Phillips Highway, Jacksonville, FL 32256

Phone: (904) 739-2277

* 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-3
3. Date of sampling: 6/21/2018

Name of sampler: Doug Steen
Affiliation of sampler: SCS Engineers
If split sampled, with whom? N/A
Integrity of well: GOOD
Installation date: 9/1/2010

Most recent previous sampling: 12/20/2017
Date of water level measurements: 6/21/2018
Datum reference point: Top of Casing
Datum elevation*: 430.06
Depth to water(below datum)*: 11.38
4. Water level elevation*: 418.68

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: 2.9
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? 1.5
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:

14. pH 6.46
15. Spec. cond. 6,633
17. Temp. 23.59
19. Turbidity 51.1

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

Laboratory:

21. Name ALS
Address: 9143 Phillips Highway, Jacksonville, FL 32256

Phone: (904) 739-2277

* 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.: BW-1
3. Date of sampling: 6/21/2018

Name of sampler: Doug Steen
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: 12/20/2017
Date of water level measurements: 6/21/2018
Datum reference point: Top of Casing
Datum elevation*: 485.57
Depth to water(below datum)*: 19.44
4. Water level elevation*: 466.13

5. Purging/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: 3.1
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? 1.5
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:

14. pH 6.75
15. Spec. cond. 7,755
17. Temp. 24.79
19. Turbidity 39.3

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

Laboratory:

21. Name ALS
Address: 9143 Phillips Highway, Jacksonville, FL 32256

Phone: (904) 739-2277

* 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: 6/21/2018

Name of sampler: Doug Steen
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. Purging/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: Detection
- 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 N/A
15. Spec. cond. N/A
17. Temp. N/A
19. Turbidity N/A

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

Laboratory:

21. Name ALS
Address: 9143 Phillips Highway, Jacksonville, FL 32256

Phone: (904) 739-2277

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

Appendix B

June 2018 Laboratory Report with Chain of Custody



August 20, 2018

Service Request No:J1804531

Mr. Jim Lawrence
SCS Engineers
1901 Central Drive
Suite 550
Bedford, TX 76021

Laboratory Results for: Sandy Creek Groundwater

Dear Mr. Lawrence,

Enclosed are the results of the sample(s) submitted to our laboratory June 22, 2018
For your reference, these analyses have been assigned our service request number **J1804531**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4410. You may also contact me via email at Jerry.Allen@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Jerry Allen".

Jerry Allen
Project Manager



Narrative Documents

ALS Environmental—Jacksonville Laboratory
9143 Philips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 Fax (904) 739-2011
www.alsglobal.com



Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water

Service Request: J1804531
Date Received: 6/22/18

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

5 water samples were received for analysis at ALS Environmental on 6/22/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at $\leq 6^{\circ}\text{C}$ upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Metals Analyses:

No significant data anomalies were noted with this analysis.

General Chemistry Analyses:

Method 300.0/9056: The reporting limit is elevated for analyte(s) analyzed by IC in J1804531. These sample(s) had high conductivity which precludes their analysis without prior dilution via this technique.

Revision Notes:

This analytical report is a revision of the original report generated on 06/29/2018. The following specific changes were made to the report: samples reported to MDL.

Approved by

A handwritten signature in black ink, appearing to read "S. E. Schaeffer".

Date 8/20/2018



SAMPLE DETECTION SUMMARY

CLIENT ID: BW-1		Lab ID: J1804531-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	6640		100	100	mg/L	SM 2540 C
Chloride	1200		3	20	mg/L	9056
pH	7.22				pH Units	9040C
Sulfate	3030		2	20	mg/L	9056
Boron, Total	3.31		0.025	0.050	mg/L	6010D
Calcium, Total	610		0.08	0.20	mg/L	6010D

CLIENT ID: MW-1		Lab ID: J1804531-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	4270		40	40	mg/L	SM 2540 C
Chloride	247		2	10	mg/L	9056
Fluoride	0.3	J	0.2	1.0	mg/L	9056
pH	7.38				pH Units	9040C
Sulfate	2530		0.9	10	mg/L	9056
Boron, Total	1.25		0.025	0.050	mg/L	6010D
Calcium, Total	587		0.08	0.20	mg/L	6010D

CLIENT ID: MW-2		Lab ID: J1804531-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	10200		200	200	mg/L	SM 2540 C
Chloride	2840		6	50	mg/L	9056
pH	7.09				pH Units	9040C
Sulfate	3400		5	50	mg/L	9056
Boron, Total	1.90		0.025	0.050	mg/L	6010D
Calcium, Total	706		0.08	0.20	mg/L	6010D

CLIENT ID: MW-3		Lab ID: J1804531-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	6090		100	100	mg/L	SM 2540 C
Chloride	396		3	20	mg/L	9056
pH	6.76				pH Units	9040C
Sulfate	3160		2	20	mg/L	9056
Boron, Total	1.13		0.025	0.050	mg/L	6010D
Calcium, Total	526		0.08	0.20	mg/L	6010D

CLIENT ID: DUP		Lab ID: J1804531-005				
Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved	6690		100	100	mg/L	SM 2540 C
Chloride	1210		3	20	mg/L	9056
pH	7.30				pH Units	9040C
Sulfate	3040		2	20	mg/L	9056
Boron, Total	3.30		0.025	0.050	mg/L	6010D
Calcium, Total	609		0.08	0.20	mg/L	6010D



Sample Receipt Information

ALS Environmental—Jacksonville Laboratory
9143 Philips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 Fax (904) 739-2011
www.alsglobal.com

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131

Service Request:J1804531

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J1804531-001	BW-1	6/21/2018	1140
J1804531-002	MW-1	6/21/2018	1205
J1804531-003	MW-2	6/21/2018	1220
J1804531-004	MW-3	6/21/2018	1245
J1804531-005	DUP	6/21/2018	0000



Cooler Receipt Form

Client: SCS ENGINEERS

Service Request #:

JJ 804531

Project: SANDY CREEK GROUNDWATER

Shipping paid by ALS?

Cooler received on 10.22.18 and opened on 10.22.18

by KB

Yes

No

NA

COURIER: ALS UPS FEDEX DHL Client Other

Airbill # 8106 4509 4980

- | | | | |
|----|--|--------------------------------------|-------------------------|
| 1 | Were custody seals on outside of cooler? | <input checked="" type="radio"/> Yes | No |
| | If yes, how many and where? | #: 1 | on lid other |
| 2 | Were seals intact and signature and date correct? | <input checked="" type="radio"/> Yes | No N/A |
| 3 | Were custody papers properly filled out? | Yes | No N/A |
| 4 | Temperature of cooler(s) upon receipt (Should be 0°C and \leq 6°C) | 0.6 | °C |
| 5 | Thermometer ID | T136 | |
| 6 | Temperature Blank Present? | <input checked="" type="radio"/> Yes | No |
| 7 | Were Ice or Ice Packs present | <input checked="" type="radio"/> Ice | Ice Packs No |
| 8 | Did all bottles arrive in good condition (unbroken, etc....)? | <input checked="" type="radio"/> Yes | No N/A |
| 9 | Type of packing material present | Netting | Vial Holder Bubble Wrap |
| 10 | Were all bottle labels complete (sample ID, preservation, etc....)? | Paper | Styrofoam Other N/A |
| 11 | Did all bottle labels and tags agree with custody papers? | <input checked="" type="radio"/> Yes | No N/A |
| 12 | Were the correct bottles used for the tests indicated? | <input checked="" type="radio"/> Yes | No N/A |
| 13 | Were all of the preserved bottles received with the appropriate preservative?
KNO ₃ pH<2 H ₂ SO ₄ pH<2 ZnAc ₂ /NaOH pH>9 NaOH pH>12
Preservative additions noted below | <input checked="" type="radio"/> Yes | No N/A |
| 14 | Were all samples received within analysis holding times? | <input checked="" type="radio"/> Yes | No N/A |
| 15 | Were VOA vials free of air bubbles greater than 6mm? If present, note below | Yes | No N/A |
| 16 | Where did the bottles originate? | ALS | Client |

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted:

Date:



Miscellaneous Forms

ALS Environmental—Jacksonville Laboratory
9143 Philips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 Fax (904) 739-2011
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

INORGANIC DATA

- * The result is an outlier. See case narrative.
- # The control limit criteria are not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimated amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected (“Non-detect”) at or above the MRL/MDL.
- Z Too many colonies were present (TNTC). The numeric value represents the filtration volume.
- i The MRL/MDL has been elevated due to matrix interference.
- X See case narrative.

