



2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

EPA CCR RULE COMPLIANCE

SOUTH CAROLINA ELECTRIC & GAS: Williams Station: FGD Pond

January 2018

Prepared by:



Brian S. Boutin, PG
Nautilus Geologic Consulting, PLLC



Stefan Bray, PE
Garrett & Moore, Inc.

Prepared for:

South Carolina Electric & Gas Company
220 Operation Way
Mail Code C221
Cayce, SC 29033



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1.0 INTRODUCTION

This document presents the *2017 Annual Groundwater Monitoring and Corrective Action* report for the Flue Gas Desulfurization (FGD) Pond at South Carolina Electric & Gas (SCE&G) Williams Generating Station in Goose Creek, Berkeley County, South Carolina in accordance with 40 CFR Part 257.90 (e). The FGD Pond is a coal combustion residuals (CCR) handling facility as defined by the US Environmental Protection Agency (EPA) CCR Rule (40 CFR Part 257.93).

This report presents the following information as required under 40 CFR Part 257.90 (e):

1. A facility map (aerial image) showing the FGD Pond and all background (or upgradient) and downgradient monitoring wells, including the well identification numbers, that are part of the groundwater monitoring program for the FGD Pond;
2. Identification of additional monitoring wells that were installed during 2017, along with a narrative description of why the wells were installed;
3. In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
4. A narrative discussion of transitions between monitoring programs (*e.g.*, the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and
5. Other information required to be included in the annual report as specified in Parts 257.90 through 257.98 of the CCR Rule.

The following sections present the components of the annual report.



2.0 GROUNDWATER MONITORING WELL SYSTEM

Nine Type II groundwater monitoring wells (designated MW-FGD-16 through MW-FGD-20, MW-FGD-19D, MW-FGD-20D, MW-FGD-20A and MW-FGD-21) were installed at the Williams Station FGD Pond in March, April, November 2016 and November 2017 to serve as monitoring wells. Five of the Type II groundwater monitoring wells (MW-FGD-16 through MW-FGD-20) were initially installed at the site in April 2016. Subsequent groundwater gauging indicated that the volume of groundwater in wells MW-FGD-19 and MW-FGD-20 was insufficient to allow for collection of representative groundwater samples from the wells. Consequently, replacement wells were installed to greater depths immediately adjacent to MW-FGD-19 and MW-FGD-20 in April 2016 to penetrate deeper into the surficial aquifer and allow for collection of representative groundwater samples at those locations. The replacement wells are designated MW-FGD-19D and MW-FGD-20D, respectively. One additional background monitoring well, designated MW-FGD-21, was installed at the site in November 2016 at a location hydraulically up gradient of the FGD pond. In the fall of 2017 monitoring well MW-FGD-20D was damaged beyond repair by construction equipment. Consequently, monitoring wells MW-FGD-20 and MW-FGD-20D were abandoned and a replacement monitoring well, designated MW-FGD-20A, was installed in November 2017.

Rising head permeability (slug) tests were conducted at monitoring wells MW-FGD-16, MW-FGD-17, MW-FGD-18, MW-FGD-19D and MW-FGD-20D in May 2016; an additional slug test was conducted at MW-FGD-21 in January 2017. A site location map is presented as **Figure 1** and a site map showing the locations and designations of the monitoring wells at Williams Station is presented as **Figure 2**. A South Carolina licensed well driller with S&ME, Inc. of Wilmington, North Carolina (SC License #1583) performed the drilling and installation of monitoring wells MW-FGD-16 through MW-FGD-20. A South Carolina licensed well driller with Red Dog Drilling of Charlotte, North Carolina (SC License #1230) performed the drilling and installation of monitoring wells MW-FGD-19D, MW-FGD-20D, MW-FGD-21 and MW-FGD-20A. Red Dog Drilling also conducted the abandonment of monitoring wells MW-FGD-20 and MW-FGD-20D. A South Carolina registered surveyor from the GEL Group, Inc. of Charleston, South Carolina (ELS SC license #15513) surveyed the monitoring wells for horizontal position, ground surface elevation and top of PVC pipe elevation.



The Type II groundwater monitoring wells were installed to monitor groundwater quality in the vicinity of the FGD pond in compliance with the groundwater monitoring requirements of the US EPA CCR Rule (40 CFR Part 257.93). Monitoring wells MW-FGD-16 and MW-FGD-21 serve as background wells to monitor the quality of groundwater in the surficial aquifer outside the area of influence of the FGD Pond. The remaining monitoring wells (MW-FGD-17, MW-FGD-18, MW-FGD-19D, and MW-FGD-20A) serve as down gradient wells to monitor the quality of groundwater down gradient of the FGD Pond.



3.0 GROUNDWATER MONITORING

3.1 Groundwater Sampling

In accordance with 40 CFR Part 257.94 (b), eight independent groundwater samples were collected for field and laboratory analysis from monitoring wells MW-FGD-16, MW-FGD-17, MW-FGD-18, MW-FGD-19D and MW-FGD-20D beginning in May 2016 and ending in July 2017. Groundwater samples were collected from monitoring wells MW-FGD-16, MW-FGD-17, MW-FGD-18, MW-FGD-19D and MW-FGD-20D every other month throughout the monitoring period in accordance with the stipulations of the *Groundwater Sampling and Analysis Plan* for the Class 3 Landfill (May 2016; revised December 2016). One groundwater sample was collected for analysis during each of the independent monitoring events. Monitoring well MW-FGD-21 was added to the monitoring well network as an additional background monitoring well beginning with the November 2016 groundwater monitoring event. Five independent groundwater samples were collected for field and laboratory analysis from background monitoring well MW-FGD-21 during the period of November 2016 through July 2017 in accordance with the stipulations of the *Groundwater Sampling and Analysis Plan* for the Class 3 Landfill (May 2016; revised December 2016). One groundwater sample was collected from monitoring well MW-FGD-21 during each of the independent monitoring events.

All independent groundwater samples collected from monitoring wells MW-FGD-16, MW-FGD-17, MW-FGD-18, MW-FGD-19D, MW-FGD-20D and MW-FGD-21 in accordance with 40 CFR Part 257.84 (b) during the period of May 2016 through July 2017 were analyzed by South Carolina Certified laboratories (SCE&G Central Laboratory (Certification Number 32006) and GEL Laboratories, LLC (Certification Numbers 10120001 and 10120002) for the constituents listed in Appendix III and Appendix IV of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107).

In accordance with 40 CFR Part 257.94, the first round of Detection Monitoring was conducted on September 19, 2017 and included groundwater sampling from monitoring wells MW-FGD-16, MW-FGD-17, MW-FGD-18, MW-FGD-19D, MW-FGD-20D and MW-FGD-21. One groundwater sample was collected from each of the monitoring wells during the Detection Monitoring event. All groundwater samples collected from the monitoring wells for detection monitoring on September 19, 2017 were analyzed by South Carolina Certified laboratories (SCE&G Central Laboratory and GEL Laboratories, LLC) for the constituents listed in Appendix III of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107).

3.2 Results of Field and Laboratory Analyses of Groundwater Samples

The results of the field and laboratory analyses of the groundwater samples collected from the monitoring wells during the independent rounds of monitoring and the first round of detection monitoring are presented in **Appendix A**. The results indicate that the pH of the groundwater at background monitoring wells MW-FGD-16 and MW-FGD-21, as well as at compliance monitoring well MW-FGD-17, consistently falls below the EPA CCR Rule standard range of 6.5 to 8.5 standard units (within the range of 5.2 to 6.4 standard units), whereas the pH of groundwater at the remaining compliance monitoring wells falls within the standard range. The results further indicate that the reported concentrations of fluoride for the groundwater samples collected from all of the monitoring wells, as well as the reported concentrations of sulfate for the groundwater samples collected from all of the monitoring wells except MW-FGD-20D, during the September 2017 Detection Monitoring event were all below the corresponding maximum contaminant levels (MCLs). The reported concentrations of chloride in groundwater samples collected from all of the down gradient monitoring wells except MW-FGD-19D exceed the MCL of 250 mg/L. In addition, the reported concentrations of total dissolved solids (TDS) in the groundwater samples collected from all of the down gradient monitoring wells exceed the MCL of 500 mg/L.

Statistical analysis to compare the groundwater quality in the downgradient monitoring wells to that of background water quality for the September 2017 Detection Monitoring event was completed on January 15, 2018 by O'Brien & Gere for South Carolina Electric & Gas. The results of the statistical analysis are presented in **Appendix B**. The statistical analysis indicates that the concentrations of boron, calcium, chloride and TDS in the groundwater samples collected from compliance monitoring wells MW-FGD-17, MW-FGD-18 and MW-FGD-20D show statistically significant increases over background concentrations (as determined from the data for groundwater samples collected from background monitoring wells MW-FGD-16 and MW-FGD-21). In addition, the statistical analysis indicates that the concentrations of chloride and TDS in the groundwater sample collected from compliance monitoring well MW-FGD-19D, and the concentrations of sulfate in the groundwater samples collected from compliance monitoring wells MW-FGD-17 and MW-FGD-20D, show a statistically significant increase over background concentrations. No other statistically significant increases over background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from the monitoring wells during the September 2017 Detection Monitoring event.



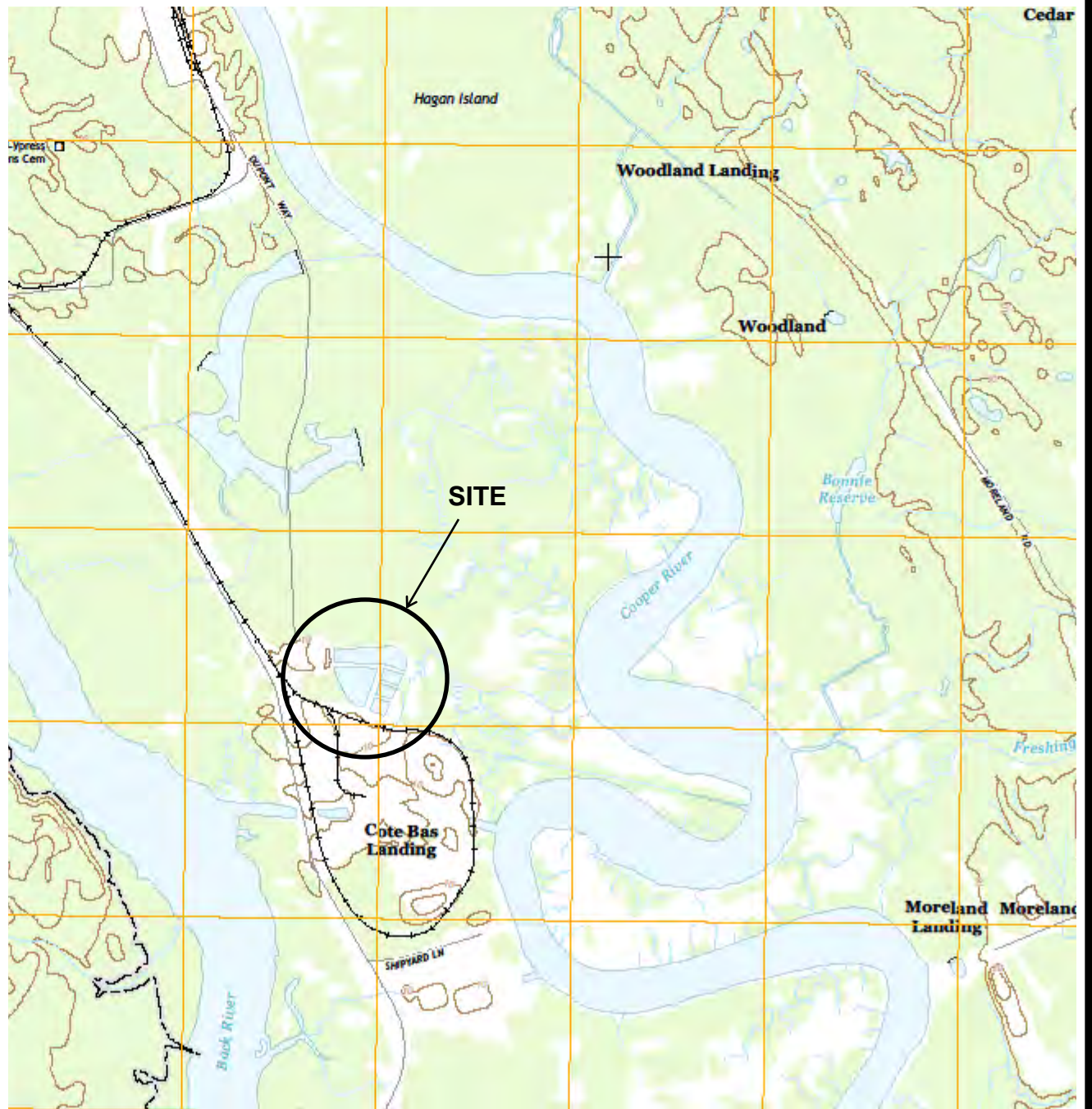
3.3 Alternate Source Demonstration

In accordance with 40 CFR Part 257.94 (e) (2), SCE&G intends to conduct an Alternate Source Demonstration (ASD) for the statistically significant increases in concentrations of boron, calcium, chloride, sulfate and TDS relative to background concentrations at the CCR Rule background monitoring wells. The ASD will rely, at a minimum, on historical groundwater quality data, site operational history, additional groundwater quality data for groundwater samples collected contemporaneously from existing monitoring wells, as well as the results of laboratory analyses of water samples collected from the FGD Pond and tidal drainages located immediately down gradient of the site waste water ponds (including the FGD Pond).



4.0 KEY PROJECT ACTIVITIES FOR 2018

In 2018, the ASD and report of results will be completed by April 15, 2018 for inclusion in the plant operating record. It is anticipated that the ASD will demonstrate that the statistically significant increases in concentrations of boron, calcium, chloride, sulfate and TDS variously observed at monitoring wells MW-FGD-17, MW-FGD-18, MW-FGD-19D and MW-FGD-20D during the September 2017 Detection Monitoring event are likely attributable to a source(s) other than the FGD Pond and are pre-existing to construction and operation of the FGD Pond. Consequently, it is further anticipated that Detection Monitoring will be resumed in 2018. Two rounds of Detection Monitoring are, therefore, anticipated to be completed in 2018 with groundwater samples being collected from monitoring wells MW-FGD-16, MW-FGD-17, MW-FGD-18, MW-FGD-19D, MW-FGD-20D and MW-FGD-21.