METALS DATA

- * The result is an outlier. See case narrative.
- # The control limit criteria are not applicable. See case narrative.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The reported value is estimated because of the presence of matrix interference.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The result was determined by Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected (“Non-detect”) at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

ORGANIC DATA

- * The result is an outlier. See case narrative.
- # The control limit criteria are not applicable. See case narrative.
- A The tentatively identified compound is a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria were exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides)
- U The compound was analyzed for, but was not detected (“Non-detect”) at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

PETROLEUM HYDROCARBON SPECIFIC

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.



- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.



Jacksonville Lab ID # for State Certifications¹

Agency	Number	Expiration Date
Department of Defense	66206	6/30/2020
Florida Department of Health	E82502	6/30/2019
Georgia Department of Natural Resources	958	6/30/2019
Kentucky Division of Waste Management	123042	6/30/2019
Louisiana Department of Environmental Quality	02086	6/30/2019
Maine Department of Health and Human Services	2017003	2/3/2019
North Carolina Department of Environment and Natural Resources	527	12/31/2018
Pennsylvania Department of Environmental Protection	68-04835	8/31/2018
South Carolina Department of Health and Environmental Control	96021001	6/30/2018
Texas Commission on Environmental Quality	T104704197-18-10	5/31/2019
Virginia Environmental Accreditation Program	460191	12/14/2018

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>



ACRONYMS

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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dba ALS Environmental

Analyst Summary report

Client: SCS Engineers **Service Request:** J1804531
Project: Sandy Creek Groundwater/16215106.00 T131

Sample Name: BW-1 **Date Collected:** 06/21/18
Lab Code: J1804531-001 **Date Received:** 06/22/18
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010D	EGARDNER	EGARDNER
9040C		HHERNANDEZ
9056		HHERNANDEZ
SM 2540 C		ALANE

Sample Name: MW-1 **Date Collected:** 06/21/18
Lab Code: J1804531-002 **Date Received:** 06/22/18
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010D	EGARDNER	EGARDNER
9040C		HHERNANDEZ
9056		HHERNANDEZ
SM 2540 C		ALANE

Sample Name: MW-2 **Date Collected:** 06/21/18
Lab Code: J1804531-003 **Date Received:** 06/22/18
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010D	EGARDNER	EGARDNER
9040C		HHERNANDEZ
9056		HHERNANDEZ
SM 2540 C		ALANE

Sample Name: MW-3 **Date Collected:** 06/21/18
Lab Code: J1804531-004 **Date Received:** 06/22/18
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
6010D	EGARDNER	EGARDNER

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131

Service Request: J1804531

Sample Name: MW-3
Lab Code: J1804531-004
Sample Matrix: Water

Date Collected: 06/21/18
Date Received: 06/22/18

Analysis Method	Extracted/Digested By	Analyzed By
9040C		HHERNANDEZ
9056		HHERNANDEZ
SM 2540 C		ALANE

Sample Name: DUP
Lab Code: J1804531-005
Sample Matrix: Water

Date Collected: 06/21/18
Date Received: 06/22/18

Analysis Method	Extracted/Digested By	Analyzed By
6010D		EGARDNER
9040C		HHERNANDEZ
9056		HHERNANDEZ
SM 2540 C		ALANE



Sample Results

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: BW-1
Lab Code: J1804531-001

Service Request: J1804531
Date Collected: 06/21/18 11:40
Date Received: 06/22/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Boron, Total	6010D	3.31	mg/L	0.050	0.025	1	06/22/18 23:06	06/22/18	
Calcium, Total	6010D	610	mg/L	0.20	0.08	2	06/25/18 18:09	06/22/18	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: MW-1
Lab Code: J1804531-002

Service Request: J1804531
Date Collected: 06/21/18 12:05
Date Received: 06/22/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Boron, Total	6010D	1.25	mg/L	0.050	0.025	1	06/22/18 23:17	06/22/18	
Calcium, Total	6010D	587	mg/L	0.20	0.08	2	06/25/18 18:14	06/22/18	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: MW-2
Lab Code: J1804531-003

Service Request: J1804531
Date Collected: 06/21/18 12:20
Date Received: 06/22/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Boron, Total	6010D	1.90	mg/L	0.050	0.025	1	06/22/18 23:28	06/22/18	
Calcium, Total	6010D	706	mg/L	0.20	0.08	2	06/25/18 18:19	06/22/18	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: MW-3
Lab Code: J1804531-004

Service Request: J1804531
Date Collected: 06/21/18 12:45
Date Received: 06/22/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Boron, Total	6010D	1.13	mg/L	0.050	0.025	1	06/22/18 23:39	06/22/18	
Calcium, Total	6010D	526	mg/L	0.20	0.08	2	06/25/18 18:24	06/22/18	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: DUP
Lab Code: J1804531-005

Service Request: J1804531
Date Collected: 06/21/18 00:00
Date Received: 06/22/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Boron, Total	6010D	3.30	mg/L	0.050	0.025	1	06/23/18 00:05	06/22/18	
Calcium, Total	6010D	609	mg/L	0.20	0.08	2	06/25/18 18:29	06/22/18	



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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: BW-1
Lab Code: J1804531-001

Service Request: J1804531
Date Collected: 06/21/18 11:40
Date Received: 06/22/18 09:15

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Chloride	9056	1200	mg/L	20	3	20	06/22/18 13:38	
Fluoride	9056	0.3 U	mg/L	2.0	0.3	20	06/22/18 13:38	
pH	9040C	7.22	pH Units	-	-	1	06/22/18 15:10	H
Solids, Total Dissolved	SM 2540 C	6640	mg/L	100	100	10	06/25/18 17:18	
Sulfate	9056	3030	mg/L	20	2	20	06/22/18 13:38	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: MW-1
Lab Code: J1804531-002

Service Request: J1804531
Date Collected: 06/21/18 12:05
Date Received: 06/22/18 09:15

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Chloride	9056	247	mg/L	10	2	10	06/22/18 14:44	
Fluoride	9056	0.3 J	mg/L	1.0	0.2	10	06/22/18 14:44	
pH	9040C	7.38	pH Units	-	-	1	06/22/18 15:12	H
Solids, Total Dissolved	SM 2540 C	4270	mg/L	40	40	4	06/25/18 17:18	
Sulfate	9056	2530	mg/L	10	0.9	10	06/22/18 14:44	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: MW-2
Lab Code: J1804531-003

Service Request: J1804531
Date Collected: 06/21/18 12:20
Date Received: 06/22/18 09:15

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Chloride	9056	2840	mg/L	50	6	50	06/22/18 15:06	
Fluoride	9056	0.6 U	mg/L	5.0	0.6	50	06/22/18 15:06	
pH	9040C	7.09	pH Units	-	-	1	06/22/18 15:14	H
Solids, Total Dissolved	SM 2540 C	10200	mg/L	200	200	20	06/25/18 17:18	
Sulfate	9056	3400	mg/L	50	5	50	06/22/18 15:06	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: MW-3
Lab Code: J1804531-004

Service Request: J1804531
Date Collected: 06/21/18 12:45
Date Received: 06/22/18 09:15

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Chloride	9056	396	mg/L	20	3	20	06/22/18 15:28	
Fluoride	9056	0.3 U	mg/L	2.0	0.3	20	06/22/18 15:28	
pH	9040C	6.76	pH Units	-	-	1	06/22/18 15:15	H
Solids, Total Dissolved	SM 2540 C	6090	mg/L	100	100	10	06/25/18 17:18	
Sulfate	9056	3160	mg/L	20	2	20	06/22/18 15:28	

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: DUP
Lab Code: J1804531-005

Service Request: J1804531
Date Collected: 06/21/18 00:00
Date Received: 06/22/18 09:15

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Chloride	9056	1210	mg/L	20	3	20	06/22/18 17:39	
Fluoride	9056	0.3 U	mg/L	2.0	0.3	20	06/22/18 17:39	
pH	9040C	7.30	pH Units	-	-	1	06/22/18 15:20	H
Solids, Total Dissolved	SM 2540 C	6690	mg/L	100	100	10	06/25/18 17:18	
Sulfate	9056	3040	mg/L	20	2	20	06/22/18 17:39	



QC Summary Forms

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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J1804531-MB

Service Request: J1804531
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Boron, Total	6010D	0.025 U	mg/L	0.050	0.025	1	06/22/18 20:41	06/22/18	
Calcium, Total	6010D	0.04 U	mg/L	0.10	0.04	1	06/22/18 20:40	06/22/18	

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QA/QC Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water

Service Request: J1804531
Date Analyzed: 06/22/18
Date Extracted: 06/22/18

Lab Control Sample Summary
Inorganic Parameters

Analysis Method: 6010D **Units:** mg/L
Prep Method: EPA 3005A **Basis:** NA
 Analysis Lot: 595951

Lab Control Sample
J1804531-LCS

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Boron, Total	2.53	2.50	101	80-120
Calcium, Total	5.15	5.00	103	80-120