Source: USGS 7.5' Topographic Quadrangle Series
Kittredge, SC 2014



**Nautilus Geologic
Consulting, PLLC**

11112 Branding Iron Place
Wendell, NC 27591
Office: (919) 366-3663
Cell: (919) 995-0363

SITE LOCATION MAP

SCE&G Williams Station
Goose Creek, Berkeley County, South Carolina

Drawn by:	Reviewed by:	Project #:	Drawing #:	Figure No. 1
USGS		Scale: 1:24,000	Drawing Date: 06/17/2015	



Google earth
2016 Google

Source: Google Earth

N



- ⊕ **GW-21** EPA CCR Rule Compliance Monitoring Well
- ⊕ **GW-4A** NPDES Monitoring Well



11112 Branding Iron Place
Wendell, NC 27591
Office: (919) 366-3663
Cell: (919) 995-0363

**EPA CCR Rule Compliance Monitoring Wells
SCE&G Williams Station
Goose Creek, Berkeley County, South Carolina**

Drawn by:	Reviewed by:	Project #:	Drawing #:	Figure No. 2
		Scale: As Shown	Drawing Date: 11/3/16	



APPENDIX A

Results of Field and Laboratory Analyses of Groundwater Samples

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond**

Gauging Date:05/10/16				Final Water Quality Indicator Parameters					
Monitoring Well ID	PVC Pipe Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
GW-16	12.65	10.11	2.54	21.9	6.3	821	2.37	43.7	0.92
GW-17	12.12	8.67	3.45	21.6	6.8	2320	9.79	-93.8	1.16
GW-18	11.93	8.50	3.43	21.4	7.3	4557	3.51	-167	1.16
GW-19D	12.56	9.61	2.95	22.0	7.4	1322	8.77	-124	1.22
GW-20D	12.17	9.37	2.80	22.8	6.9	1777	3.33	-119	1.15

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 397097 GEL Work Order: 397097

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams NPDES

Client Sample ID: GW-16 Project: SCEG01516C
Sample ID: 397097001 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 10-MAY-16 10:40
Receive Date: 10-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in Liquid "As Received"											
Fluoride		0.141	0.033	0.100	mg/L	1	MXL2	05/11/16	1839	1566382	1
Metals Analysis-ICP-MS											
200.8/200.2 NPDES Metals "As Received"											
Lithium	J	5.17	2.00	10.0	ug/L	1	BAJ	05/12/16	1834	1566408	2
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228	U	ND	1.23	3.00	pCi/L		AXM6	05/23/16	1425	1567148	3
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		2.58	0.191	1.00	pCi/L		LXP1	05/20/16	0950	1563143	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	05/11/16	1730	1566407

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.8	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams NPDES

Client Sample ID: GW-17
Sample ID: 397097002
Matrix: Ground Water
Collect Date: 10-MAY-16 11:51
Receive Date: 10-MAY-16
Collector: Client
Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in Liquid "As Received"											
Fluoride		0.328	0.033	0.100	mg/L	1	MXL2	05/11/16	2011	1566382	1
Metals Analysis-ICP-MS											
200.8/200.2 NPDES Metals "As Received"											
Lithium	J	2.96	2.00	10.0	ug/L	1	BAJ	05/12/16	1844	1566408	2
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228		1.64	1.56	3.00	pCi/L		AXM6	05/23/16	1425	1567148	3
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.86	0.226	1.00	pCi/L		LXP1	05/20/16	0950	1563143	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	05/11/16	1730	1566407

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.9	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams NPDES

Client Sample ID: DUP Project: SCEG01516C
Sample ID: 397097003 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 10-MAY-16 12:00
Receive Date: 10-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in Liquid "As Received"											
Fluoride		0.373	0.033	0.100	mg/L	1	MXL2	05/11/16	2144	1566382	1
Metals Analysis-ICP-MS											
200.8/200.2 NPDES Metals "As Received"											
Lithium	J	2.84	2.00	10.0	ug/L	1	BAJ	05/12/16	1852	1566408	2
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228	U	ND	2.00	3.00	pCi/L		AXM6	05/23/16	1425	1567148	3
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		2.92	0.360	1.00	pCi/L		LXP1	05/20/16	0950	1563143	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	05/11/16	1730	1566407

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93	(15%-125%)

Notes:

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams NPDES

Client Sample ID: Field Blank Project: SCEG01516C
Sample ID: 397097004 Client ID: GEEL003
Matrix: Water
Collect Date: 10-MAY-16 12:30
Receive Date: 10-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in Liquid "As Received"											
Fluoride	U	ND	0.033	0.100	mg/L	1	MXL2	05/11/16	2215	1566382	1
Metals Analysis-ICP-MS											
200.8/200.2 NPDES Metals "As Received"											
Lithium	U	ND	2.00	10.0	ug/L	1	BAJ	05/12/16	1855	1566408	2
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228	U	ND	1.20	3.00	pCi/L		AXM6	05/23/16	1425	1567148	3
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226	U	ND	0.387	1.00	pCi/L		LXP1	05/20/16	0950	1563143	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	05/11/16	1730	1566407

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92.8	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams NPDES

Client Sample ID: GW-18 Project: SCEG01516C
Sample ID: 397097005 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 10-MAY-16 13:19
Receive Date: 10-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in Liquid "As Received"											
Fluoride		0.577	0.033	0.100	mg/L	1	MXL2	05/11/16	2246	1566382	1
Metals Analysis-ICP-MS											
200.8/200.2 NPDES Metals "As Received"											
Lithium	J	7.13	2.00	10.0	ug/L	1	BAJ	05/12/16	1857	1566408	2
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228	U	ND	1.22	3.00	pCi/L		AXM6	05/23/16	1425	1567148	3
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.47	0.390	1.00	pCi/L		LXP1	05/20/16	0950	1563143	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	05/11/16	1730	1566407

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			98.6	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams NPDES

Client Sample ID: GW-19D Project: SCEG01516C
Sample ID: 397097006 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 10-MAY-16 14:10
Receive Date: 10-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in Liquid "As Received"											
Fluoride		0.746	0.033	0.100	mg/L	1	MXL2	05/11/16	2317	1566382	1
Metals Analysis-ICP-MS											
200.8/200.2 NPDES Metals "As Received"											
Lithium	J	2.93	2.00	10.0	ug/L	1	BAJ	05/12/16	1900	1566408	2
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228	U	ND	1.55	3.00	pCi/L		AXM6	05/23/16	1425	1567148	3
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		1.56	0.361	1.00	pCi/L		LXP1	05/20/16	1030	1563143	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	05/11/16	1730	1566407

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			98.3	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: May 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams NPDES

Client Sample ID: GW-20D Project: SCEG01516C
Sample ID: 397097007 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 10-MAY-16 15:05
Receive Date: 10-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in Liquid "As Received"											
Fluoride		0.199	0.033	0.100	mg/L	1	MXL2	05/11/16	2348	1566382	1
Metals Analysis-ICP-MS											
200.8/200.2 NPDES Metals "As Received"											
Lithium	J	5.04	2.00	10.0	ug/L	1	BAJ	05/12/16	1902	1566408	2
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "As Received"											
Radium-228	U	ND	1.39	3.00	pCi/L		AXM6	05/23/16	1425	1567148	3
Rad Radium-226											
Lucas Cell, Ra226, liquid "As Received"											
Radium-226		3.01	0.316	1.00	pCi/L		LXP1	05/20/16	1030	1563143	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	05/11/16	1730	1566407

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			96.6	(15%-125%)

Notes:

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QC Summary

Workorder: 397097

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226											
Batch	1563143										
Radium-226		0.794		0.578	pCi/L	31.4		(0% - 100%)	LXP1	05/20/16	10:30
QC1203537488	LCS										
Radium-226	24.4			26.1	pCi/L		107	(75%-125%)		05/20/16	10:30
QC1203537485	MB										
Radium-226			U	0.0419	pCi/L					05/20/16	10:30
QC1203537487	396153001 MS										
Radium-226	122	0.794		126	pCi/L		103	(75%-125%)		05/20/16	10:30

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FA Failed analysis.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- NI See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected

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QC Summary

Workorder: 397097

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



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May 18, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22319**

Williams Station GW 16-NPDES/CCR


Date & Time Sampled: May 10, 2016 10:40
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG16TDS

GW 16

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	37.2	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	6.50	0.00	S.U.	5/13/16 12:05	CDB
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	12.6	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	478	2.0	mg/L	5/16/16 12:46	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Tel: (803)217-9384
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May 18, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22320**

Williams Station GW 17-NPDES/CCR

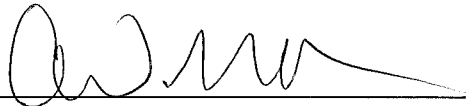
Date & Time Sampled: May 10, 2016 11:51
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG17TDS

GW 17

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	536	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	6.65	0.00	S.U.	5/13/16 12:05	CDB
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	33.7	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	1634	2.0	mg/L	5/16/16 12:46	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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 Tel: (803)217-9384
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May 18, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22321**

Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: May 10, 2016 12:00
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIGDUPTDS

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	472	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	6.62	0.00	S.U.	5/13/16 12:05	CDB
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	37.3	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	1664	2.0	mg/L	5/16/16 12:46	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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May 18, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22322**

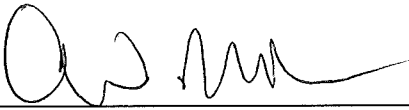
Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: May 10, 2016 12:30
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIGFBTDS

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	8.00	0.00	S.U.	5/13/16 12:05	CDB
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	Not Detected	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	5.0	2.0	mg/L	5/16/16 12:46	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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 Columbia, SC 29212
 Tel: (803)217-9384
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May 18, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22323**

Williams Station GW 18-NPDES/CCR

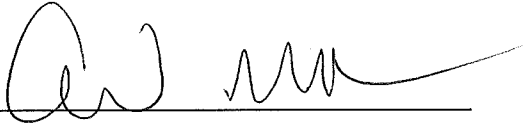
Date & Time Sampled: May 10, 2016 13:19
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG18TDS

GW 18

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1140	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	6.99	0.00	S.U.	5/13/16 12:05	CDB
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	40.5	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	2450	2.0	mg/L	5/16/16 12:46	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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 Tel: (803)217-9384
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May 18, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22324**

Williams Station GW 19D-NPDES/CCR

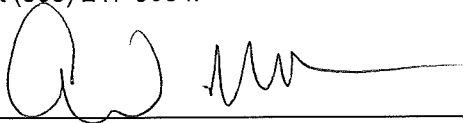
Date & Time Sampled: May 10, 2016 14:10
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG19DTDS

GW 19D

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	168	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	7.39	0.00	S.U.	5/13/16 12:05	CDB
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	17.68	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	798	2.0	mg/L	5/16/16 12:46	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Tel: (803)217-9384
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May 18, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22325**

Williams Station GW 20D-NPDES/CCR

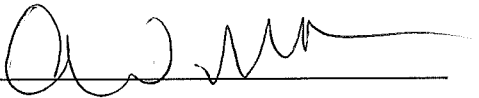
Date & Time Sampled: May 10, 2016 15:05
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG20DTDS

GW 20D

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	410	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	7.08	0.00	S.U.	5/13/16 12:05	CDB
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	30.39	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	1049	2.0	mg/L	5/16/16 12:46	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

May 19, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22326**

Will Sta GW 16, T. Metals-NPDES/CCR

Date & Time Sampled: May 10, 2016 10:40
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG16TM

GW 16

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Arsenic by ICP_MS EPA 200.8	2.0	1.0	ppb	5/16/16 14:47	MC
Barium (CWA) 200.7	199	10.0	ppb	5/19/16 07:53	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 07:53	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 07:53	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Calcium EPA 200.7	141000	100	ppb	5/19/16 07:53	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Cobalt by ICP_MS EPA 200.8	36.6	1.0	ppb	5/16/16 14:47	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Mercury (CWA) by EPA 245.2	Less than	1.0	ppb	5/18/16 14:05	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 14:47	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Columbia, SC 29212
 Tel: (803)217-9384
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May 19, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22327**

Will Sta GW 17, T. Metals-NPDES/CCR

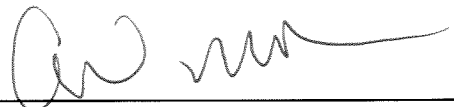
Date & Time Sampled: May 10, 2016 11:51
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG17TM

GW 17

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Arsenic by ICP_MS EPA 200.8	29.5	1.0	ppb	5/16/16 14:47	MC
Barium (CWA) 200.7	182	10.0	ppb	5/19/16 07:53	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 07:53	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 07:53	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Calcium EPA 200.7	148000	100	ppb	5/19/16 07:53	MC
Chromium by ICP_MS EPA 200.8	1.4	1.0	ppb	5/16/16 14:47	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Mercury (CWA) by EPA 245.2	Less than	1.0	ppb	5/18/16 14:05	MC
Molybdenum - EPA 200.8	1.7	1.0	ppb	5/16/16 14:47	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 14:47	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Tel: (803)217-9384
 Fax: (803) 217-9911

May 19, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22328**

Will Sta Duplicate, T. Metals-NPDES/CCR

Date & Time Sampled: May 10, 2016 12:00
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIGDUPTM

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Arsenic by ICP_MS EPA 200.8	33.2	1.0	ppb	5/16/16 14:47	MC
Barium (CWA) 200.7	181	10.0	ppb	5/19/16 07:53	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 07:53	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 07:53	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Calcium EPA 200.7	145000	100	ppb	5/19/16 07:53	MC
Chromium by ICP_MS EPA 200.8	1.1	1.0	ppb	5/16/16 14:47	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Mercury (CWA) by EPA 245.2	Less than	1.0	ppb	5/18/16 14:05	MC
Molybdenum - EPA 200.8	1.6	1.0	ppb	5/16/16 14:47	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 14:47	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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 Tel: (803)217-9384
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May 19, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22329**

Will Sta Field Blank, T. Metals-NPDES/CCR

Date & Time Sampled: May 10, 2016 12:30
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIGFBTM

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Barium (CWA) 200.7	Less than	10.0	ppb	5/19/16 07:53	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 07:53	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 07:53	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Calcium EPA 200.7	Less than	100	ppb	5/19/16 07:53	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/18/16 14:05	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 14:47	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

May 19, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22330**

Will Sta GW 18, T. Metals-NPDES/CCR

Date & Time Sampled: May 10, 2016 13:19
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG18TM

GW 18

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Arsenic by ICP_MS EPA 200.8	3.6	1.0	ppb	5/16/16 14:47	MC
Barium (CWA) 200.7	300	10.0	ppb	5/19/16 07:53	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 07:53	MC
Boron - EPA 200.7	1050	1000	ppb	5/19/16 07:53	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Calcium EPA 200.7	81000	100	ppb	5/19/16 07:53	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Mercury (CWA) by EPA 245.2	Less than	1.0	ppb	5/18/16 14:05	MC
Molybdenum - EPA 200.8	1.1	1.0	ppb	5/16/16 14:47	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 14:47	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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May 19, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22331**

Will Sta GW 19D, T. Metals-NPDES/CCR

Date & Time Sampled: May 10, 2016 14:10

Date & Time Submitted: May 12, 2016 15:00

Collected by: C.SANDEL Location Code: WIG19DTM

GW 19D

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Arsenic by ICP_MS EPA 200.8	2.7	1.0	ppb	5/16/16 14:47	MC
Barium (CWA) 200.7	84.2	10.0	ppb	5/19/16 07:53	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 07:53	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 07:53	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Calcium EPA 200.7	52900	100	ppb	5/19/16 07:53	MC
Chromium by ICP_MS EPA 200.8	1.0	1.0	ppb	5/16/16 14:47	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Mercury (CWA) by EPA 245.2	Less than	1.0	ppb	5/18/16 14:05	MC
Molybdenum - EPA 200.8	11.9	1.0	ppb	5/16/16 14:47	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 14:47	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

May 19, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22332**

Will Sta GW 20D, T. Metals-NPDES/CCR

Date & Time Sampled: May 10, 2016 15:05
 Date & Time Submitted: May 12, 2016 15:00
 Collected by: C.SANDEL Location Code: WIG20DTM

GW 20D

Login Record File: 160513001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Arsenic by ICP_MS EPA 200.8	16.6	1.0	ppb	5/16/16 14:47	MC
Barium (CWA) 200.7	114	10.0	ppb	5/19/16 07:53	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 07:53	MC
Boron - EPA 200.7	1400	1000	ppb	5/19/16 07:53	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Calcium EPA 200.7	166000	100	ppb	5/19/16 07:53	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC
Mercury (CWA) by EPA 245.2	Less than	1.0	ppb	5/18/16 14:05	MC
Molybdenum - EPA 200.8	6.0	1.0	ppb	5/16/16 14:47	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 14:47	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 14:47	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C**

Williams Station FGD Pond C

Monitoring Well ID	Well Data			Gauging Date:07/11/16				Final Water Quality Indicator Parameters					
	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Initial Gauging		Final Gauging		Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
				Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.						
GW-16	12.65	9.85	2.80	10.12	2.53	10.31	2.34	24.8	5.7	372	13.6	25.1	0.24
GW-17	12.12	12.12	0.00	8.43	3.69	8.47	3.65	22.8	6.3	2189	27.8	-84.0	0.16
GW-18	11.93	11.93	0.00	9.02	2.91	8.95	2.98	24.5	6.8	3826	10.9	-127	0.22
GW-19D	12.56	12.50	0.06	9.76	2.80	9.88	2.68	23.5	7.2	1122	11.0	-166	0.25
GW-20D	12.17	12.10	0.07	9.46	2.71	9.60	2.57	24.6	6.8	1535	11.4	-169	0.20

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 401253 GEL Work Order: 401253

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 25, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: DUP	Project: SCEG01516C
Sample ID: 401253006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 11-JUL-16 15:00	
Receive Date: 12-JUL-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.820	0.033	0.100	mg/L		1	MXL2	07/12/16	1540	1580929	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	J	4.81	2.00	10.0	ug/L	1.00	1	SKJ	07/14/16	1858	1580961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.27	1.39	3.00	pCi/L			AXM6	07/20/16	1204	1580930	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.36	0.354	1.00	pCi/L			LXP1	07/22/16	0838	1581244	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JP1	07/12/16	1650	1580960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.8	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 25, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Field Blank	Project: SCEG01516C
Sample ID: 401253004	Client ID: GEEL003
Matrix: Water	
Collect Date: 11-JUL-16 14:00	
Receive Date: 12-JUL-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride	U	ND	0.033	0.100	mg/L		1	MXL2	07/12/16	1340	1580929	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	07/14/16	1850	1580961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.50	3.00	pCi/L			AXM6	07/20/16	1204	1580930	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.290	0.255	1.00	pCi/L			LXP1	07/22/16	0838	1581244	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JP1	07/12/16	1650	1580960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			97.7	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 25, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-16	Project: SCEG01516C
Sample ID: 401253001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 11-JUL-16 11:37	
Receive Date: 12-JUL-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.444	0.033	0.100	mg/L		1	MXL2	07/12/16	1211	1580929	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	J	9.28	2.00	10.0	ug/L	1.00	1	SKJ	07/14/16	1811	1580961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.60	3.00	pCi/L			AXM6	07/20/16	1203	1580930	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.74	0.349	1.00	pCi/L			LXP1	07/22/16	0838	1581244	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JP1	07/12/16	1650	1580960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			98.7	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 25, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17
Sample ID: 401253002
Matrix: Ground Water
Collect Date: 11-JUL-16 12:41
Receive Date: 12-JUL-16
Collector: Client
Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.269	0.033	0.100	mg/L		1	MXL2	07/12/16	1240	1580929	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	J	4.29	2.00	10.0	ug/L	1.00	1	SKJ	07/14/16	1842	1580961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.30	3.00	pCi/L			AXM6	07/20/16	1203	1580930	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.29	0.378	1.00	pCi/L			LXP1	07/22/16	0838	1581244	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JP1	07/12/16	1650	1580960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			94.8	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 25, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 401253003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 11-JUL-16 13:43	
Receive Date: 12-JUL-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.507	0.033	0.100	mg/L		1	MXL2	07/12/16	1310	1580929	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium		10.2	2.00	10.0	ug/L	1.00	1	SKJ	07/14/16	1846	1580961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.09	3.00	pCi/L			AXM6	07/20/16	1204	1580930	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.36	0.243	1.00	pCi/L			LXP1	07/22/16	0838	1581244	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JP1	07/12/16	1650	1580960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			99.5	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 25, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-19D	Project: SCEG01516C
Sample ID: 401253005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 11-JUL-16 14:44	
Receive Date: 12-JUL-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.780	0.033	0.100	mg/L		1	MXL2	07/12/16	1410	1580929	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	J	4.79	2.00	10.0	ug/L	1.00	1	SKJ	07/14/16	1854	1580961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.58	3.00	pCi/L			AXM6	07/20/16	1204	1580930	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.29	0.301	1.00	pCi/L			LXP1	07/22/16	0838	1581244	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JP1	07/12/16	1650	1580960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			66.2	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 25, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-20D	Project: SCEG01516C
Sample ID: 401253007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 11-JUL-16 16:05	
Receive Date: 12-JUL-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.225	0.033	0.100	mg/L		1	MXL2	07/12/16	1610	1580929	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	J	8.57	2.00	10.0	ug/L	1.00	1	SKJ	07/14/16	1902	1580961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	0.911	3.00	pCi/L			AXM6	07/20/16	1204	1580930	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.60	0.348	1.00	pCi/L			LXP1	07/22/16	0915	1581244	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	JP1	07/12/16	1650	1580960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			98.3	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: July 25, 2016

Page 1 of 3

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 401253

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1580929										
QC1203582823	401253007	DUP									
Fluoride		0.225		0.219	mg/L	2.98 ^		(+/-0.100)	MXL2	07/12/16	16:40
QC1203582822	LCS										
Fluoride	2.50			2.39	mg/L		95.6	(90%-110%)		07/12/16	11:41
QC1203582821	MB										
Fluoride			U	ND	mg/L					07/12/16	11:11
QC1203582824	401253007	PS									
Fluoride	2.50	0.225		2.49	mg/L		90.5	(90%-110%)		07/12/16	17:10
Metals Analysis - ICPMS											
Batch	1580961										
QC1203582913	401253001	DUP									
Lithium		J	9.28	J	9.31	ug/L	0.355 ^	(+/-10.0)	SKJ	07/14/16	18:14
QC1203582912	LCS										
Lithium	50.0			53.6	ug/L		107	(80%-120%)		07/14/16	18:07
QC1203582911	MB										
Lithium			U	ND	ug/L					07/14/16	18:03
QC1203582914	401253001	MS									
Lithium	50.0	J	9.28		62.0	ug/L		105	(75%-125%)	07/14/16	18:18
QC1203582915	401253001	SDILT									
Lithium		J	9.28	U	ND	ug/L	N/A	(0%-10%)		07/14/16	18:26
Rad Gas Flow											
Batch	1580930										
QC1203582831	401253007	DUP									
Radium-228		U	0.0703	U	-0.884	pCi/L	N/A		N/AAXM6	07/20/16	12:07
QC1203582832	LCS										
Radium-228	45.1			40.4	pCi/L		89.6	(75%-125%)		07/20/16	12:07
QC1203582830	MB										
Radium-228			U	-0.339	pCi/L					07/20/16	12:03
Rad Ra-226											
Batch	1581244										
QC1203583628	401285001	DUP									

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 401253

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226											
Batch		1581244									
Radium-226		U	0.280	0.518	pCi/L	59.4		(0% - 100%)	LXP1	07/22/16	11:40
QC1203583630	LCS										
Radium-226	24.4			23.1	pCi/L		94.5	(75%-125%)		07/22/16	10:25
QC1203583627	MB										
Radium-226				0.432	pCi/L					07/22/16	09:50
QC1203583629	401285001	MS									
Radium-226	122	U	0.280	93.2	pCi/L		76.4	(75%-125%)		07/22/16	11:40

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FA Failed analysis.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- NI See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected

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QC Summary

Workorder: 401253

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
U		Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.									
UI		Gamma Spectroscopy--Uncertain identification									
UJ		Gamma Spectroscopy--Uncertain identification									
UL		Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.									
X		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y		Other specific qualifiers were required to properly define the results. Consult case narrative.									
Z		Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.									
^		RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
d		5-day BOD--The 2:1 depletion requirement was not met for this sample									
e		5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes									
h		Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

July 26, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22964** **Williams Station GW 16-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 11:37
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG16TDS

GW 16

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Chlorides by IC EPA 300.0	38.7	1.0	PPM	7/19/16	10:47	LS
pH by SM4500HB	5.98	0.00	S.U.	7/20/16	09:43	PRC
Sulfates by IC EPA 300.0	9.8	1.0	PPM	7/19/16	10:47	LS
Total Dissolved Solid-SM2540C	237	2.0	mg/L	7/15/16	14:29	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: _____



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 2102 North Lake Drive
 Columbia, SC 29212
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July 26, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22966** **Williams Station GW 17-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 12:41
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG17TDS

GW 17

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Chlorides by IC EPA 300.0	537	10	PPM	7/19/16	16:44	LS
pH by SM4500HB	6.81	0.00	S.U.	7/20/16	09:43	PRC
Sulfates by IC EPA 300.0	45.0	5.0	PPM	7/19/16	11:00	LS
Total Dissolved Solid-SM2540C	1571	2.0	mg/L	7/15/16	14:29	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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July 26, 2016

REPORT TO:
Mike Moore C221

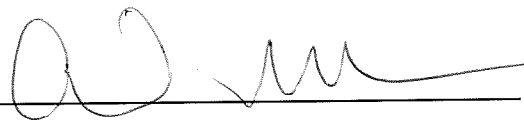
Sample ID: **AB22968** **Williams Station GW 18-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 13:43
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG18TDS

GW 18

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1078	25	PPM	7/19/16 16:30	LS
pH by SM4500HB	7.22	0.00	S.U.	7/20/16 09:43	PRC
Sulfates by IC EPA 300.0	30.8	1.0	PPM	7/19/16 11:15	LS
Total Dissolved Solid-SM2540C	2543	2.0	mg/L	7/15/16 14:29	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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 2102 North Lake Drive
 Columbia, SC 29212
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July 26, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22970** **Williams Station GW Field Blank**
 Date & Time Sampled: July 11, 2016 14:00
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG18TDS

GW 18

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Chlorides by IC EPA 300.0	LESS THAN	0.50	PPM	7/19/16	11:30	LS
pH by SM4500HB	7.35	0.00	S.U.	7/20/16	09:43	PRC
Sulfates by IC EPA 300.0	LESS THAN	0.50	PPM	7/19/16	11:30	LS
Total Dissolved Solid-SM2540C	20	2.0	mg/L	7/15/16	14:29	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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 Columbia, SC 29212
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July 26, 2016

REPORT TO:
Mike Moore C221

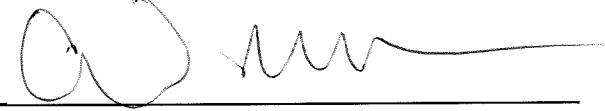
Sample ID: **AB22972 Williams Station GW 19D-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 14:44
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG19DTDS

GW 19D

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Chlorides by IC EPA 300.0	156	5.0	PPM	7/19/16	17:00	LS
pH by SM4500HB	7.54	0.00	S.U.	7/20/16	09:43	PRC
Sulfates by IC EPA 300.0	6.7	2.5	PPM	7/19/16	11:44	LS
Total Dissolved Solid-SM2540C	761	2.0	mg/L	7/15/16	14:29	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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2102 North Lake Drive
Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

July 26, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22974 Williams Station GW 19D-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 15:00
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG19DTDS

GW 19D

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Chlorides by IC EPA 300.0	170	2.5	PPM	7/19/16	11:58	LS
pH by SM4500HB	7.48	0.00	S.U.	7/20/16	09:43	PRC
Sulfates by IC EPA 300.0	3.2	2.5	PPM	7/19/16	11:58	LS
Total Dissolved Solid-SM2540C	78	2.0	mg/L	7/15/16	14:29	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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 Columbia, SC 29212
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July 26, 2016

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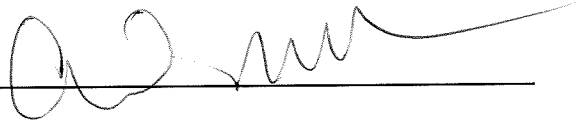
Sample ID: **AB22976** **Williams Station GW 20D-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 16:05
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG20DTDS

GW 20D

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Chlorides by IC EPA 300.0	398	5.0	PPM	7/19/16	12:13	LS
pH by SM4500HB	7.08	0.00	S.U.	7/20/16	09:43	PRC
Sulfates by IC EPA 300.0	14.8	5.0	PPM	7/19/16	12:13	LS
Total Dissolved Solid-SM2540C	1250	2.0	mg/L	7/15/16	14:29	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

August 10, 2016

REPORT TO:
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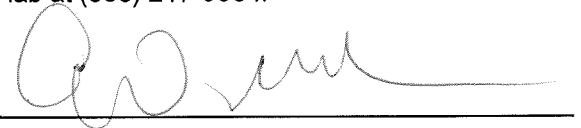
Sample ID: **AB22965 Will Sta GW 16, T. Metals-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 11:37
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG16TM

GW 16

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/9/16	12:53	MC
Arsenic by ICP_MS EPA 200.8	3.5	1.0	ppb	8/9/16	12:53	MC
Barium (CWA) 200.7	118	10.0	ppb	7/21/16	08:41	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/21/16	08:41	MC
Boron - EPA 200.7	Less than	1000	ppb	7/21/16	08:41	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Calcium EPA 200.7	49000	100	ppb	7/21/16	08:41	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Cobalt by ICP_MS EPA 200.8	25.2	1.0	ppb	7/26/16	14:28	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/19/16	14:13	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/9/16	12:53	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC

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 2102 North Lake Drive
 Columbia, SC 29212
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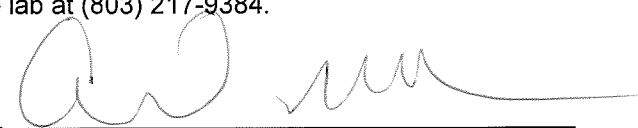
Sample ID: **AB22967 Will Sta GW 17, T. Metals-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 12:41
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG17TM

GW 17

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/9/16	12:53	MC
Arsenic by ICP_MS EPA 200.8	12.8	1.0	ppb	8/9/16	12:53	MC
Barium (CWA) 200.7	267	10.0	ppb	7/21/16	08:41	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/21/16	08:41	MC
Boron - EPA 200.7	2420	1000	ppb	7/21/16	08:41	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Calcium EPA 200.7	267000	100	ppb	7/21/16	08:41	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/19/16	14:13	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/9/16	12:53	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

August 10, 2016

REPORT TO:
Mike Moore C221

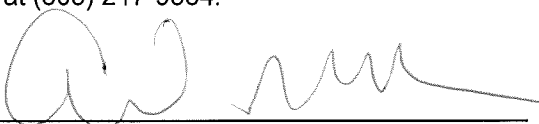
Sample ID: **AB22969 Will Sta GW 18, T. Metals-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 13:43
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG18TM

GW 18

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/9/16	12:53	MC
Arsenic by ICP_MS EPA 200.8	2.3	1.0	ppb	8/9/16	12:53	MC
Barium (CWA) 200.7	355	10.0	ppb	7/21/16	08:41	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/21/16	08:41	MC
Boron - EPA 200.7	1430	1000	ppb	7/21/16	08:41	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Calcium EPA 200.7	103000	100	ppb	7/21/16	08:41	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/19/16	14:13	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/9/16	12:53	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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August 10, 2016

REPORT TO:
Mike Moore C221

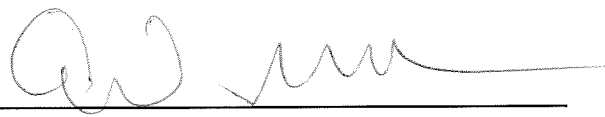
Sample ID: **AB22971 Will Sta GW Field Blank**
 Date & Time Sampled: July 11, 2016 14:00
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG18TM

GW 18

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/9/16 12:53	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	8/9/16 12:53	MC
Barium (CWA) 200.7	Less than	10.0	ppb	7/21/16 08:41	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/21/16 08:41	MC
Boron - EPA 200.7	Less than	1000	ppb	7/21/16 08:41	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/22/16 09:17	MC
Calcium EPA 200.7	180	100	ppb	7/21/16 08:41	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16 14:28	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16 14:28	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/22/16 09:17	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/19/16 14:13	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	7/22/16 09:17	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/9/16 12:53	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/26/16 14:28	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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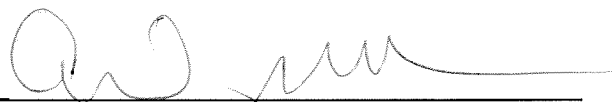
Sample ID: **AB22973 Will Sta GW 19D, T. Metals-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 14:44
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG19DTM