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Analytical Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J1804531-MB

Service Request: J1804531
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Chloride	9056	0.2 U	mg/L	1.0	0.2	1	06/22/18 12:11	
Fluoride	9056	0.02 U	mg/L	0.10	0.02	1	06/22/18 12:11	
Solids, Total Dissolved	SM 2540 C	10 U	mg/L	10	10	1	06/25/18 17:18	
Sulfate	9056	0.09 U	mg/L	1.0	0.09	1	06/22/18 12:11	

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QA/QC Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water

Service Request:J1804531
Date Collected:06/21/18
Date Received:06/22/18
Date Analyzed:6/22/18

Matrix Spike Summary
General Chemistry Parameters

Sample Name: BW-1 **Units:**mg/L
Lab Code: J1804531-001 **Basis:**NA

Matrix Spike
J1804531-001MS

Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chloride	9056	1200	2170	1000	97	90-110
Fluoride	9056	0.3 U	105	100	105	90-110
Sulfate	9056	3030	3890	1000	86 *	90-110

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Superset Reference:18-0000470471 rev 00

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QA/QC Report

Client: SCS Engineers
Project Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water

Service Request: J1804531
Date Collected: 06/21/18
Date Received: 06/22/18
Date Analyzed: 06/22/18 - 06/25/18

Replicate Sample Summary
General Chemistry Parameters

Sample Name: BW-1 **Units:** mg/L
Lab Code: J1804531-001 **Basis:** NA

Analyte Name	Analysis Method	PQL	MDL	Sample Result	Duplicate Sample J1804531-001DUP Result			
					Average	RPD	RPD Limit	
Chloride	9056	20	3	1200	1200	1200	<1	20
Fluoride	9056	2.0	0.3	0.3 U	0.3 U	NC	NC	20
Solids, Total Dissolved	SM 2540 C	100	100	6640	6700	6670	<1	10
Sulfate	9056	20	2	3030	3000	3020	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: SCS Engineers
Project: Sandy Creek Groundwater/16215106.00 T131
Sample Matrix: Water

Service Request: J1804531
Date Analyzed: 06/22/18 - 06/25/18

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
J1804531-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	9056	50.7	50.0	101	90-110
Fluoride	9056	5.24	5.00	105	90-110
Solids, Total Dissolved	SM 2540 C	275	300	92	85-115
Sulfate	9056	51.4	50.0	103	90-110

Appendix C

Historical Groundwater Analytical Data

APPENDIX C - GROUNDWATER ANALYTICAL DATA
JUNE 2018 SEMIANNUAL GROUNDWATER MONITORING REPORT
SANDY CREEK ENERGY STATION
2161 RATTLESNAKE ROAD
DURBAN, TEXAS 77432

Nitrates in soil											
Combined Radium											
Radium-226											
Units	mg/m³	Std. Units	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³
Sulfate	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	mg/m³
Atmospheric Dissolved Solids	WW-1	1.2	454	253	7.6	2050	4050	0.44	<0.0010	<0.0050	0.43
Atmospheric Dissolved Solids	WW-1	1.2	5.20	236	7.5	2190	4060	0.33	<0.010	<0.0050	0.39
Atmospheric Dissolved Solids	WW-1	1.2	1030	402	7.2	2580	5260	0.12	0.022	0.0059	0.21
Atmospheric Dissolved Solids	WW-1	1.3	535	239	6.8	2300	3880	0.18	<0.010	<0.0050	0.41
Atmospheric Dissolved Solids	WW-1	1.3	216	5.24	7	2130	3720	0.10	<0.010	<0.0050	0.37
Atmospheric Dissolved Solids	WW-1	1.3	531	223	7.5	2350	3980	0.19	<0.010	<0.0050	0.44
Atmospheric Dissolved Solids	WW-1	1.2	5.30	203	7.4	2010	3680	0.19	<0.010	<0.0050	0.36
Atmospheric Dissolved Solids	WW-1	1.2	518	241	7.1	2620	4550	0.10	<0.010	<0.0050	0.395
Atmospheric Dissolved Solids	WW-1	1.3	5.48	248	7.4	2340	4250	0.10	<0.010	<0.0050	0.20
Atmospheric Dissolved Solids	WW-1	1.25	5.87	247	7.38	2530	4270	0.17	<0.010	<0.0050	0.18
Atmospheric Dissolved Solids	WW-1	1.25	6217/2018	7.38	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Mercury	WW-1	1.9	569	1890	6.7	2810	8520	<0.010	<0.0050	0.061	<0.0050
Mercury	WW-1	2.2	697	2080	7.3	2890	8070	0.031	<0.010	<0.0050	0.69
Mercury	WW-1	2.2	613	2340	6.7	3010	9930	0.034	0.038	0.027	0.050
Mercury	WW-1	2.2	680	2440	6.7	3080	7870	0.020	<0.010	<0.0050	0.87
Mercury	WW-1	2.1	701	2140	6.7	2770	9680	0.021	<0.010	<0.0050	0.84
Mercury	WW-1	1.9	646	2320	6.9	3110	9630	0.020	<0.010	<0.0050	0.82
Mercury	WW-1	1.9	640	2420	6.8	2970	14200	0.016	<0.010	<0.0050	0.8
Mercury	WW-1	1.9	664	2520	6.8	3710	9600	0.010	<0.010	<0.0050	0.75
Mercury	WW-1	2.2	716	2590	7.2	3100	9600	0.010	<0.010	<0.0050	0.729
Mercury	WW-1	1.9	706	2840	7.09	3400	10200	n/a	n/a	n/a	0.74
Mercury	WW-1	1.9	6217/2018	7.09	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cadmium	WW-1	0.35	67.6	12.3	7.2	135	536	<0.010	<0.0050	0.21	<0.0050
Cadmium	WW-1	1.2	479	347	7	2430	5400	0.052	<0.010	0.0061	0.052
Cadmium	WW-1	1.1	465	2330	6.5	5440	9010	0.024	<0.010	0.0050	0.059
Cadmium	WW-1	1.2	505	381	7.3	2950	5680	0.018	<0.010	0.0050	0.006
Cadmium	WW-1	1.1	504	322	6.6	2420	5010	0.028	<0.010	0.0050	0.068
Cadmium	WW-1	1.1	389	202	7	1450	2900	<0.20	<0.010	0.0050	0.7
Cadmium	WW-1	1.1	486	327	7.1	2650	4740	<0.010	<0.0050	0.0050	0.62
Cadmium	WW-1	1.1	519	401	6.5	2890	6160	0.034	<0.010	0.0050	0.084
Cadmium	WW-1	1.3	563	380	6.8	2830	5790	<0.010	<0.0050	0.0070	0.086
Cadmium	WW-1	1.3	526	396	6.76	3160	6090	n/a	n/a	n/a	0.92
Cadmium	WW-1	1.8	465	727	9.5	2130	4900	<0.010	<0.0050	0.17	<0.010
Cadmium	WW-1	2.2	6217/2018	7.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lead	WW-1	0.35	67.6	12.3	7.2	135	536	0.055	<0.010	0.015	0.0026
Lead	WW-1	1.2	479	347	7	2430	5400	0.055	<0.010	0.0053	0.0025
Lead	WW-1	1.1	465	2330	6.5	5440	9010	0.024	<0.010	0.011	0.0025
Lead	WW-1	1.2	505	381	7.3	2950	5680	0.018	<0.010	0.0064	0.0023
Lead	WW-1	1.1	504	322	6.6	2420	5010	0.028	<0.010	0.0050	0.020
Lead	WW-1	1.1	389	202	7	1450	2900	<0.20	<0.010	0.0050	0.073
Lead	WW-1	1.1	486	327	7.1	2650	4740	<0.010	<0.0050	0.0050	0.056
Lead	WW-1	1.1	519	401	6.5	2890	6160	0.034	<0.010	0.0050	0.084
Lead	WW-1	1.3	563	380	6.8	2830	5790	<0.010	<0.0050	0.0070	0.086
Lead	WW-1	1.3	526	396	6.76	3160	6090	n/a	n/a	n/a	0.92
Lead	WW-1	1.8	465	727	9.5	2130	4900	0.17	<0.010	0.015	0.0026
Lead	WW-1	2.2	6217/2018	7.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	WW-1	0.35	67.6	12.3	7.2	135	536	0.055	<0.010	0.015	0.0026
Chloride	WW-1	1.2	479	347	7	2430	5400	0.055	<0.010	0.0053	0.0025
Chloride	WW-1	1.1	465	2330	6.5	5440	9010	0.024	<0.010	0.011	0.0023
Chloride	WW-1	1.2	505	381	7.3	2950	5680	0.018	<0.010	0.0064	0.0022
Chloride	WW-1	1.1	504	322	6.6	2420	5010	0.028	<0.010	0.0050	0.020
Chloride	WW-1	1.1	389	202	7	1450	2900	<0.20	<0.010	0.0050	0.073
Chloride	WW-1	1.1	486	327	7.1	2650	4740	<0.010	<0.0050	0.0050	0.056
Chloride	WW-1	1.1	519	401	6.5	2890	6160	0.034	<0.010	0.0050	0.084
Chloride	WW-1	1.3	563	380	6.8	2830	5790	<0.010	<0.0050	0.0070	0.086
Chloride	WW-1	1.3	526	396	6.76	3160	6090	n/a	n/a	n/a	0.92
Chloride	WW-1	1.8	465	727	9.5	2130	4900	0.17	<0.010	0.015	0.0026
Chloride	WW-1	2.2	6217/2018	7.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Selenium	WW-1	0.35	67.6	12.3	7.2	135	536	0.055	<0.010	0.015	0.0026
Selenium	WW-1	1.2	479	347	7	2430	5400	0.055	<0.010	0.0053	0.0025
Selenium	WW-1	1.1	465	2330	6.5	5440	9010	0.024	<0.010	0.011	0.0023
Selenium	WW-1	1.2	505	381	7.3	2950	5680	0.018	<0.010	0.0064	0.0022
Selenium	WW-1	1.1	504	322	6.6	2420	5010	0.028	<0.010	0.0050	0.020
Selenium	WW-1	1.1	389	202	7	1450	2900	<0.20	<0.010	0.0050	0.073
Selenium	WW-1	1.1	486	327	7.1	2650	4740	<0.010	<0.0050	0.0050	0.056
Selenium	WW-1	1.1	519	401	6.5	2890	6160	0.034	<0.010	0.0050	0.084
Selenium	WW-1	1.3	563	380	6.8	2830	5790	<0.010	<0.0050	0.0070	0.086
Selenium	WW-1	1.3	526	396	6.76	3160	6090	n/a	n/a	n/a	0.92
Selenium	WW-1	1.8	465	727	9.5	2130	4900	0.17	<0.010	0.015	0.0026
Selenium	WW-1	2.2	6217/2018	7.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fluoride	WW-1	0.35	67.6	12.3	7.2	135	536	0.055	<0.010	0.015	0.0026
Fluoride	WW-1	1.2	479	347	7	2430	5400	0.055	<0.010	0.0053	0.0025
Fluoride	WW-1	1.1	465	2330	6.5	5440	9010	0.024	<0.010	0.011	0.0023
Fluoride	WW-1	1.2	505	381	7.3	2950	5680	0.018	<0.010	0.0064	0.0022
Fluoride	WW-1	1.1	504	322	6.6	2420	5010	0.028	<0.010	0.0050	0.020
Fluoride	WW-1	1.1	389	202	7	1450	2900	<0.20	<0.010	0.0050	0.073
Fluoride	WW-1	1.1	486	327	7.1	2650	4740	<0.010	<0.0050	0.0050	0.056
Fluoride	WW-1	1.1	519	401	6.5	2890	6160	0.034	<0.010	0.0050	0.084
Fluoride	WW-1	1.3	563	380	6.8	2830	5790	<0.010	<0.0050	0.0070	0.086
Fluoride	WW-1	1.3	526	396	6.76	3160	6090	n/a	n/a	n/a	0.92
Fluoride	WW-1	1.8	465	727	9.5	2130	4900	0.17	<0.010	0.015	0.0026
Fluoride	WW-1	2.2	6217/2018	7.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a