GW 19D

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/9/16	12:53	MC
Arsenic by ICP_MS EPA 200.8	2.7	1.0	ppb	8/9/16	12:53	MC
Barium (CWA) 200.7	99.7	10.0	ppb	7/21/16	08:41	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/21/16	08:41	MC
Boron - EPA 200.7	Less than	1000	ppb	7/21/16	08:41	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Calcium EPA 200.7	45300	100	ppb	7/21/16	08:41	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/19/16	14:13	MC
Molybdenum - EPA 200.8	13.7	1.0	ppb	7/22/16	09:17	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/9/16	12:53	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



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August 10, 2016

REPORT TO:
Mike Moore C221

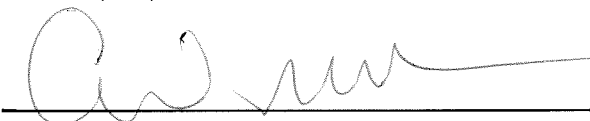
Sample ID: **AB22975 Will Sta GW 19D, T. Metals-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 15:00
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG19DTM

GW 19D

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/9/16	12:53	MC
Arsenic by ICP_MS EPA 200.8	2.7	1.0	ppb	8/9/16	12:53	MC
Barium (CWA) 200.7	102	10.0	ppb	7/21/16	08:41	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/21/16	08:41	MC
Boron - EPA 200.7	Less than	1000	ppb	7/21/16	08:41	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Calcium EPA 200.7	46000	100	ppb	7/21/16	08:41	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/19/16	14:13	MC
Molybdenum - EPA 200.8	14.2	1.0	ppb	7/22/16	09:17	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/9/16	12:53	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

August 10, 2016

REPORT TO:
Mike Moore C221

Sample ID: **AB22977 Will Sta GW 20D, T. Metals-NPDES/CCR**
 Date & Time Sampled: July 11, 2016 16:05
 Date & Time Submitted: July 15, 2016 09:55
 Collected by: ANDERSON,D Location Code: WIG20DTM

GW 20D

Login Record File: 160715002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/9/16	12:53	MC
Arsenic by ICP_MS EPA 200.8	4.4	1.0	ppb	8/9/16	12:53	MC
Barium (CWA) 200.7	110	10.0	ppb	7/21/16	08:41	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/21/16	08:41	MC
Boron - EPA 200.7	1900	1000	ppb	7/21/16	08:41	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Calcium EPA 200.7	182000	100	ppb	7/21/16	08:41	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/19/16	14:13	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	7/22/16	09:17	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/9/16	12:53	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/26/16	14:28	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C**

Williams Station FGD Pond C

Monitoring Well ID	Well Data			Gauging Date: 09/12/16				Final Water Quality Indicator Parameters					
	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Initial Gauging		Final Gauging		Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
				Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.						
GW-16	12.65	9.85	2.80	9.88	2.77	10.13	2.52	27.8	5.4	276	5.11	144	1.09
GW-17	12.12	12.12	0.00	8.64	3.48	8.69	3.43	24.5	6.5	2000	9.83	-105	1.86
GW-18	11.93	11.93	0.00	9.85	2.08	9.85	2.08	26.2	6.9	4170	5.09	-87	1.28
GW-19D	12.56	12.50	0.06	9.98	2.58	10.23	2.33	26.7	7.2	1220	5.05	-125	1.89
GW-20D	12.17	12.10	0.07	9.65	2.52	9.95	2.22	28.4	6.8	1630	5.13	-119	0.98

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 405664 GEL Work Order: 405664

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-17	Project: SCEG01516C
Sample ID: 405664001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 12-SEP-16 10:29	
Receive Date: 12-SEP-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.482	0.033	0.100	mg/L		1	MXL2	09/13/16	0307	1597951	1
Chloride		612	6.70	20.0	mg/L		100	MXL2	09/13/16	1716	1597951	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.80	2.00	10.0	ug/L	1.00	1	SKJ	09/14/16	0010	1597940	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.11	1.76	3.00	pCi/L			AXM6	09/22/16	1054	1598020	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.95	0.466	1.00	pCi/L			LXP1	09/21/16	0810	1598007	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	09/12/16	1735	1597939

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86.2	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17

Sample ID: 405664001

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: DUP	Project: SCEG01516C
Sample ID: 405664002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 12-SEP-16 10:40	
Receive Date: 12-SEP-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.507	0.033	0.100	mg/L		1	MXL2	09/13/16	0441	1597951	1
Chloride		527	6.70	20.0	mg/L		100	MXL2	09/13/16	1850	1597951	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	6.04	2.00	10.0	ug/L	1.00	1	SKJ	09/14/16	0034	1597940	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.21	3.00	pCi/L			AXM6	09/22/16	1054	1598020	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.77	0.539	1.00	pCi/L			LXP1	09/21/16	0810	1598007	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	09/12/16	1735	1597939

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"			68.3	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: DUP

Sample ID: 405664002

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 405664003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 12-SEP-16 11:32	
Receive Date: 12-SEP-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.580	0.033	0.100	mg/L		1	MXL2	09/13/16	0513	1597951	1
Chloride		1080	13.4	40.0	mg/L		200	MXL2	09/13/16	1922	1597951	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.3	2.00	10.0	ug/L	1.00	1	SKJ	09/14/16	0038	1597940	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.27	2.12	3.00	pCi/L			AXM6	09/22/16	1053	1598020	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.35	0.505	1.00	pCi/L			LXP1	09/21/16	0810	1598007	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	09/12/16	1735	1597939

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			74.2	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-18

Sample ID: 405664003

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Field Blank	Project: SCEG01516C
Sample ID: 405664004	Client ID: GEEL003
Matrix: Water	
Collect Date: 12-SEP-16 11:30	
Receive Date: 12-SEP-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride	J	0.0991	0.067	0.200	mg/L		1	MXL2	09/13/16	0647	1597951	1
Fluoride	U	ND	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	09/14/16	0042	1597940	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.43	3.00	pCi/L			AXM6	09/22/16	1053	1598020	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.597	0.483	1.00	pCi/L			LXP1	09/21/16	0810	1598007	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	09/12/16	1735	1597939

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			75.3	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-19D	Project: SCEG01516C
Sample ID: 405664005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 12-SEP-16 12:16	
Receive Date: 12-SEP-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.801	0.033	0.100	mg/L		1	MXL2	09/13/16	0718	1597951	1
Chloride		150	3.35	10.0	mg/L		50	MXL2	09/13/16	1953	1597951	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.13	2.00	10.0	ug/L	1.00	1	SKJ	09/14/16	0046	1597940	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.34	3.00	pCi/L			AXM6	09/22/16	1054	1598020	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.16	0.567	1.00	pCi/L			LXP1	09/21/16	0810	1598007	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	09/12/16	1735	1597939

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			72.9	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-19D
Sample ID: 405664005

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-20D	Project: SCEG01516C
Sample ID: 405664006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 12-SEP-16 13:00	
Receive Date: 12-SEP-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.262	0.033	0.100	mg/L		1	MXL2	09/13/16	0750	1597951	1
Chloride		375	6.70	20.0	mg/L		100	MXL2	09/13/16	2024	1597951	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	9.32	2.00	10.0	ug/L	1.00	1	SKJ	09/14/16	0050	1597940	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.22	3.00	pCi/L			AXM6	09/22/16	1054	1598020	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		10.3	0.460	1.00	pCi/L			LXP1	09/21/16	0845	1598007	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	09/12/16	1735	1597939

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			62.8	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-20D
Sample ID: 405664006

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-16	Project: SCEG01516C
Sample ID: 405664007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 12-SEP-16 14:00	
Receive Date: 12-SEP-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.404	0.033	0.100	mg/L		1	MXL2	09/13/16	0821	1597951	1
Chloride		36.0	0.670	2.00	mg/L		10	MXL2	09/13/16	2056	1597951	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	7.95	2.00	10.0	ug/L	1.00	1	SKJ	09/14/16	0054	1597940	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.96	3.00	pCi/L			AXM6	09/22/16	1054	1598020	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.15	0.387	1.00	pCi/L			LXP1	09/21/16	0845	1598007	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JP1	09/12/16	1735	1597939

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			77	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 26, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID:	GW-16	Project:	SCEG01516C
Sample ID:	405664007	Client ID:	GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
-----------	-----------	--------	----	----	-------	----	----	---------	------	------	-------	--------

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: September 26, 2016

Page 1 of 3

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 405664

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time	
Ion Chromatography												
Batch	1597951											
QC1203625776	405664001	DUP										
Chloride		612		611	mg/L	0.131		(0%-20%)	MXL2	09/13/16	17:47	
Fluoride		0.482		0.482	mg/L	0.104	^	(+/-0.100)		09/13/16	03:39	
QC1203625775	LCS											
Chloride	5.00			4.72	mg/L			94.4	(90%-110%)	09/13/16	02:36	
Fluoride	2.50			2.50	mg/L			99.9	(90%-110%)			
QC1203625774	MB											
Chloride			U	ND	mg/L					09/13/16	02:04	
Fluoride			U	ND	mg/L							
QC1203625777	405664001	PS										
Chloride	5.00	6.12		11.5	mg/L			108	(90%-110%)	09/13/16	18:19	
Fluoride	2.50	0.482		2.79	mg/L			92.3	(90%-110%)	09/13/16	04:10	
Metals Analysis - ICPMS												
Batch	1597940											
QC1203625739	405664001	DUP										
Lithium		J	5.80	J	5.48	ug/L	5.71	^	(+/-10.0)	SKJ	09/14/16	00:14
QC1203625738	LCS											
Lithium	50.0			51.7	ug/L			103	(80%-120%)	09/14/16	00:06	
QC1203625737	MB											
Lithium			U	ND	ug/L					09/14/16	00:02	
QC1203625740	405664001	MS										
Lithium	50.0	J	5.80		48.2	ug/L		84.7	(75%-125%)	09/14/16	00:18	
QC1203625741	405664001	SDILT										
Lithium		J	5.80	U	ND	ug/L	N/A		(0%-10%)	09/14/16	00:22	
Rad Gas Flow												
Batch	1598020											
QC1203625947	405664002	DUP										
Radium-228		U	2.18	U	1.43	pCi/L	N/A		N/A	AXM6	09/22/16	10:54
QC1203625948	LCS											

GEL LABORATORIES LLC

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QC Summary

Workorder: 405664

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1598020										
Radium-228	44.2			38.1	pCi/L		86.4	(75%-125%)		09/22/16	10:54
QC1203625946	MB										
Radium-228			U	1.05	pCi/L				AXM6	09/22/16	10:54
Rad Ra-226											
Batch	1598007										
QC1203625907	405664006 DUP										
Radium-226		10.3		9.05	pCi/L	13		(0%-20%)	LXP1	09/21/16	08:45
QC1203625909	LCS										
Radium-226	24.4			21.7	pCi/L		89.1	(75%-125%)		09/21/16	08:45
QC1203625906	MB										
Radium-226			U	0.104	pCi/L					09/21/16	08:45
QC1203625908	405664006 MS										
Radium-226	122	10.3		107	pCi/L		79.3	(75%-125%)		09/21/16	08:45

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FA Failed analysis.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.

GEL LABORATORIES LLC

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QC Summary

Workorder: 405664

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N1		See case narrative									
ND		Analyte concentration is not detected above the detection limit									
NJ		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Q		One or more quality control criteria have not been met. Refer to the applicable narrative or DER.									
R		Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.									
R		Sample results are rejected									
U		Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.									
UI		Gamma Spectroscopy--Uncertain identification									
UJ		Gamma Spectroscopy--Uncertain identification									
UL		Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.									
X		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y		Other specific qualifiers were required to properly define the results. Consult case narrative.									
Z		Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.									
^		RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
d		5-day BOD--The 2:1 depletion requirement was not met for this sample									
e		5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes									
h		Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 30, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23606**

Williams Station GW 17-NPDES/CCR

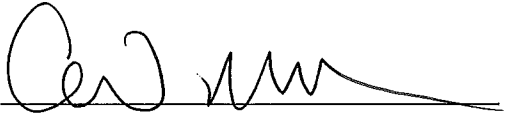
Date & Time Sampled: September 12, 2016 10:29
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG17TDS

GW 17

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1276	10	mg/L	9/22/16 05:33	LS
Sulfates by IC EPA 300.0	170	5.0	mg/L	9/22/16 05:33	LS
Total Dissolved Solid-SM2540C	3368	2.0	mg/L	9/16/16 14:07	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 30, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23607**

Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: September 12, 2016 10:40

Date & Time Submitted: September 15, 2016 11:05

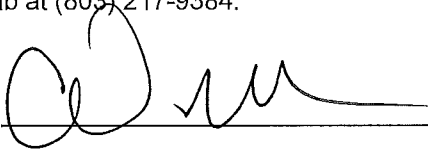
Collected by: C.SANDEL

Location Code: WIGDUPTDS

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1272	10.0	mg/L	9/22/16 05:33	LS
Sulfates by IC EPA 300.0	163	5.0	mg/L	9/22/16 05:33	LS
Total Dissolved Solid-SM2540C	3307	2.0	mg/L	9/16/16 14:07	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
2102 North Lake Drive
Columbia, SC 29212
Tel: (803)217-9384
Fax: (803) 217-9911

September 30, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23608**

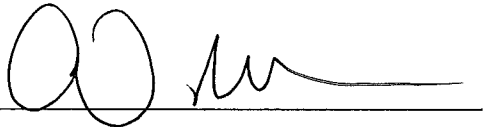
Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: September 12, 2016 11:30
Date & Time Submitted: September 15, 2016 11:05
Collected by: C.SANDEL Location Code: WIGFBTDS

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	LESS THAN	0.50	mg/L	9/22/16 05:33	LS
Sulfates by IC EPA 300.0	LESS THAN	0.50	mg/L	9/22/16 05:33	LS
Total Dissolved Solid-SM2540C	7.0	2.0	mg/L	9/16/16 14:07	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 30, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23609**

Williams Station GW 18-NPDES/CCR

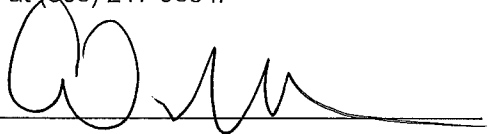
Date & Time Sampled: September 12, 2016 11:32
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG18TDS

GW 18

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1112	10	mg/L	9/22/16 05:33	LS
Sulfates by IC EPA 300.0	36.6	10.0	mg/L	9/22/16 05:33	LS
Total Dissolved Solid-SM2540C	2591	2.0	mg/L	9/16/16 14:07	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 30, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23610**

Williams Station GW 19D-NPDES/CCR

Date & Time Sampled: September 12, 2016 12:16

Date & Time Submitted: September 15, 2016 11:05

Collected by: C.SANDEL

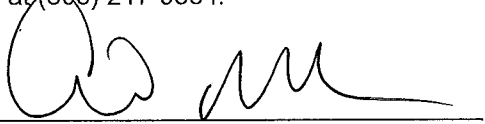
Location Code: WIG19DTDS

GW 19D

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	154	2.5	mg/L	9/22/16 05:33	LS
Sulfates by IC EPA 300.0	3.10	2.5	mg/L	9/22/16 05:33	LS
Total Dissolved Solid-SM2540C	756	2.0	mg/L	9/16/16 14:07	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 30, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23611**

Williams Station GW 20D-NPDES/CCR

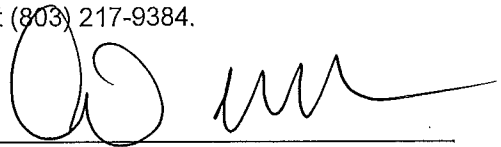
Date & Time Sampled: September 12, 2016 13:00
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG20DTDS

GW 20D

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	408	5.0	mg/L	9/22/16 05:33	LS
Sulfates by IC EPA 300.0	11.7	5.0	mg/L	9/22/16 05:33	LS
Total Dissolved Solid-SM2540C	1151	2.0	mg/L	9/16/16 14:07	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 30, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23612**

Williams Station GW 16-NPDES/CCR


Date & Time Sampled: September 12, 2016 14:00
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG16TDS

GW 16

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	37.0	0.50	mg/L	9/22/16 05:33	LS
Sulfates by IC EPA 300.0	14.2	0.50	mg/L	9/22/16 05:33	LS
Total Dissolved Solid-SM2540C	213	2.0	mg/L	9/16/16 14:07	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 20, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23631 Will Sta GW 17, T. Metals-NPDES/CCR**
 Date & Time Sampled: September 12, 2016 10:29
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG17TM

GW 17

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Arsenic by ICP_MS EPA 200.8	36.8	1.0	ppb	9/20/16	11:30	MC
Barium (CWA) 200.7	338	10.0	ppb	9/20/16	12:28	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	9/20/16	12:28	CDB
Boron - EPA 200.7	4190	1000	ppb	9/20/16	12:28	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Calcium EPA 200.7	318000	100	ppb	9/20/16	12:28	CDB
Chromium by ICP_MS EPA 200.8	1.3	1.0	ppb	9/20/16	11:30	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/20/16	18:35	MC
Molybdenum - EPA 200.8	2.1	1.0	ppb	9/20/16	11:30	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/20/16	11:30	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 20, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23632 Will Sta Duplicate, T.**
 Date & Time Sampled: September 12, 2016 10:40
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIGDUPTM

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Arsenic by ICP_MS EPA 200.8	34.9	1.0	ppb	9/20/16	11:30	MC
Barium (CWA) 200.7	357	10.0	ppb	9/20/16	12:28	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	9/20/16	12:28	CDB
Boron - EPA 200.7	4590	1000	ppb	9/20/16	12:28	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Calcium EPA 200.7	351000	100	ppb	9/20/16	12:28	CDB
Chromium by ICP_MS EPA 200.8	1.0	1.0	ppb	9/20/16	11:30	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/20/16	18:35	MC
Molybdenum - EPA 200.8	2.2	1.0	ppb	9/20/16	11:30	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/20/16	11:30	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 20, 2016

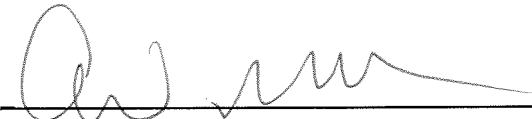
REPORT TO:
Mike Moore

Sample ID: **AB23633** Will Sta Field Blank, T.
 Date & Time Sampled: September 12, 2016 11:30
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIGFBTM

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Barium (CWA) 200.7	Less than	10.0	ppb	9/20/16	12:28	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	9/20/16	12:28	CDB
Boron - EPA 200.7	Less than	1000	ppb	9/20/16	12:28	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Calcium EPA 200.7	Less than	100	ppb	9/20/16	12:28	CDB
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/20/16	18:35	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/20/16	11:30	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



Central Laboratory (P-08)
2102 North Lake Drive
Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 20, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23634 Will Sta GW 18, T. Metals-NPDES/CCR**
 Date & Time Sampled: September 12, 2016 11:32
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG18TM

GW 18

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Arsenic by ICP_MS EPA 200.8	2.0	1.0	ppb	9/20/16	11:30	MC
Barium (CWA) 200.7	451	10.0	ppb	9/20/16	12:28	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	9/20/16	12:28	CDB
Boron - EPA 200.7	1910	1000	ppb	9/20/16	12:28	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Calcium EPA 200.7	123000	100	ppb	9/20/16	12:28	CDB
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/20/16	18:35	MC
Molybdenum - EPA 200.8	1.0	1.0	ppb	9/20/16	11:30	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/20/16	11:30	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 20, 2016

REPORT TO:
Mike Moore

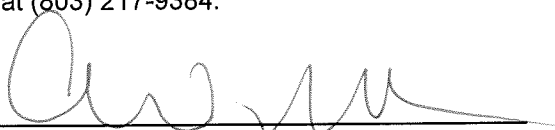
Sample ID: **AB23635 Will Sta GW 19D, T. Metals-NPDES/CCR**
 Date & Time Sampled: September 12, 2016 12:16
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG19DTM

GW 19D

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Arsenic by ICP_MS EPA 200.8	2.7	1.0	ppb	9/20/16	11:30	MC
Barium (CWA) 200.7	110	10.0	ppb	9/20/16	12:28	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	9/20/16	12:28	CDB
Boron - EPA 200.7	Less than	1000	ppb	9/20/16	12:28	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Calcium EPA 200.7	46200	100	ppb	9/20/16	12:28	CDB
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/20/16	18:35	MC
Molybdenum - EPA 200.8	16.2	1.0	ppb	9/20/16	11:30	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/20/16	11:30	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 20, 2016

REPORT TO:
Mike Moore

Sample ID: **AB23636 Will Sta GW 20D, T. Metals-NPDES/CCR**
 Date & Time Sampled: September 12, 2016 13:00
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG20DTM

GW 20D

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Arsenic by ICP_MS EPA 200.8	1.1	1.0	ppb	9/20/16	11:30	MC
Barium (CWA) 200.7	110	10.0	ppb	9/20/16	12:28	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	9/20/16	12:28	CDB
Boron - EPA 200.7	1930	1000	ppb	9/20/16	12:28	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Calcium EPA 200.7	181000	100	ppb	9/20/16	12:28	CDB
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/20/16	18:35	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/20/16	11:30	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 20, 2016

REPORT TO:
Mike Moore

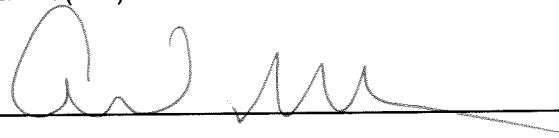
Sample ID: **AB23637 Will Sta GW 16, T. Metals-NPDES/CCR**
 Date & Time Sampled: September 12, 2016 14:00
 Date & Time Submitted: September 15, 2016 11:05
 Collected by: C.SANDEL Location Code: WIG16TM

GW 16

Login Record File: 160915002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	MDL	Units	Completed Analysis Date & Time		Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Arsenic by ICP_MS EPA 200.8	2.6	1.0	ppb	9/20/16	11:30	MC
Barium (CWA) 200.7	119	10.0	ppb	9/20/16	12:28	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	9/20/16	12:28	CDB
Boron - EPA 200.7	Less than	1000	ppb	9/20/16	12:28	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Calcium EPA 200.7	31000	100	ppb	9/20/16	12:28	CDB
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Cobalt by ICP_MS EPA 200.8	17.6	1.0	ppb	9/20/16	11:30	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/20/16	18:35	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/20/16	11:30	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/20/16	11:30	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved by: 

Williams Station FGD Pond C
EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C

Gauging Date: 11/28/2016													
Monitoring Well ID	Well Data			Initial Gauging		Final Gauging		Final Water Quality Indicator Parameters					
	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
GW-16	12.65	9.85	2.80	10.33	2.32	10.47	2.18	23.19	6.3	379	5.87	86	1.19
GW-17	12.12	12.12	0.00	8.63	3.49	8.69	3.43	22.35	6.6	3510	5.17	98	0.53
GW-18	11.93	11.93	0.00	8.72	3.21	9.33	2.60	22.83	7.0	4240	6.51	108	1.13
GW-19D	12.56	12.50	0.06	9.28	3.28	9.60	2.96	22.35	7.4	1220	5.82	155	1.71
GW-20D	12.17	12.10	0.07	9.09	3.08	9.44	2.73	23.98	6.9	1740	7.02	114	1.05
GW-21	13.80	11.28	2.52	11.30	2.5	11.97	1.83	22.38	6.1	558	9.61	63	0.91

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GEEL003 GEL Engineering, LLC

Client SDG: 411381 GEL Work Order: 411381

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- H Analytical holding time was exceeded
- J Value is estimated
- U Analyte was analyzed for but not detected above the Lc
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-4A	Project: SCEG01516C
Sample ID: 411381001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 28-NOV-16 09:39	
Receive Date: 28-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride	U	ND	0.165	0.500	mg/L		5	MAR1	12/01/16	1000	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium		29.4	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0013	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.38	1.35	3.00	pCi/L			AXM6	12/07/16	1116	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		10.7	0.618	1.00	pCi/L			LXP1	12/08/16	0950	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.6	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-6R	Project: SCEG01516C
Sample ID: 411381002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 28-NOV-16 10:50	
Receive Date: 28-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride	U	ND	0.165	0.500	mg/L		5	MAR1	12/01/16	1029	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium		21.1	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0038	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.14	3.00	pCi/L			AXM6	12/07/16	1116	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.26	0.556	1.00	pCi/L			LXP1	12/08/16	0950	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			97.1	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-7R Project: SCEG01516C
Sample ID: 411381003 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 28-NOV-16 11:31
Receive Date: 28-NOV-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.251	0.033	0.100	mg/L		1	MAR1	11/30/16	1832	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium		11.2	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0042	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.38	3.00	pCi/L			AXM6	12/07/16	1116	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.03	0.726	1.00	pCi/L			LXP1	12/08/16	0950	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			99.3	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-8	Project: SCEG01516C
Sample ID: 411381004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 28-NOV-16 12:05	
Receive Date: 28-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.160	0.033	0.100	mg/L		1	MAR1	11/30/16	1901	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	U	ND	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0045	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		4.57	1.55	3.00	pCi/L			AXM6	12/07/16	1116	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.18	0.382	1.00	pCi/L			LXP1	12/08/16	0950	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.1	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Field Blank	Project: SCEG01516C
Sample ID: 411381005	Client ID: GEEL003
Matrix: Water	
Collect Date: 28-NOV-16 12:10	
Receive Date: 28-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	11/30/16	1930	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	U	ND	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0048	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.82	3.00	pCi/L			AXM6	12/07/16	1116	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.03	0.718	1.00	pCi/L			LXP1	12/08/16	0950	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.6	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-1R	Project: SCEG01516C
Sample ID: 411381006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 28-NOV-16 12:45	
Receive Date: 28-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.134	0.033	0.100	mg/L		1	MAR1	11/30/16	1958	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium		17.1	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0051	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.66	3.00	pCi/L			AXM6	12/07/16	1119	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.20	0.350	1.00	pCi/L			LXP1	12/08/16	0950	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.1	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-2R	Project: SCEG01516C
Sample ID: 411381007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 28-NOV-16 13:29	
Receive Date: 28-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.505	0.033	0.100	mg/L		1	MAR1	11/30/16	2027	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium		10.7	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0054	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.79	1.56	3.00	pCi/L			AXM6	12/07/16	1119	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.30	0.714	1.00	pCi/L			LXP1	12/08/16	0950	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.1	(15%-125%)

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-1G	Project: SCEG01516C
Sample ID: 411381008	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 28-NOV-16 14:37	
Receive Date: 28-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Anions "As Received"												
Fluoride		0.386	0.033	0.100	mg/L		1	MAR1	11/30/16	2154	1619954	1
Metals Analysis-ICP-MS												
SW846 3005A/6020A Liquid "As Received"												
Lithium	J	4.89	3.00	10.0	ug/L	1.00	1	PRB	12/07/16	0057	1619715	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.35	3.00	pCi/L			AXM6	12/07/16	1119	1619857	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.03	0.655	1.00	pCi/L			LXP1	12/08/16	1025	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	SXW1	11/29/16	0703	1619714

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3005A/6020A	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.5	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: December 12, 2016

Page 1 of 3

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 411381

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1619954										
QC1203679646	411381008	DUP									
Fluoride		0.386		0.383	mg/L	0.858	^	(+/-0.100)	MAR1	11/30/16	22:23
QC1203679645	LCS										
Fluoride	2.50			2.52	mg/L			(90%-110%)		11/30/16	17:05
QC1203679644	MB										
Fluoride			U	ND	mg/L					11/30/16	16:36
QC1203679647	411381008	PS									
Fluoride	2.50	0.386		2.86	mg/L			(90%-110%)		11/30/16	22:52
Metals Analysis - ICPMS											
Batch	1619715										
QC1203678976	411381001	DUP									
Lithium		29.4		29.3	ug/L	0.211	^	(+/-10.0)	PRB	12/07/16	00:16
QC1203678975	LCS										
Lithium	50.0			57.0	ug/L			(80%-120%)		12/07/16	00:10
QC1203678974	MB										
Lithium			U	ND	ug/L					12/07/16	00:07
QC1203678977	411381001	MS									
Lithium	50.0	29.4		79.4	ug/L			(75%-125%)		12/07/16	00:19
QC1203678978	411381001	SDILT									
Lithium		29.4	J	5.94	ug/L	1.08		(0%-10%)		12/07/16	00:26
Rad Gas Flow											
Batch	1619857										
QC1203679349	410294008	DUP									
Radium-228			U	1.06	U	0.0699	pCi/L	N/A	N/AAXM6	12/07/16	11:19
QC1203679350	LCS										
Radium-228	21.5			22.6	pCi/L			(75%-125%)		12/07/16	11:19
QC1203679348	MB										
Radium-228				0.991	pCi/L					12/07/16	11:19
Rad Ra-226											
Batch	1620646										
QC1203681508	411381001	DUP									

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2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 411381

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226											
Batch	1620646										
Radium-226		10.7		9.43	pCi/L	12.7		(0%-20%)	LXP1	12/08/16	10:55
QC1203681510	LCS										
Radium-226	24.4			18.7	pCi/L		76.8	(75%-125%)		12/08/16	11:25
QC1203681507	MB										
Radium-226			U	0.119	pCi/L					12/08/16	10:55
QC1203681509	411381001	MS									
Radium-226	122	10.7		137	pCi/L		104	(75%-125%)		12/08/16	10:55

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FA Failed analysis.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- NI See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected

GEL LABORATORIES LLC

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QC Summary

Workorder: 411381

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
U		Analyte was analyzed for but not detected above the Lc									
U		Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.									
UI		Gamma Spectroscopy--Uncertain identification									
UJ		Gamma Spectroscopy--Uncertain identification									
UL		Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.									
X		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y		Other specific qualifiers were required to properly define the results. Consult case narrative.									
Z		Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.									
^		RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
d		5-day BOD--The 2:1 depletion requirement was not met for this sample									
e		5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes									
h		Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 411442 GEL Work Order: 411442

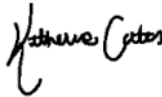
The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- H Analytical holding time was exceeded
- J Value is estimated
- U Analyte was analyzed for but not detected above the Lc
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-17	Project: SCEG01516C
Sample ID: 411442001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 29-NOV-16 08:46	
Receive Date: 29-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.337	0.033	0.100	mg/L		1	MAR1	12/02/16	1937	1620185	1
Chloride		1140	13.4	40.0	mg/L		200	MAR1	12/07/16	1230	1620185	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	9.50	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1829	1620118	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.98	1.29	3.00	pCi/L			AXM6	12/09/16	1110	1620580	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.09	0.295	1.00	pCi/L			LXP1	12/08/16	1025	1620646	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	11/29/16	1650	1620117

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			97.3	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17

Sample ID: 411442001

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: DUP	Project: SCEG01516C
Sample ID: 411442002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 29-NOV-16 09:00	
Receive Date: 29-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.326	0.033	0.100	mg/L		1	MAR1	12/02/16	2006	1620185	1
Chloride		1260	13.4	40.0	mg/L		200	MAR1	12/07/16	1259	1620185	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	9.82	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1846	1620118	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.35	1.54	3.00	pCi/L			AXM6	12/09/16	1110	1620580	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.39	0.388	1.00	pCi/L			LXP1	12/08/16	1025	1620646	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	11/29/16	1650	1620117

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"			87.7	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: DUP

Sample ID: 411442002

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 411442003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 29-NOV-16 09:44	
Receive Date: 29-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.588	0.033	0.100	mg/L		1	MAR1	12/02/16	2035	1620185	1
Chloride		1140	13.4	40.0	mg/L		200	MAR1	12/07/16	1327	1620185	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.8	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1849	1620118	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.48	3.00	pCi/L			AXM6	12/09/16	1110	1620580	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.35	0.626	1.00	pCi/L			LXP1	12/08/16	1025	1620646	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	11/29/16	1650	1620117