0.015 Exceedance of EPA Primary MCL
MCL - EPA Primary Drinking Water Maximum Contaminant Level

U.S. Code of Federal Regulations, Title 40, Appendix III Constituent

40 CFR 257 Appendix IV Constituent

40 CFR 257 Appendix III & IV Constituent

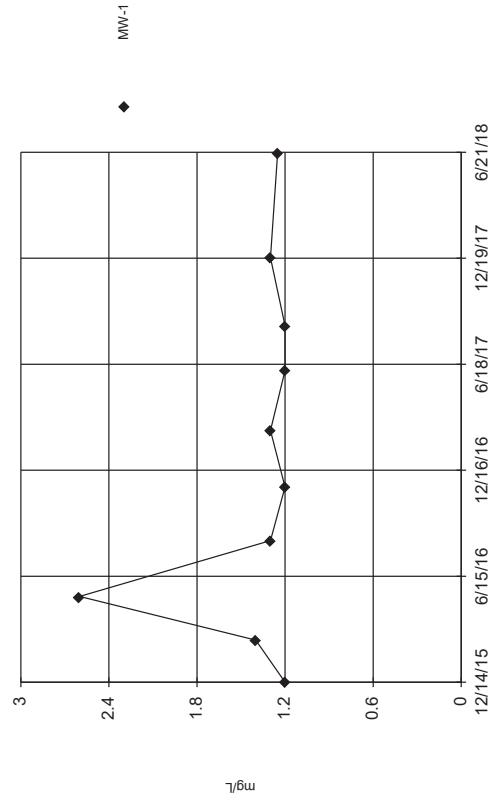
"<" - Indicates analyte was not detected above the laboratory reporting limit

Figure 8 - indicates constituent has no ERA Primary MCL

Appendix D

Time Series Graphs

Time Series

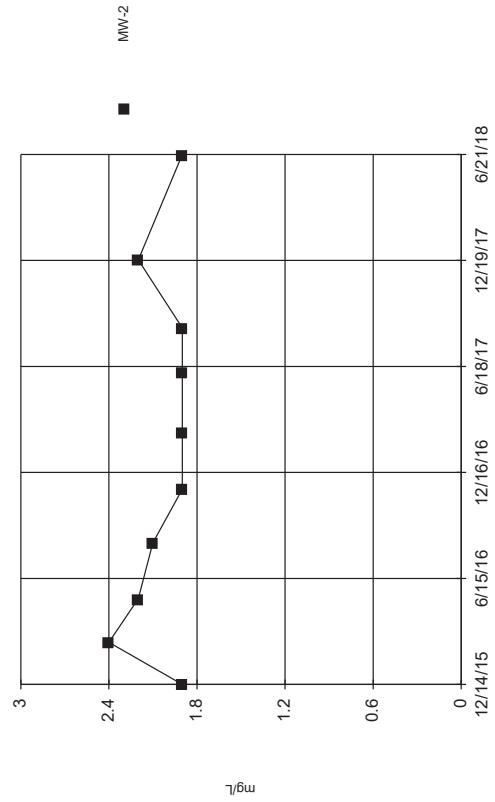


Constituent: Boron Analysis Run 8/16/2018 10:02 AM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata (Santitas)_08.16.2018

Constituent: Boron Analysis Run 8/16/2018 10:02 AM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata (Santitas)_08.16.2018

Time Series

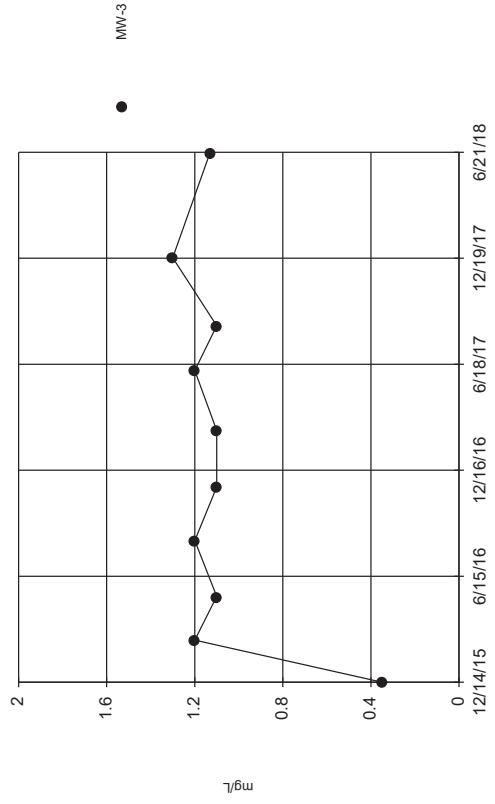


Constituent: Boron Analysis Run 8/16/2018 10:02 AM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata (Santitas)_08.16.2018

Constituent: Boron Analysis Run 8/16/2018 10:02 AM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata (Santitas)_08.16.2018