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.6	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-18

Project: SCEG01516C

Sample ID: 411442003

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-19D	Project: SCEG01516C
Sample ID: 411442004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 29-NOV-16 10:34	
Receive Date: 29-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.886	0.033	0.100	mg/L		1	MAR1	12/02/16	2104	1620185	1
Chloride		157	3.35	10.0	mg/L		50	MAR1	12/07/16	1356	1620185	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.16	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1852	1620118	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.65	3.00	pCi/L			AXM6	12/09/16	1110	1620580	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	ND	0.349	1.00	pCi/L			LXP1	12/08/16	1025	1620646	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	11/29/16	1650	1620117

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			85.3	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-19D
Sample ID: 411442004

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-20D	Project: SCEG01516C
Sample ID: 411442005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 29-NOV-16 11:28	
Receive Date: 29-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.317	0.033	0.100	mg/L		1	MAR1	12/02/16	2133	1620185	1
Chloride		380	6.70	20.0	mg/L		100	MAR1	12/07/16	1425	1620185	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	8.96	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1854	1620118	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.21	3.00	pCi/L			AXM6	12/09/16	1110	1620580	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.57	0.759	1.00	pCi/L			LXP1	12/08/16	1025	1620646	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	11/29/16	1650	1620117

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			100	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-20D
Sample ID: 411442005

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: December 12, 2016

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-21	Project: SCEG01516C
Sample ID: 411442006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 29-NOV-16 12:43	
Receive Date: 29-NOV-16	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride		4.52	0.067	0.200	mg/L		1	MAR1	12/02/16	2202	1620185	1
Fluoride		0.128	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1857	1620118	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.09	3.00	pCi/L			AXM6	12/09/16	1110	1620580	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.44	0.293	1.00	pCi/L			LXP1	12/08/16	1055	1620646	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	11/29/16	1650	1620117

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			69.4	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: December 12, 2016

Page 1 of 3

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 411442

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1620185										
QC1203680315	411442006	DUP									
Chloride		4.52		4.48	mg/L	0.951		(0%-20%)	MAR1	12/02/16	22:31
Fluoride		0.128		0.132	mg/L	3.39	^	(+/-0.100)			
QC1203680314	LCS										
Chloride	5.00			5.07	mg/L			101 (90%-110%)		12/02/16	19:08
Fluoride	2.50			2.62	mg/L			105 (90%-110%)			
QC1203680313	MB										
Chloride			U	ND	mg/L					12/02/16	18:39
Fluoride			U	ND	mg/L						
QC1203680316	411442006	PS									
Chloride	5.00	4.52		9.80	mg/L			106 (90%-110%)		12/02/16	23:00
Fluoride	2.50	0.128		2.49	mg/L			94.3 (90%-110%)			
Metals Analysis - ICPMS											
Batch	1620118										
QC1203680116	411442001	DUP									
Lithium		J 9.50	J	9.45	ug/L	0.549	^	(+/-10.0)	BAJ	11/30/16	18:31
QC1203680115	LCS										
Lithium	50.0			49.4	ug/L			98.8 (80%-120%)		11/30/16	18:26
QC1203680114	MB										
Lithium			U	ND	ug/L					11/30/16	18:23
QC1203680117	411442001	MS									
Lithium	50.0	J 9.50		55.7	ug/L			92.4 (75%-125%)		11/30/16	18:34
QC1203680118	411442001	SDILT									
Lithium		J 9.50	U	ND	ug/L	N/A		(0%-10%)		11/30/16	18:37
Rad Gas Flow											
Batch	1620580										
QC1203681318	411442006	DUP									
Radium-228		U 1.94		1.66	pCi/L	15.5		(0% - 100%)	AXM6	12/09/16	11:13
QC1203681319	LCS										

GEL LABORATORIES LLC

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QC Summary

Workorder: 411442

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1620580										
Radium-228	21.5			25.2	pCi/L		117	(75%-125%)		12/09/16	11:13
QC1203681317											
Radium-228			U	-1.08	pCi/L				AXM6	12/09/16	11:10
Rad Ra-226											
Batch	1620646										
QC1203681508		411381001	DUP								
Radium-226				10.7	pCi/L	12.7		(0%-20%)	LXP1	12/08/16	10:55
QC1203681510		LCS									
Radium-226	24.4			18.7	pCi/L		76.8	(75%-125%)		12/08/16	11:25
QC1203681507		MB									
Radium-226			U	0.119	pCi/L					12/08/16	10:55
QC1203681509		411381001	MS								
Radium-226	122			10.7	pCi/L		104	(75%-125%)		12/08/16	10:55

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FA Failed analysis.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.

GEL LABORATORIES LLC

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QC Summary

Workorder: 411442

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time	
N1												See case narrative
ND												Analyte concentration is not detected above the detection limit
NJ												Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q												One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R												Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
R												Sample results are rejected
U												Analyte was analyzed for but not detected above the Lc
U												Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
UI												Gamma Spectroscopy--Uncertain identification
UJ												Gamma Spectroscopy--Uncertain identification
UL												Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X												Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y												Other specific qualifiers were required to properly define the results. Consult case narrative.
Z												Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^												RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d												5-day BOD--The 2:1 depletion requirement was not met for this sample
e												5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes
h												Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24754**

Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: November 28, 2016 12:10

Date & Time Submitted: November 30, 2016 09:10

Collected by: C.SANDEL Location Code: WIGFBTDS

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	less than	0.50	mg/L	12/7/16 18:40	EB
pH by SM4500HB	7.50	0.00	S.U.	12/1/16 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	less than	0.50	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	57	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24757**

Williams Station GW 16-NPDES/CCR

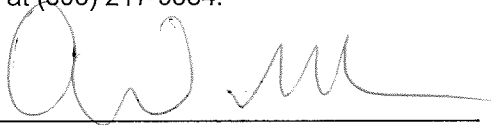
Date & Time Sampled: November 28, 2016 14:37
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG16TDS

GW 16

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	38.3	0.50	mg/L	12/7/16 18:40	EB
pH by SM4500HB Holding Time of 15 minutes has been exceeded.	6.31	0.00	S.U.	12/1/16 14:00	BF
Sulfates by IC EPA 300.0	16.7	0.50	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	272	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24758**

Williams Station GW 17-NPDES/CCR

Date & Time Sampled: November 29, 2016 08:46

Date & Time Submitted: November 30, 2016 09:10

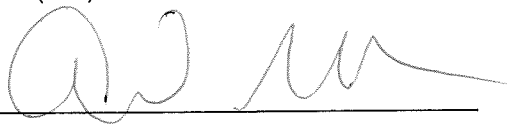
Collected by: C.SANDEL Location Code: WIG17TDS

GW 17

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1341	10	mg/L	12/7/16 18:40	EB
pH by SM4500HB	6.51	0.00	S.U.	12/1/16 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	172	5.0	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	3117	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24759**

Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: November 29, 2016 09:00
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIGDUPTDS

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1298	10	mg/L	12/7/16 18:40	EB
pH by SM4500HB	6.55	0.00	S.U.	12/1/16 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	167	5.0	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	3171	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24760**

Williams Station GW 18-NPDES/CCR

Date & Time Sampled: November 29, 2016 09:44

Date & Time Submitted: November 30, 2016 09:10

Collected by: C.SANDEL

Location Code: WIG18TDS

GW 18

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1235	10	mg/L	12/7/16 18:40	EB
pH by SM4500HB	7.04	0.00	S.U.	12/1/16 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	31.7	10	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	2654	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24761**

Williams Station GW 19D-NPDES/CCR

Date & Time Sampled: November 29, 2016 10:34
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG19DTDS

GW 19D

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	178	2.5	mg/L	12/7/16 18:40	EB
pH by SM4500HB	7.57	0.00	S.U.	12/1/16 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	2.64	2.5	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	795	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24762**

Williams Station GW 20D-NPDES/CCR

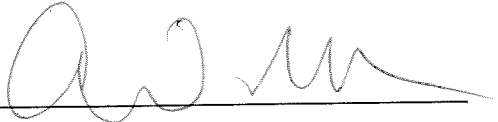
Date & Time Sampled: November 29, 2016 11:28
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG20DTDS

GW 20D

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	435	5.0	mg/L	12/7/16 18:40	EB
pH by SM4500HB	7.08	0.00	S.U.	12/1/16 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	8.01	5.0	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	1091	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 08, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24763**

Williams Station GW 21-CCR

Date & Time Sampled: November 29, 2016 12:43
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG21TDS

GW 21

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.35	2.5	mg/L	12/7/16 18:40	EB
pH by SM4500HB	6.52	0.00	S.U.	12/1/16 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	12.5	5.0	mg/L	12/7/16 18:40	EB
Total Dissolved Solid-SM2540C	495	2.0	mg/L	12/2/16 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
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 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24768**

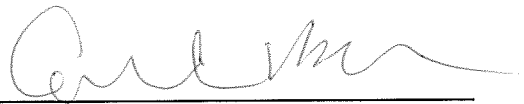
Will Sta Field Blank, T. Metals-NPDES/CCR

Date & Time Sampled: November 28, 2016 12:10
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIGFBTM

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 10:59	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Barium (CWA) 200.7	Less than	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	Less than	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Calcium EPA 200.7	Less than	100	ppb	12/6/16 11:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	12/6/16 11:51	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 10:59	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24771**

Will Sta GW 16, T. Metals-NPDES/CCR

Date & Time Sampled: November 28, 2016 14:37
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG16TM

GW 16

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 10:59	MC
Arsenic by ICP_MS EPA 200.8	2.5	1.0	ppb	12/5/16 10:59	MC
Barium (CWA) 200.7	Less than	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	Less than	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Calcium EPA 200.7	47900	1000	ppb	12/6/16 11:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Cobalt by ICP_MS EPA 200.8	17.1	1.0	ppb	12/5/16 10:59	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	12/6/16 11:51	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 10:59	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24772**

Will Sta GW 17, T. Metals-NPDES/CCR

Date & Time Sampled: November 29, 2016 08:46
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG17TM

GW 17

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 10:59	MC
Arsenic by ICP_MS EPA 200.8	16.2	1.0	ppb	12/5/16 10:59	MC
Barium (CWA) 200.7	425	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	8235	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Calcium EPA 200.7	567000	2000	ppb	12/6/16 11:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Lithium (CWA) 200.7	Less than	20.0	ppb	12/6/16 11:51	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	1.4	1.0	ppb	12/5/16 10:59	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 10:59	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24773**


Will Sta Duplicate, T. Metals-NPDES/CCR

Date & Time Sampled: November 29, 2016 09:00
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIGDUPTM

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 10:59	MC
Arsenic by ICP_MS EPA 200.8	16.8	1.0	ppb	12/5/16 10:59	MC
Barium (CWA) 200.7	429	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	8116	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Calcium EPA 200.7	545000	1000	ppb	12/6/16 11:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC
Lithium (CWA) 200.7	12.3	10.0	ppb	12/6/16 11:51	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	1.4	1.0	ppb	12/5/16 10:59	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 10:59	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 10:59	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24774**

Will Sta GW 18, T. Metals-NPDES/CCR

Date & Time Sampled: November 29, 2016 09:44
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG18TM

GW 18

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 11:24	MC
Arsenic by ICP_MS EPA 200.8	2.2	1.0	ppb	12/5/16 11:24	MC
Barium (CWA) 200.7	389	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	1594	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Calcium EPA 200.7	103000	1000	ppb	12/6/16 12:00	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Lithium (CWA) 200.7	11.9	10.0	ppb	12/6/16 12:00	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 11:24	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24775**

Will Sta GW 19D, T. Metals-NPDES/CCR

Date & Time Sampled: November 29, 2016 10:34
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG19DTM

GW 19D

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 11:24	MC
Arsenic by ICP_MS EPA 200.8	2.6	1.0	ppb	12/5/16 11:24	MC
Barium (CWA) 200.7	102	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	Less than	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Calcium EPA 200.7	41000	1000	ppb	12/6/16 12:00	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	12/6/16 12:00	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	13.8	1.0	ppb	12/5/16 11:24	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 11:24	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24776**

Will Sta GW 20D, T. Metals-NPDES/CCR

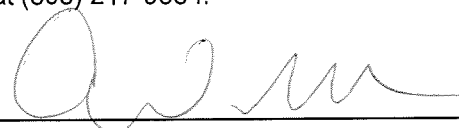
Date & Time Sampled: November 29, 2016 11:28
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG20DTM

GW 20D

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 11:24	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Barium (CWA) 200.7	104	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	1718	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Calcium EPA 200.7	169000	1000	ppb	12/6/16 12:00	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	12/6/16 12:00	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 11:24	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

December 06, 2016

REPORT TO:
Mike Moore

Sample ID: **AB24777**

Will Sta GW 21, T. Metals-NPDES/CCR


Date & Time Sampled: November 29, 2016 12:43
 Date & Time Submitted: November 30, 2016 09:10
 Collected by: C.SANDEL Location Code: WIG21TM2

GW 21

Login Record File: 161130002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS EPA 200.8	Less than	20	ppb	12/5/16 11:24	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Barium (CWA) 200.7	48	10	ppb	12/1/16 15:36	PRC
Beryllium EPA 200.7	Less than	2	ppb	12/1/16 15:36	PRC
Boron - EPA 200.7	Less than	1000	ppb	12/1/16 15:36	PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Calcium EPA 200.7	158000	100	ppb	12/6/16 12:00	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Cobalt by ICP_MS EPA 200.8	3.4	1.0	ppb	12/5/16 11:24	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	12/6/16 12:00	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	12/2/16 14:12	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	12/5/16 11:24	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	12/5/16 11:24	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C**

Williams Station FGD Pond C

				Gauging Date: 1/23-24/17									
Well Data				Initial Gauging		Final Gauging		Final Water Quality Indicator Parameters					
Monitoring Well ID	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
GW-16	12.65	9.85	2.80	8.99	3.66	9.15	3.50	19.4	5.8	408	7.81	57.7	0.44
GW-17	12.12	12.12	0.00	8.26	3.86	8.27	3.85	20.6	6.4	2515	9.15	-74.4	1.06
GW-18	11.93	11.93	0.00	9.21	2.72	9.22	2.71	20.8	6.9	4699	7.88	-90.6	0.61
GW-19D	12.56	12.50	0.06	9.66	2.90	9.83	2.73	20.4	7.3	1345	6.30	-123	0.69
GW-20D	12.17	12.10	0.07	9.31	2.86	9.56	2.61	21.9	6.7	1894	7.24	-59.3	0.79
GW-21	13.80	11.28	2.52	9.34	4.46	9.83	3.97	19.2	5.8	447	9.79	27.1	0.47

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 414833 GEL Work Order: 414833

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- H Analytical holding time was exceeded
- J Value is estimated
- U Analyte was analyzed for but not detected above the Lc
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-4A	Project: SCEG01516C
Sample ID: 414833001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 09:21	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride	U	ND	0.330	1.00	mg/L		10	MXL2	01/25/17	1240	1633687	1
Chloride		2160	33.5	100	mg/L		500	MXL2	01/25/17	1308	1633687	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		27.6	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2323	1633589	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.96	1.61	3.00	pCi/L			AXM6	01/30/17	0907	1633606	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		10.2	0.420	1.00	pCi/L			LXP1	02/01/17	0806	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86.7	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-4A
Sample ID: 414833001

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-6R	Project: SCEG01516C
Sample ID: 414833002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 10:37	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride	U	ND	0.330	1.00	mg/L		10	MXL2	01/25/17	1337	1633687	1
Chloride		1890	33.5	100	mg/L		500	MXL2	01/25/17	1406	1633687	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		20.3	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2327	1633589	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.59	3.00	pCi/L			AXM6	01/30/17	0907	1633606	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.38	0.180	1.00	pCi/L			LXP1	02/01/17	0806	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"			81.2	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-6R