Time Series

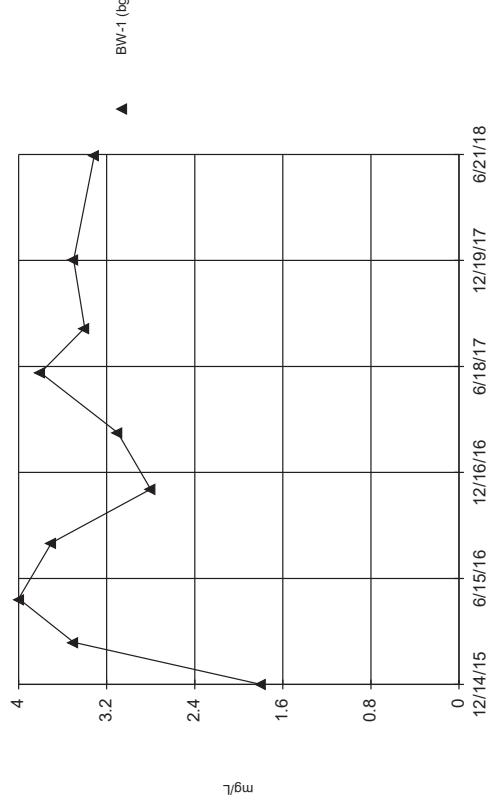


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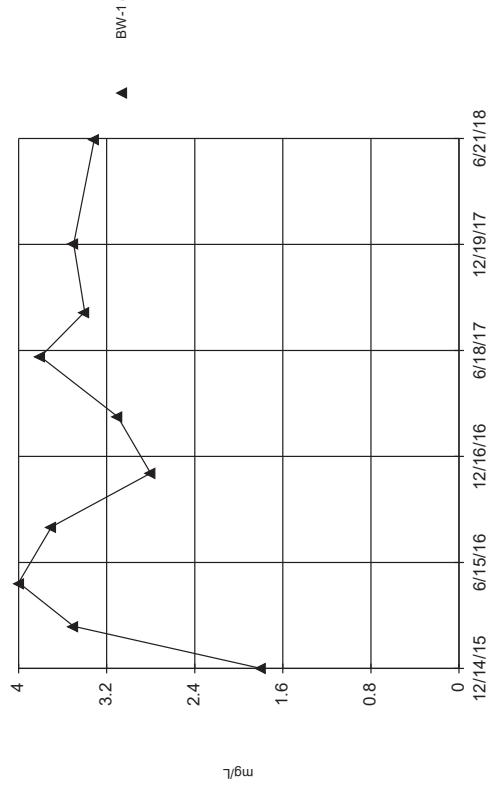
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Constituent: Boron Analysis Run 8/16/2018 10:02 AM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata (Santitas)_08.16.2018

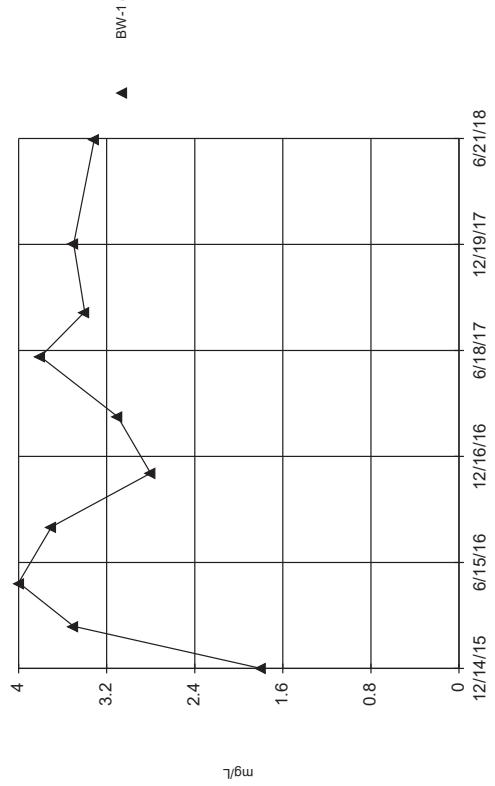
Time Series



Time Series

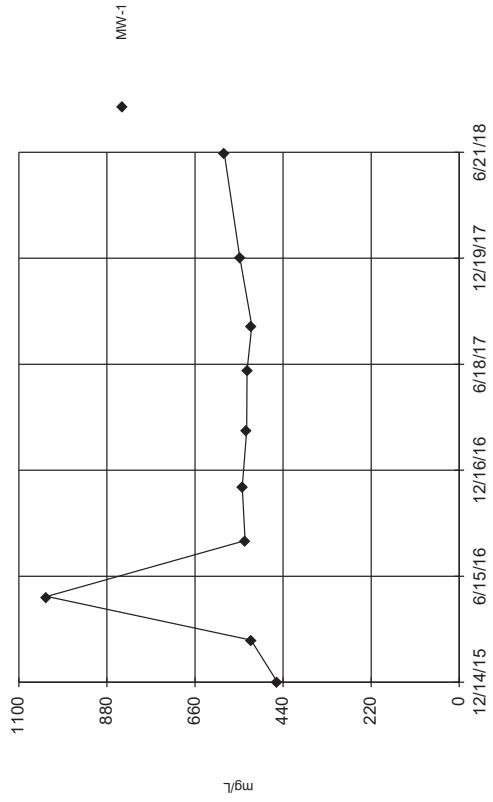


Time Series



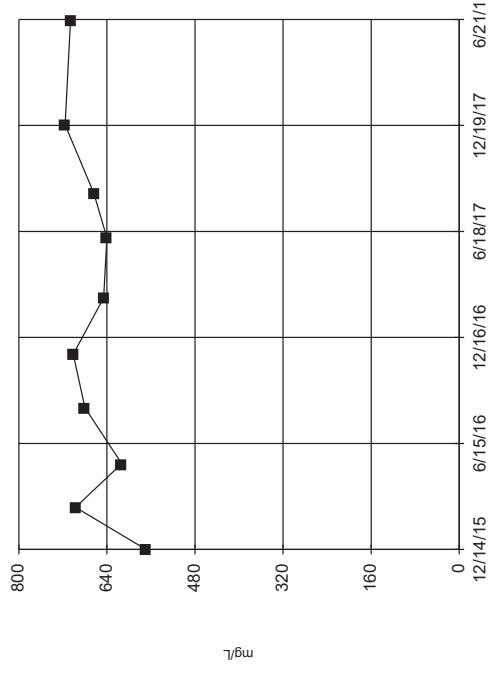
Time Series

Time Series



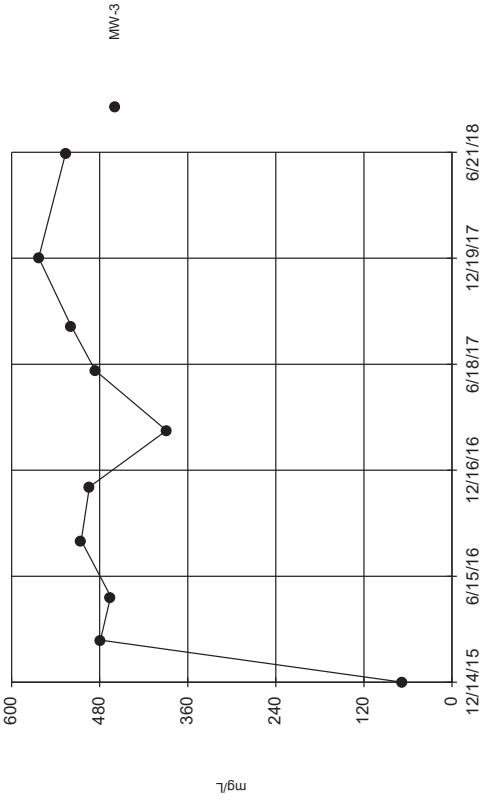
Constituent: Calcium Analysis Run 8/16/2018 10:02 AM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santitas)_08.16.2018

Time Series



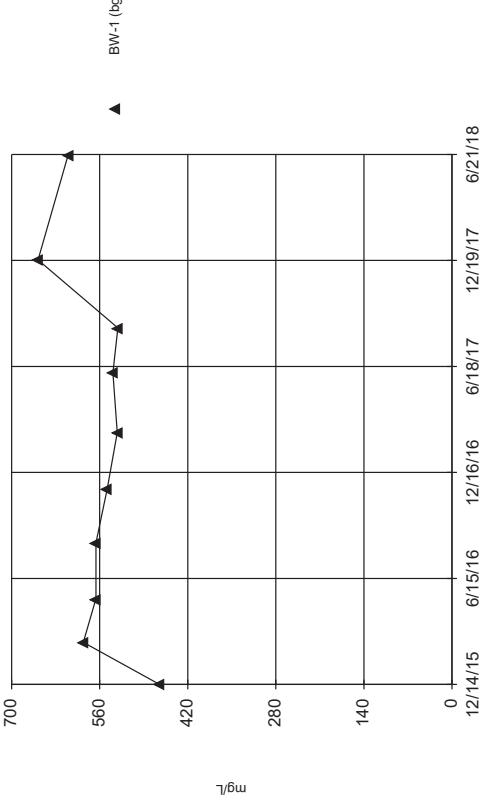
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Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santitas)_08.16.2018

Time Series



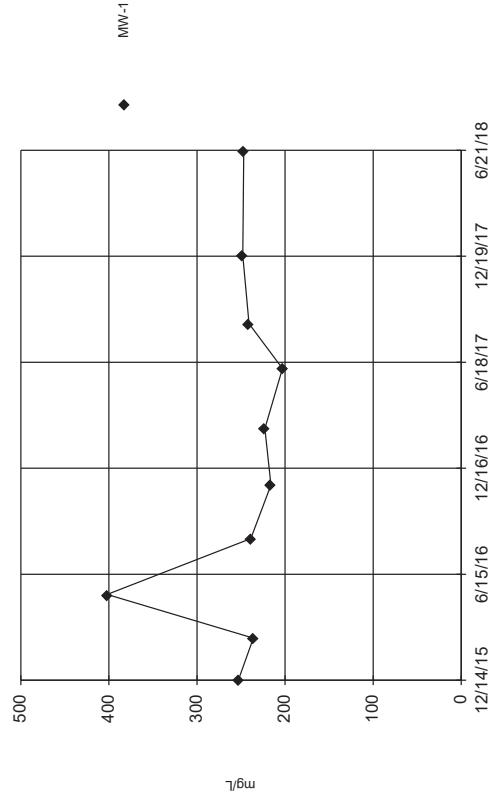
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Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santitas)_08.16.2018

Time Series

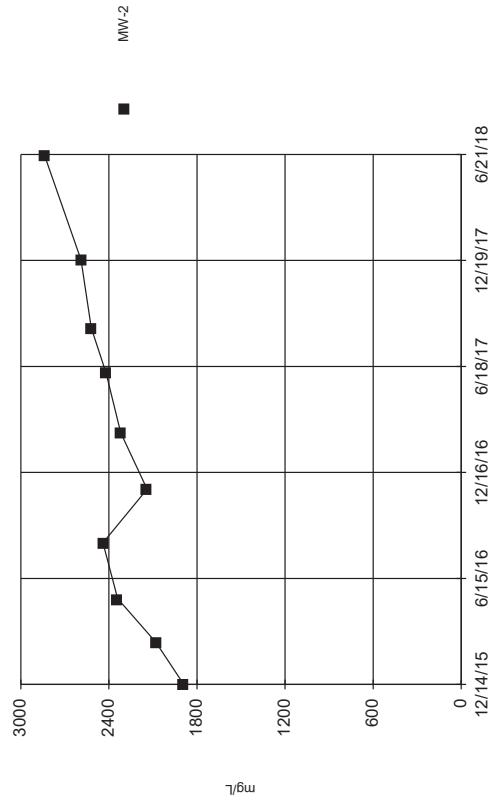


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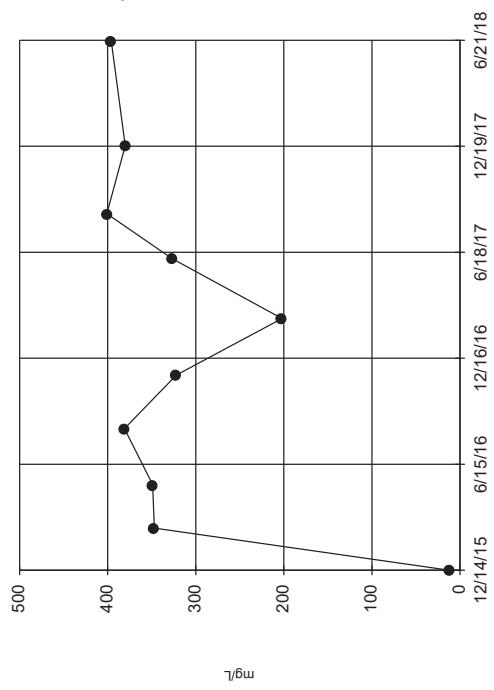
Time Series