Sample ID: 414833002

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-7R	Project: SCEG01516C
Sample ID: 414833003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 11:18	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.229	0.033	0.100	mg/L		1	MXL2	01/24/17	1925	1633687	1
Chloride		407	6.70	20.0	mg/L		100	MXL2	01/25/17	1435	1633687	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		12.4	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2331	1633589	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.70	3.00	pCi/L			AXM6	01/30/17	0907	1633606	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.94	0.369	1.00	pCi/L			LXP1	02/01/17	0806	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			83.8	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-7R
Sample ID: 414833003

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Field Blank	Project: SCEG01516C
Sample ID: 414833004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 11:45	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride	J	0.0999	0.067	0.200	mg/L		1	MXL2	01/24/17	1954	1633687	1
Fluoride	U	ND	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2342	1633589	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.65	3.00	pCi/L			AXM6	01/30/17	0911	1633606	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		0.624	0.398	1.00	pCi/L			LXP1	02/01/17	0806	1633875	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			85.3	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-8	Project: SCEG01516C
Sample ID: 414833005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 11:52	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.117	0.033	0.100	mg/L		1	MXL2	01/24/17	2023	1633687	1
Chloride		938	13.4	40.0	mg/L		200	MXL2	01/25/17	1504	1633687	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2346	1633589	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.84	1.94	3.00	pCi/L			AXM6	01/30/17	0924	1633606	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.09	0.297	1.00	pCi/L			LXP1	02/01/17	0806	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			99.8	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-8

Sample ID: 414833005

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-1R	Project: SCEG01516C
Sample ID: 414833006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 12:32	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.118	0.033	0.100	mg/L		1	MXL2	01/24/17	2052	1633687	1
Chloride		919	13.4	40.0	mg/L		200	MXL2	01/25/17	1533	1633687	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		16.4	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2350	1633589	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.77	3.00	pCi/L			AXM6	01/30/17	0924	1633606	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.73	0.455	1.00	pCi/L			LXP1	02/01/17	0806	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92.4	(15%-125%)

Notes:

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Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-1R

Sample ID: 414833006

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-2R	Project: SCEG01516C
Sample ID: 414833007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 13:22	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.473	0.033	0.100	mg/L		1	MXL2	01/24/17	2121	1633687	1
Chloride		457	6.70	20.0	mg/L		100	MXL2	01/25/17	1602	1633687	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.8	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2354	1633589	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.77	3.00	pCi/L			AXM6	01/30/17	0918	1633606	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.21	0.398	1.00	pCi/L			LXP1	02/01/17	0836	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			85.2	(15%-125%)

Notes:

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-2R

Sample ID: 414833007

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-16	Project: SCEG01516C
Sample ID: 414833008	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 14:13	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.316	0.033	0.100	mg/L		1	MXL2	01/24/17	2150	1633687	1
Chloride		34.7	0.670	2.00	mg/L		10	MXL2	01/25/17	1631	1633687	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.94	2.00	10.0	ug/L	1.00	1	SKJ	01/25/17	2358	1633589	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.59	3.00	pCi/L			AXM6	01/30/17	0911	1633606	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.76	0.305	1.00	pCi/L			LXP1	02/01/17	0836	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.3	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-16

Sample ID: 414833008

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-21	Project: SCEG01516C
Sample ID: 414833009	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 23-JAN-17 15:00	
Receive Date: 23-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride		3.69	0.067	0.200	mg/L		1	MXL2	01/24/17	2316	1633687	1
Fluoride	J	0.0673	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	01/26/17	0002	1633589	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.98	3.00	pCi/L			AXM6	01/30/17	0924	1633606	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.84	0.382	1.00	pCi/L			LXP1	02/01/17	0836	1633875	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/24/17	0817	1633588

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			85.5	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: February 2, 2017

Page 1 of 4

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 414833

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1633687										
QC1203714041	414833009	DUP									
Chloride		3.69		3.71	mg/L	0.548		(0%-20%)	MXL2	01/24/17	23:45
Fluoride	J	0.0673	J	0.0559	mg/L	18.5	^	(+/-0.100)			
QC1203714040	LCS										
Chloride	5.00			4.87	mg/L			(90%-110%)		01/24/17	17:58
Fluoride	2.50			2.42	mg/L			(90%-110%)			
QC1203714039	MB										
Chloride			U	ND	mg/L					01/24/17	17:30
Fluoride			U	ND	mg/L						
QC1203714042	414833009	PS									
Chloride	5.00	3.69		8.71	mg/L			100 (90%-110%)		01/25/17	00:14
Fluoride	2.50	J	0.0673	2.45	mg/L			95.4 (90%-110%)			
Metals Analysis - ICPMS											
Batch	1633589										
QC1203713778	414837001	DUP									
Lithium		U	ND	U	ND	ug/L	N/A		SKJ	01/26/17	00:18
QC1203713777	LCS										
Lithium	50.0			52.1	ug/L			104 (80%-120%)		01/25/17	23:19
QC1203713776	MB										
Lithium			U	ND	ug/L					01/25/17	23:15

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 414833

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1633589										
QC1203713779	414837001	MS									
Lithium	50.0	U	ND		55.4	ug/L	110	(75%-125%)	SKJ	01/26/17	00:22
QC1203713780	414837001	SDILT									
Lithium		U	ND	U	ND	ug/L	N/A	(0%-10%)		01/26/17	00:26
Rad Gas Flow											
Batch	1633606										
QC1203713806	414833009	DUP									
Radium-228		U	0.494	U	-0.153	pCi/L	N/A		N/AAXM6	01/30/17	09:14
QC1203713807	LCS										
Radium-228	21.1				22.2	pCi/L	105	(75%-125%)		01/30/17	09:14
QC1203713805	MB										
Radium-228			U		0.638	pCi/L				01/30/17	09:11
Rad Ra-226											
Batch	1633875										
QC1203714471	414833001	DUP									
Radium-226			10.2		8.76	pCi/L	14.9	(0%-20%)	LXP1	02/01/17	09:18
QC1203714473	LCS										
Radium-226	26.0				19.7	pCi/L	76	(75%-125%)		02/01/17	11:30
QC1203714470	MB										
Radium-226			U		-0.0753	pCi/L				02/01/17	09:18
QC1203714472	414833001	MS									
Radium-226	130		10.2		108	pCi/L	75.3	(75%-125%)		02/01/17	11:30

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 414833

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
B											
BD											
E											
E											
FA											
FB											
H											
J											
K											
L											
M											
M											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 414833

Page 4 of 4

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
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N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 414945 GEL Work Order: 414945

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- H Analytical holding time was exceeded
- J Value is estimated
- U Analyte was analyzed for but not detected above the Lc
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-17	Project: SCEG01516C
Sample ID: 414945001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JAN-17 08:35	
Receive Date: 24-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.224	0.033	0.100	mg/L		1	MXL2	01/25/17	1855	1634026	1
Chloride		963	13.4	40.0	mg/L		200	MXL2	01/26/17	2002	1634026	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	6.39	2.00	10.0	ug/L	1.00	1	SKJ	01/27/17	2206	1633861	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.30	3.00	pCi/L			AXM6	02/02/17	1111	1633896	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.75	0.422	1.00	pCi/L			LXP1	02/01/17	0836	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/25/17	1010	1633860

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			69.2	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17

Sample ID: 414945001

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: DUP	Project: SCEG01516C
Sample ID: 414945002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JAN-17 08:50	
Receive Date: 24-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.238	0.033	0.100	mg/L		1	MXL2	01/25/17	2022	1634026	1
Chloride		1000	13.4	40.0	mg/L		200	MXL2	01/26/17	2129	1634026	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	6.24	2.00	10.0	ug/L	1.00	1	SKJ	01/27/17	2230	1633861	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.81	3.00	pCi/L			AXM6	02/02/17	1111	1633896	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.14	0.171	1.00	pCi/L			LXP1	02/01/17	0836	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/25/17	1010	1633860

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"			61.7	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: DUP

Sample ID: 414945002

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 414945003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JAN-17 09:36	
Receive Date: 24-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.497	0.033	0.100	mg/L		1	MXL2	01/25/17	2051	1634026	1
Chloride		1140	13.4	40.0	mg/L		200	MXL2	01/26/17	2158	1634026	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		12.1	2.00	10.0	ug/L	1.00	1	SKJ	01/27/17	2234	1633861	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.15	1.35	3.00	pCi/L			AXM6	01/31/17	1018	1633896	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.27	0.417	1.00	pCi/L			LXP1	02/01/17	0836	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/25/17	1010	1633860

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			96.4	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-18

Sample ID: 414945003

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-19D	Project: SCEG01516C
Sample ID: 414945004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JAN-17 10:20	
Receive Date: 24-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.758	0.033	0.100	mg/L		1	MXL2	01/25/17	2120	1634026	1
Chloride		160	3.35	10.0	mg/L		50	MXL2	01/26/17	2227	1634026	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.21	2.00	10.0	ug/L	1.00	1	SKJ	01/27/17	2238	1633861	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.78	3.00	pCi/L			AXM6	01/31/17	1018	1633896	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.95	0.372	1.00	pCi/L			LXP1	02/01/17	0918	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/25/17	1010	1633860

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-19D
Sample ID: 414945004

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-20D	Project: SCEG01516C
Sample ID: 414945005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JAN-17 11:26	
Receive Date: 24-JAN-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.244	0.033	0.100	mg/L		1	MXL2	01/25/17	2149	1634026	1
Chloride		407	6.70	20.0	mg/L		100	MXL2	01/26/17	2256	1634026	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	9.69	2.00	10.0	ug/L	1.00	1	SKJ	01/27/17	2242	1633861	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.30	3.00	pCi/L			AXM6	01/31/17	1018	1633896	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.95	0.290	1.00	pCi/L			LXP1	02/01/17	0918	1633875	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	01/25/17	1010	1633860

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			85.7	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 3, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-20D
Sample ID: 414945005

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: February 3, 2017

Page 1 of 4

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 414945

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1634026										
QC1203714903	414945001	DUP									
Chloride		963		965	mg/L	0.199		(0%-20%)	MXL2	01/26/17	20:31
Fluoride		0.224		0.232	mg/L	3.59	^	(+/-0.100)		01/25/17	19:24
QC1203714902	LCS										
Chloride	5.00			4.81	mg/L			96.2	(90%-110%)	01/25/17	18:26
Fluoride	2.50			2.41	mg/L			96.6	(90%-110%)		
QC1203714901	MB										
Chloride			U	ND	mg/L					01/25/17	17:58
Fluoride			U	ND	mg/L						
QC1203714904	414945001	PS									
Chloride	5.00	4.82		9.90	mg/L			102	(90%-110%)	01/26/17	21:00
Fluoride	2.50	0.224		2.63	mg/L			96.4	(90%-110%)	01/25/17	19:53
Metals Analysis - ICPMS											
Batch	1633861										
QC1203714441	414945001	DUP									
Lithium	J	6.39	J	5.93	ug/L	7.48	^	(+/-10.0)	SKJ	01/27/17	22:10
QC1203714440	LCS										
Lithium	50.0			54.3	ug/L			109	(80%-120%)	01/27/17	22:03
QC1203714439	MB										
Lithium			U	ND	ug/L					01/27/17	21:59

GEL LABORATORIES LLC

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QC Summary

Workorder: 414945

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1633861										
QC1203714442	414945001	MS									
Lithium	50.0	J	6.39	53.6	ug/L		94.3	(75%-125%)	SKJ	01/27/17	22:14
QC1203714443	414945001	SDILT									
Lithium		J	6.39	U	ND	ug/L	N/A	(0%-10%)		01/27/17	22:18
Rad Gas Flow											
Batch	1633896										
QC1203714548	414945004	DUP									
Radium-228		U	0.961	1.84	pCi/L	62.8		(0% - 100%)	AXM6	01/31/17	10:21
QC1203714549	LCS										
Radium-228	21.1			22.6	pCi/L		107	(75%-125%)		01/31/17	10:21
QC1203714547	MB										
Radium-228			U	0.988	pCi/L					01/31/17	11:37
Rad Ra-226											
Batch	1633875										
QC1203714471	414833001	DUP									
Radium-226			10.2	8.76	pCi/L	14.9		(0%-20%)	LXP1	02/01/17	09:18
QC1203714473	LCS										
Radium-226	26.0			19.7	pCi/L		76	(75%-125%)		02/01/17	11:30
QC1203714470	MB										
Radium-226			U	-0.0753	pCi/L					02/01/17	09:18
QC1203714472	414833001	MS									
Radium-226	130		10.2	108	pCi/L		75.3	(75%-125%)		02/01/17	11:30

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 414945

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
B											
BD											
E											
E											
FA											
FB											
H											
J											
K											
L											
M											
M											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 414945

Page 4 of 4

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
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N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25428**

Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: January 23, 2017 11:45
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIGFBTDS

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	LESS THAN	0.50	mg/L	2/3/17 23:50	LS
pH by SM4500HB	8.23	0.00	S.U.	1/26/17 08:54	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	LESS THAN	0.50	mg/L	2/3/17 23:50	LS
Total Dissolved Solid-SM2540C	37	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25432**

Williams Station GW 16-NPDES/CCR

Date & Time Sampled: January 23, 2017 14:13
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG16TDS

GW 16

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	34.6	0.50	mg/L	2/3/17 23:50	LS
pH by SM4500HB Holding Time of 15 minutes has been exceeded.	6.05	0.00	S.U.	1/26/17 08:54	BF
Sulfates by IC EPA 300.0	17.6	0.50	mg/L	2/3/17 23:50	LS
Total Dissolved Solid-SM2540C	266	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25433**

Williams Station GW 21-CCR

Date & Time Sampled: January 23, 2017 15:00
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG21TDS

GW 21

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	3.61	0.50	mg/L	2/3/17 23:50	LS
pH by SM4500HB	5.98	0.00	S.U.	1/26/17 08:54	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	125	1.0	mg/L	2/7/17 23:50	LS
Total Dissolved Solid-SM2540C	274	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25434**

Williams Station GW 17-NPDES/CCR

Date & Time Sampled: January 24, 2017 08:35
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG17TDS

GW 17

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	984	250	mg/L	2/8/17 18:00	LS
pH by SM4500HB	6.53	0.00	S.U.	1/26/17 08:54	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	140	5	mg/L	2/3/17 23:50	LS
Total Dissolved Solid-SM2540C	2747	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25435**

Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: January 24, 2017 08:50
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIGDUPTDS

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1106	10.0	mg/L	2/7/17 23:50	LS
pH by SM4500HB	6.49	0.00	S.U.	1/26/17 08:54	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	145	5.0	mg/L	2/3/17 23:50	LS
Total Dissolved Solid-SM2540C	2703	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25436**

Williams Station GW 18-NPDES/CCR

Date & Time Sampled: January 24, 2017 09:36
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG18TDS

GW 18

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1072	1000	mg/L	2/7/17 23:50	LS
pH by SM4500HB	7.03	0.00	S.U.	1/26/17 08:54	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	35.6	0.50	mg/L	2/3/17 23:50	LS
Total Dissolved Solid-SM2540C	2561	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25437**

Williams Station GW 19D-NPDES/CCR

Date & Time Sampled: January 24, 2017 10:20
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG19DTDS

GW 19D

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	162	2.5	mg/L	2/3/17 23:50	LS
pH by SM4500HB	7.45	0.00	S.U.	1/26/17 08:54	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	LESS THAN	2.5	mg/L	2/3/17 23:50	LS
Total Dissolved Solid-SM2540C	786	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25438**

Williams Station GW 20D-NPDES/CCR

Date & Time Sampled: January 24, 2017 11:26
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG20DTDS

GW 20D

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	435	5.0	mg/L	2/3/17 23:50	LS
pH by SM4500HB	7.10	0.00	S.U.	1/26/17 08:54	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	9.1	5.0	mg/L	2/3/17 23:50	LS
Total Dissolved Solid-SM2540C	1137	2.0	mg/L	1/25/17 15:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25442**