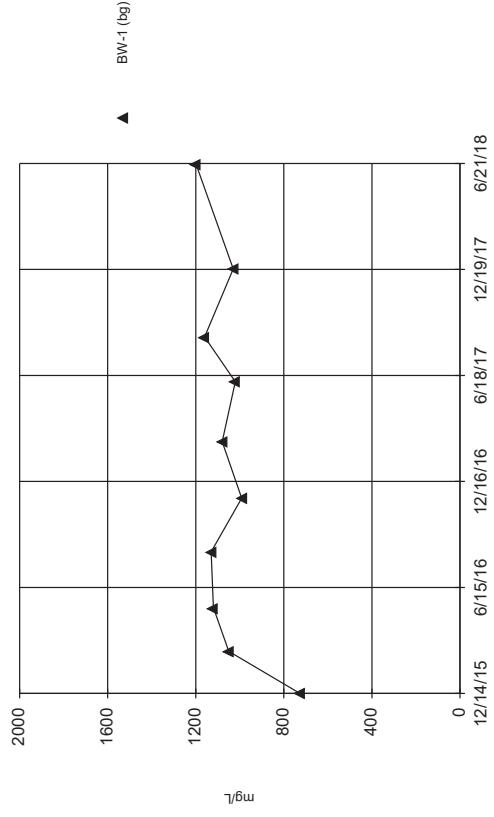
Time Series



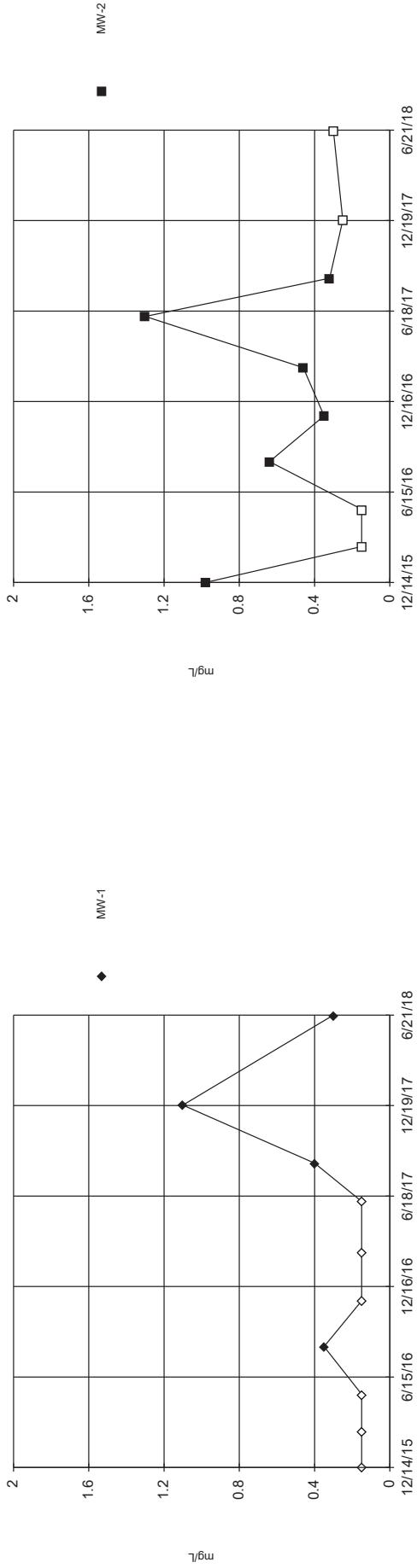
Time Series



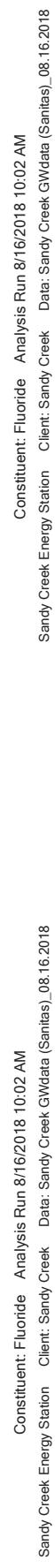
Time Series



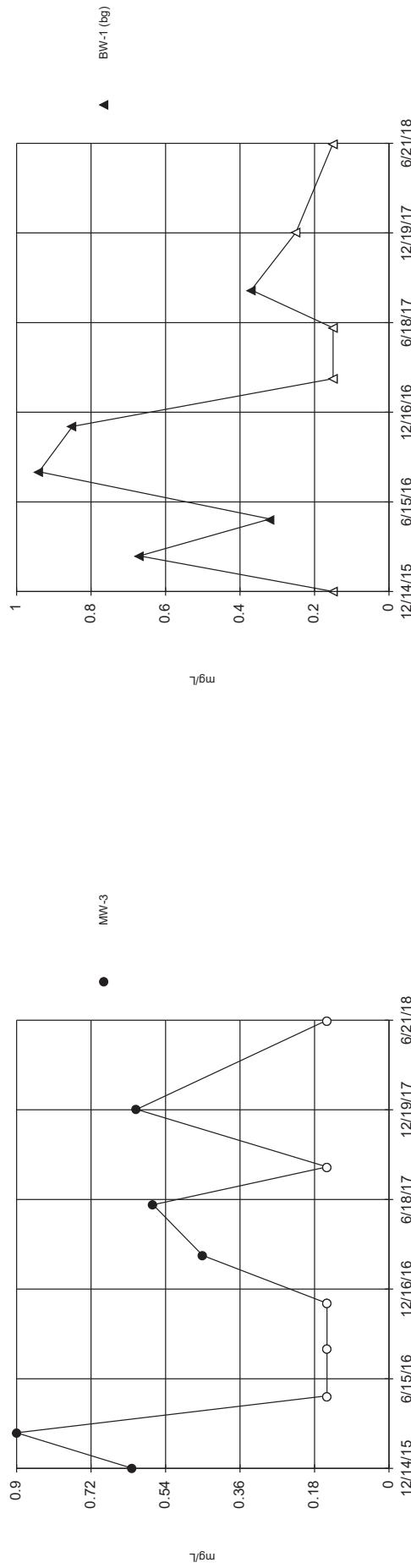
Time Series



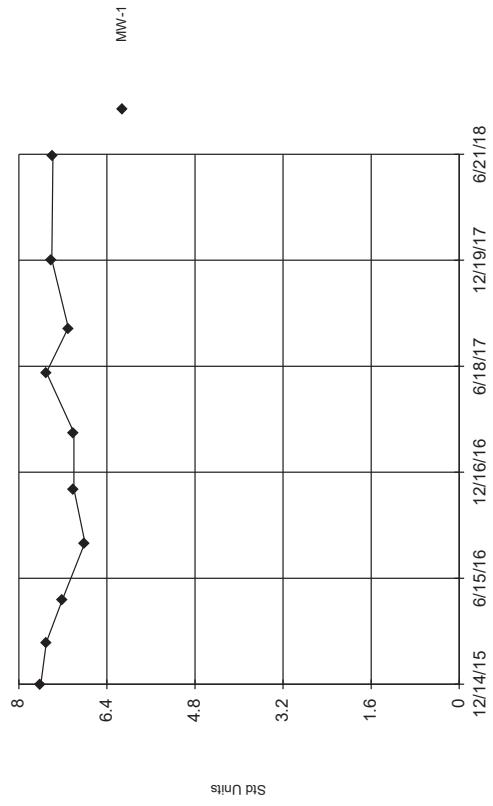
Time Series



Time Series



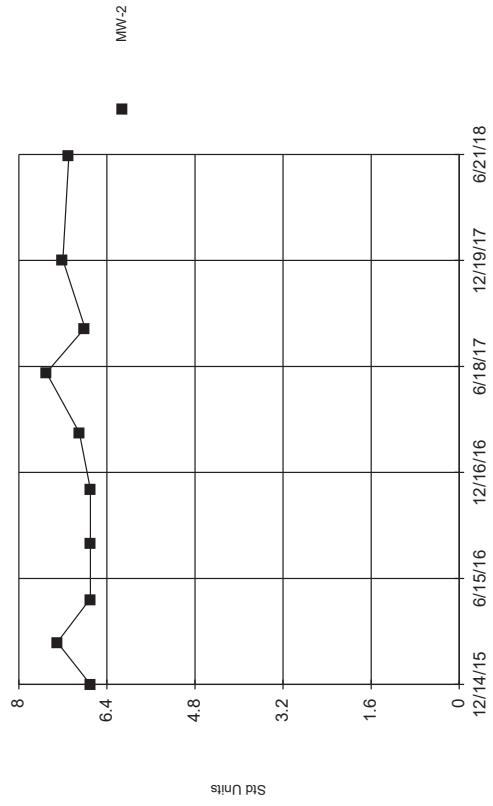
Time Series



Constituent: pH Analysis Run 8/16/2018 10:02 AM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santitas)_08.16.2018

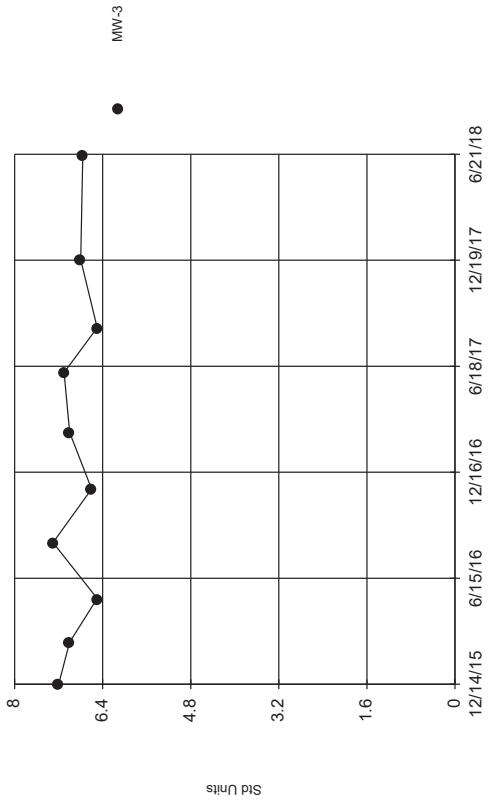
Time Series



Constituent: pH Analysis Run 8/16/2018 10:02 AM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santitas)_08.16.2018

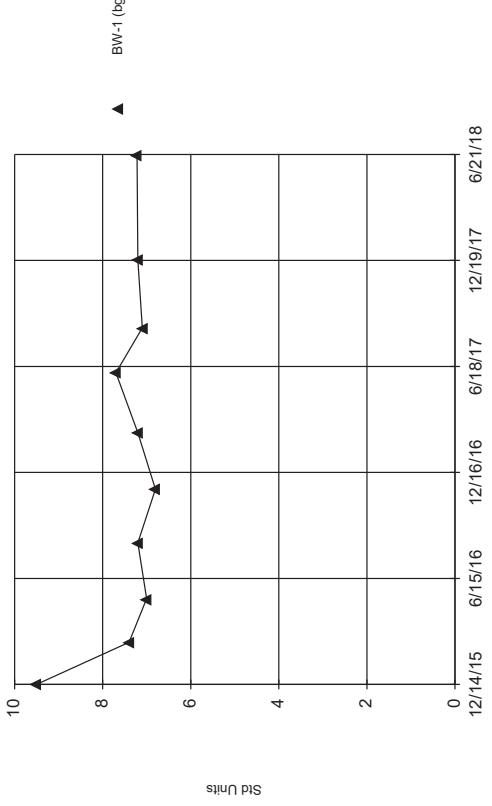
Time Series



Constituent: pH Analysis Run 8/16/2018 10:02 AM

Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santitas)_08.16.2018

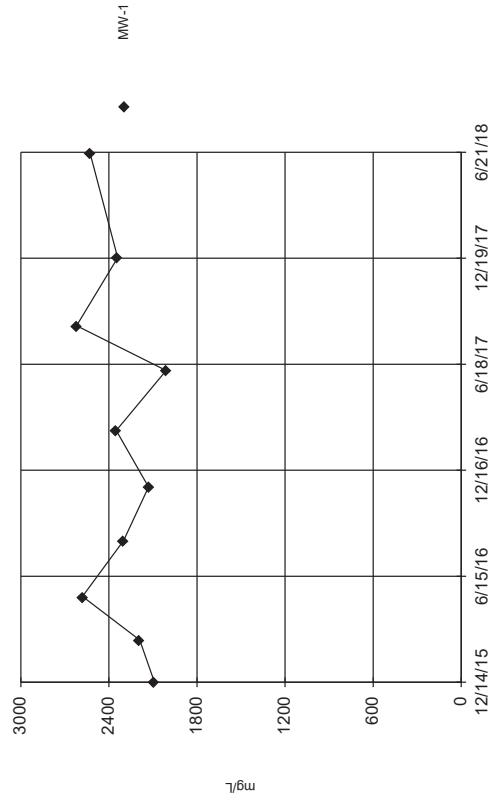
Time Series



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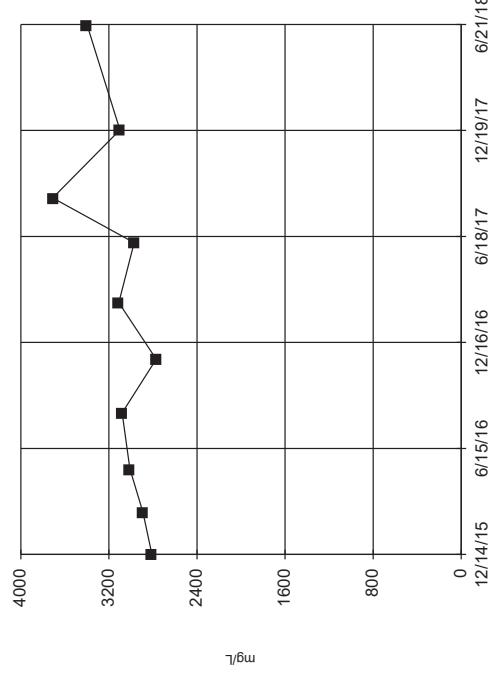
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Time Series



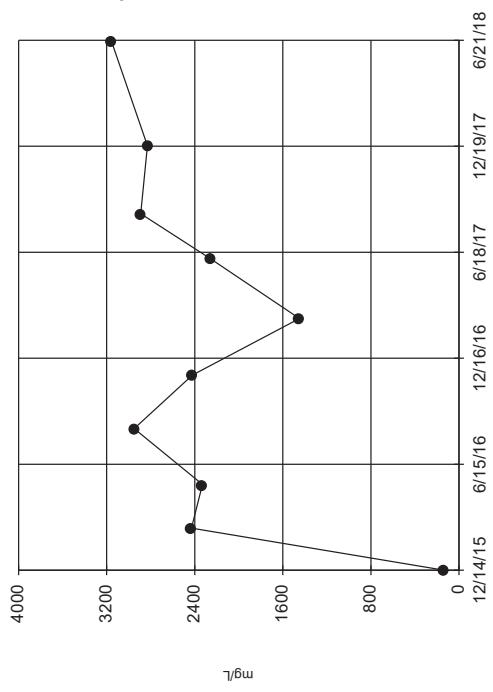
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Time Series



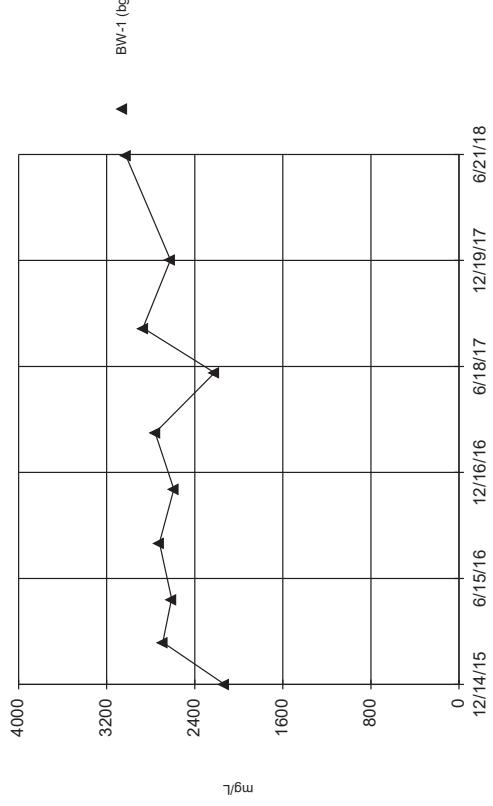
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Time Series



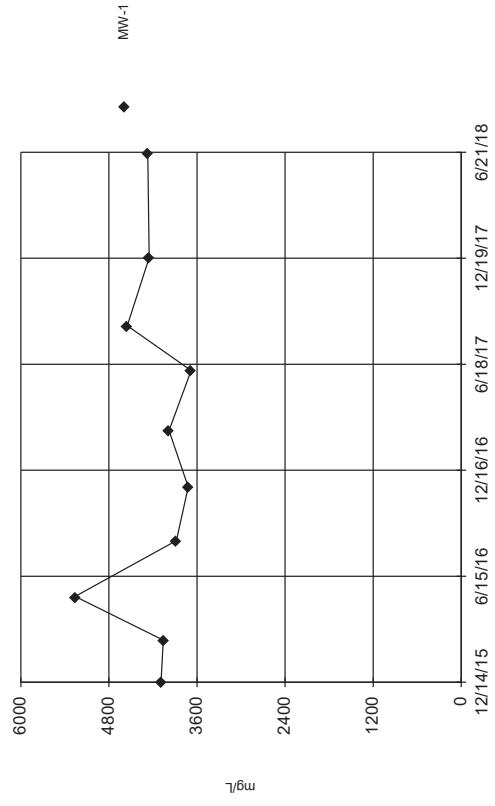
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Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata (Santitas)_08.16.2018

Time Series

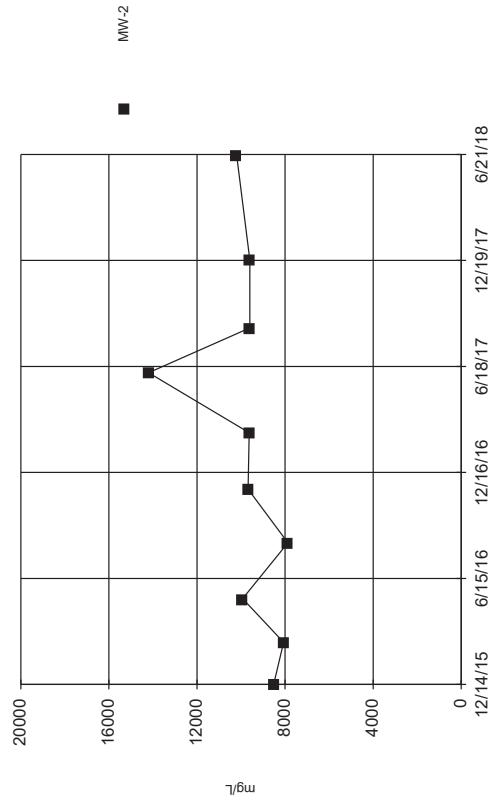


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Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GWdata (Santitas)_08.16.2018

Time Series



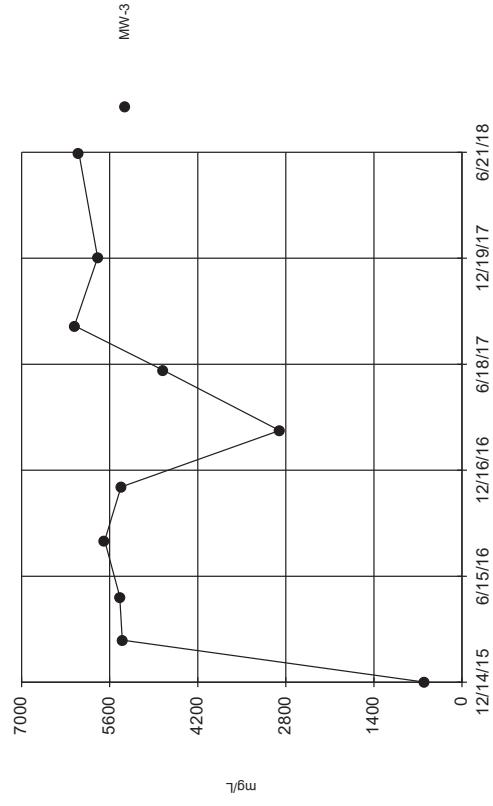
Time Series



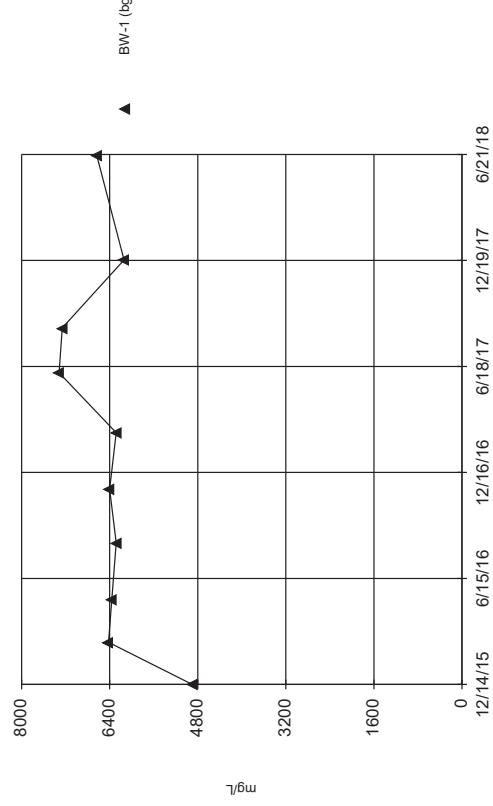
Constituent: Total Dissolved Solids Client: Sandy Creek Data: Sandy Creek GwData (Santistar)_08.16.2018

Analysis Run 8/16/2018 10:02 AM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santistar)_08.16.2018

Time Series



Time Series



Constituent: Total Dissolved Solids Client: Sandy Creek Data: Sandy Creek GwData (Santistar)_08.16.2018

Analysis Run 8/16/2018 10:02 AM
Sandy Creek Energy Station Client: Sandy Creek Data: Sandy Creek GwData (Santistar)_08.16.2018