Will Sta Field Blank, T. Metals-NPDES/CCR

Date & Time Sampled: January 23, 2017 11:45
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIGFBTM

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Barium by ICP-OES 200.7	Less than	10.0	ppb	1/26/17 16:41	MC/PRC
Beryllium EPA 200.7	Less than	2.0	ppb	1/26/17 16:41	MC/PRC
Boron - EPA 200.7	Less than	1000	ppb	1/26/17 16:41	MC/PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Calcium EPA 200.7	Less than	100	ppb	1/26/17 16:41	MC/PRC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lithium (CWA) 200.7	Less than	2.0	ppb	1/26/17 16:41	MC/PRC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/6/17 15:36	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



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 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25446**

Will Sta GW 16, T. Metals-NPDES/CCR

Date & Time Sampled: January 23, 2017 14:13
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG16TM

GW 16

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Arsenic by ICP_MS 200.8	2.8	1.0	ppb	2/6/17 15:36	MC
Barium by ICP-OES 200.7	114	10.0	ppb	1/26/17 16:41	MC/PRC
Beryllium EPA 200.7	Less than	2.0	ppb	1/26/17 16:41	MC/PRC
Boron - EPA 200.7	Less than	1000	ppb	1/26/17 16:41	MC/PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Calcium EPA 200.7	45900	100	ppb	1/26/17 16:41	MC/PRC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Cobalt by ICP_MS 200.8	20.6	1.0	ppb	2/6/17 15:36	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lithium (CWA) 200.7	5.3	2.0	ppb	1/26/17 16:41	MC/PRC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/6/17 15:36	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
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 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25447**

Will Sta GW 21, T. Metals-NPDES/CCR

Date & Time Sampled: January 23, 2017 15:00
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG21TM2

GW 21

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Barium by ICP-OES 200.7	34.8	10.0	ppb	1/26/17 16:41	MC/PRC
Beryllium EPA 200.7	3.7	2.0	ppb	1/26/17 16:41	MC/PRC
Boron - EPA 200.7	Less than	1000	ppb	1/26/17 16:41	MC/PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Calcium EPA 200.7	44700	100	ppb	1/26/17 16:41	MC/PRC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Cobalt by ICP_MS 200.8	3.0	1.0	ppb	2/7/17 07:59	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Lithium (CWA) 200.7	Less than	2.0	ppb	1/26/17 16:41	MC/PRC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/7/17 07:59	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25448**

Will Sta GW 17, T. Metals-NPDES/CCR

Date & Time Sampled: January 24, 2017 08:35
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG17TM

GW 17

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Arsenic by ICP_MS 200.8	9.3	1.0	ppb	2/7/17 07:59	MC
Barium by ICP-OES 200.7	273	10.0	ppb	2/1/17 09:45	MC
Beryllium EPA 200.7	Less than	2.0	ppb	2/1/17 09:45	MC
Boron - EPA 200.7	3900	1000	ppb	2/1/17 09:45	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Calcium EPA 200.7	330000	100	ppb	2/1/17 09:45	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Lithium (CWA) 200.7	5.3	2.0	ppb	2/1/17 09:45	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	2/7/17 07:59	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/7/17 07:59	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/7/17 07:59	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25449**

Will Sta Duplicate, T. Metals-NPDES/CCR

Date & Time Sampled: January 24, 2017 08:50
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIGDUPTM

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Arsenic by ICP_MS 200.8	10.6	1.0	ppb	2/6/17 15:36	MC
Barium by ICP-OES 200.7	265	10.0	ppb	2/1/17 09:45	MC
Beryllium EPA 200.7	Less than	2.0	ppb	2/1/17 09:45	MC
Boron - EPA 200.7	3600	1000	ppb	2/1/17 09:45	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Calcium EPA 200.7	319000	100	ppb	2/1/17 09:45	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lithium (CWA) 200.7	4.8	2.0	ppb	2/1/17 09:45	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/6/17 15:36	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25450**

Will Sta GW 18, T. Metals-NPDES/CCR

Date & Time Sampled: January 24, 2017 09:36
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG18TM

GW 18

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Arsenic by ICP_MS 200.8	2.2	1.0	ppb	2/6/17 15:36	MC
Barium by ICP-OES 200.7	447	10.0	ppb	1/26/17 16:41	MC/PRC
Beryllium EPA 200.7	Less than	2.0	ppb	1/26/17 16:41	MC/PRC
Boron - EPA 200.7	2050	1000	ppb	1/26/17 16:41	MC/PRC
Cadmium by ICP_MS EPA 200.8	Less than	2.0	ppb	2/6/17 15:36	MC
Calcium EPA 200.7	130000	100	ppb	1/26/17 16:41	MC/PRC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lithium (CWA) 200.7	11.6	2.0	ppb	1/26/17 16:41	MC/PRC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	1.0	1.0	ppb	2/6/17 15:36	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/6/17 15:36	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25451**

Will Sta GW 19D, T. Metals-NPDES/CCR

Date & Time Sampled: January 24, 2017 10:20
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG19DTM

GW 19D

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Arsenic by ICP_MS 200.8	2.5	1.0	ppb	2/6/17 15:36	MC
Barium by ICP-OES 200.7	101	10.0	ppb	1/26/17 16:41	MC/PRC
Beryllium EPA 200.7	Less than	2.0	ppb	1/26/17 16:41	MC/PRC
Boron - EPA 200.7	Less than	1000	ppb	1/26/17 16:41	MC/PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Calcium EPA 200.7	41100	100	ppb	1/26/17 16:41	MC/PRC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lithium (CWA) 200.7	4.9	2.0	ppb	1/26/17 16:41	MC/PRC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	13.7	1.0	ppb	2/6/17 15:36	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/6/17 15:36	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB25452**

Will Sta GW 20D, T. Metals-NPDES/CCR

Date & Time Sampled: January 24, 2017 11:26
 Date & Time Submitted: January 24, 2017 13:50
 Collected by: C.SANDEL Location Code: WIG20DTM

GW 20D

Login Record File: 170125001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Barium by ICP-OES 200.7	78.2	10.0	ppb	1/26/17 16:41	MC/PRC
Beryllium EPA 200.7	Less than	2.0	ppb	1/26/17 16:41	MC/PRC
Boron - EPA 200.7	1350	1000	ppb	1/26/17 16:41	MC/PRC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Calcium EPA 200.7	133000	100	ppb	1/26/17 16:41	MC/PRC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Lithium (CWA) 200.7	6.9	2.0	ppb	1/26/17 16:41	MC/PRC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/31/17 15:22	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	2/6/17 15:36	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	2/6/17 15:36	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	2/6/17 15:36	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C**

Williams Station FGD Pond C

Gauging Date: 3/21-22/17													
Monitoring Well ID	Well Data			Initial Gauging		Final Gauging		Final Water Quality Indicator Parameters					
	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
GW-16	12.67	9.85	2.82	10.50	2.17	10.61	2.06	20.51	5.5	318	7.03	110.1	0.22
GW-17	12.05	12.12	-0.07	8.99	3.06	9.05	3.00	21.62	6.4	2310	6.85	-103.7	0.18
GW-18	11.79	11.93	-0.14	9.06	2.73	9.37	2.42	20.46	6.7	4774	7.08	-107.8	0.12
GW-19D	12.56	12.50	0.06	10.21	2.35	10.36	2.20	20.43	7.2	1404	10.10	-96.5	0.13
GW-20D	12.17	12.10	0.07	9.84	2.33	10.07	2.10	22.13	6.7	1908	4.96	-83.1	0.14
GW-21	13.80	11.28	2.52	11.32	2.48	11.58	2.22	19.53	5.8	451	10.53	9.1	0.44

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 419061 GEL Work Order: 419061

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- H Analytical holding time was exceeded
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.

Reviewed by _____



GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-21	Project: SCEG01516C
Sample ID: 419061001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 10:10	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride		4.01	0.067	0.200	mg/L		1	MAR1	03/23/17	0037	1649965	1
Fluoride		0.108	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1859	1649961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.38	3.00	pCi/L			AXM6	03/30/17	1129	1650030	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.06	0.310	1.00	pCi/L			MXH8	04/04/17	0810	1650031	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			89.5	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-16	Project: SCEG01516C
Sample ID: 419061002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 11:55	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.393	0.033	0.100	mg/L		1	MAR1	03/23/17	0203	1649965	1
Chloride		32.9	0.335	1.00	mg/L		5	MAR1	03/24/17	1130	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.48	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1914	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.18	3.00	pCi/L			AXM6	03/30/17	1129	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.92	0.203	1.00	pCi/L			MXH8	04/04/17	0810	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			88.8	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-16

Sample ID: 419061002

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-17	Project: SCEG01516C
Sample ID: 419061003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAR-17 11:05	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.349	0.033	0.100	mg/L		1	MAR1	03/23/17	0232	1649965	1
Chloride		1380	13.4	40.0	mg/L		200	MAR1	03/24/17	1158	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	8.97	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1917	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.91	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		2.44	0.179	1.00	pCi/L			MXH8	04/04/17	0810	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			76.6	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17

Project: SCEG01516C

Sample ID: 419061003

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: DUP	Project: SCEG01516C
Sample ID: 419061004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAR-17 12:00	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.299	0.033	0.100	mg/L		1	MAR1	03/23/17	0301	1649965	1
Chloride		1350	13.4	40.0	mg/L		200	MAR1	03/24/17	1227	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	8.60	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1920	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.64	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		1.49	0.349	1.00	pCi/L			MXH8	04/04/17	0810	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"			97.5	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: DUP

Sample ID: 419061004

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 419061005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAR-17 12:30	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.637	0.033	0.100	mg/L		1	MAR1	03/23/17	0330	1649965	1
Chloride		1130	13.4	40.0	mg/L		200	MAR1	03/24/17	1256	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	9.63	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1922	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.40	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		7.26	0.351	1.00	pCi/L			MXH8	04/04/17	0810	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.5	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-18

Project: SCEG01516C

Sample ID: 419061005

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-19D	Project: SCEG01516C
Sample ID: 419061006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAR-17 13:25	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.853	0.033	0.100	mg/L		1	MAR1	03/23/17	0359	1649965	1
Chloride		163	3.35	10.0	mg/L		50	MAR1	03/24/17	1325	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	4.97	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1925	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.21	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.05	0.329	1.00	pCi/L			MXH8	04/04/17	0810	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.4	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-19D
Sample ID: 419061006

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-20D	Project: SCEG01516C
Sample ID: 419061007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAR-17 14:35	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.280	0.033	0.100	mg/L		1	MAR1	03/23/17	0526	1649965	1
Chloride		399	6.70	20.0	mg/L		100	MAR1	03/24/17	1354	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	9.20	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1928	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	0.935	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.90	0.314	1.00	pCi/L			MXH8	04/04/17	0810	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			100	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-20D
Sample ID: 419061007

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-4A	Project: SCEG01516C
Sample ID: 419061008	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 13:30	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.145	0.033	0.100	mg/L		1	MAR1	03/23/17	0555	1649965	1
Chloride		1680	33.5	100	mg/L		500	MAR1	03/24/17	1423	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		22.0	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1936	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.62	2.52	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.22	0.313	1.00	pCi/L			MXH8	04/04/17	0846	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			52.5	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-4A
Sample ID: 419061008

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-6R	Project: SCEG01516C
Sample ID: 419061009	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 14:35	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.132	0.033	0.100	mg/L		1	MAR1	03/23/17	0624	1649965	1
Chloride		1990	33.5	100	mg/L		500	MAR1	03/24/17	1452	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		19.9	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1938	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.21	1.75	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.69	0.229	1.00	pCi/L			MXH8	04/04/17	0846	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			81.2	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-6R
Sample ID: 419061009

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-7R	Project: SCEG01516C
Sample ID: 419061010	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 15:30	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.270	0.033	0.100	mg/L		1	MAR1	03/23/17	0652	1649965	1
Chloride		475	6.70	20.0	mg/L		100	MAR1	03/24/17	1521	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.9	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1941	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.47	3.00	pCi/L			AXM6	03/30/17	1131	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.15	0.353	1.00	pCi/L			MXH8	04/04/17	0846	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			43.6	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-7R

Sample ID: 419061010

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Field Blank	Project: SCEG01516C
Sample ID: 419061011	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 15:40	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride	J	0.117	0.067	0.200	mg/L		1	MAR1	03/23/17	0721	1649965	1
Fluoride	U	ND	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1943	1649961	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.48	3.00	pCi/L			AXM6	03/30/17	1132	1650030	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	ND	0.320	1.00	pCi/L			MXH8	04/04/17	0846	1650031	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.8	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-8	Project: SCEG01516C
Sample ID: 419061012	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 16:20	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.139	0.033	0.100	mg/L		1	MAR1	03/23/17	0750	1649965	1
Chloride		993	13.4	40.0	mg/L		200	MAR1	03/24/17	1647	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1946	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.25	1.40	3.00	pCi/L			AXM6	03/30/17	1132	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		9.32	0.408	1.00	pCi/L			MXH8	04/04/17	0846	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.7	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-8

Project: SCEG01516C

Sample ID: 419061012

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-1R	Project: SCEG01516C
Sample ID: 419061013	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 21-MAR-17 17:20	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.169	0.033	0.100	mg/L		1	MAR1	03/23/17	0819	1649965	1
Chloride		936	13.4	40.0	mg/L		200	MAR1	03/24/17	1716	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		16.8	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1949	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.63	3.00	pCi/L			AXM6	03/30/17	1132	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.28	0.153	1.00	pCi/L			MXH8	04/04/17	0846	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			91.7	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-1R

Sample ID: 419061013

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-2R	Project: SCEG01516C
Sample ID: 419061014	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAR-17 09:00	
Receive Date: 22-MAR-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.550	0.033	0.100	mg/L		1	MAR1	03/23/17	0848	1649965	1
Chloride		449	6.70	20.0	mg/L		100	MAR1	03/24/17	1745	1649965	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.1	2.00	10.0	ug/L	1.00	1	BAJ	04/01/17	1951	1649961	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.03	3.00	pCi/L			AXM6	03/30/17	1132	1650030	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.17	0.264	1.00	pCi/L			MXH8	04/04/17	0846	1650031	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	SXW1	03/23/17	1143	1649960

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			94.4	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: April 5, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-2R
Sample ID: 419061014

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: April 5, 2017

Page 1 of 4

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 419061

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1649965										
QC1203753200	419061001	DUP									
Chloride		4.01		4.01	mg/L	0.0125		(0%-20%)	MAR1	03/23/17	01:05
Fluoride		0.108		0.107	mg/L	0.929	^	(+/-0.100)			
QC1203753201	419061014	DUP									
Chloride		449		455	mg/L	1.3		(0%-20%)		03/24/17	18:14
Fluoride		0.550		0.551	mg/L	0.164		(0%-20%)		03/23/17	09:17
QC1203753199	LCS										
Chloride	5.00			4.84	mg/L			96.7	(90%-110%)		03/23/17 00:08
Fluoride	2.50			2.50	mg/L			99.9	(90%-110%)		
QC1203753198	MB										
Chloride			U	ND	mg/L						03/22/17 23:39
Fluoride			U	ND	mg/L						
QC1203753202	419061001	PS									
Chloride	5.00	4.01		9.30	mg/L			106	(90%-110%)		03/23/17 01:34
Fluoride	2.50	0.108		2.55	mg/L			97.6	(90%-110%)		
QC1203753203	419061014	PS									
Chloride	5.00	4.49		9.75	mg/L			105	(90%-110%)		03/24/17 18:43
Fluoride	2.50	0.550		2.91	mg/L			94.3	(90%-110%)		03/23/17 09:46

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 419061

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1649961										
QC1203753179	419057001	DUP									
Lithium		U	ND	U	ND	ug/L	N/A		BAJ	04/01/17	18:32
QC1203753180	419061001	DUP									
Lithium		U	ND	U	ND	ug/L	N/A			04/01/17	19:01
QC1203753178	LCS										
Lithium	50.0				50.2	ug/L	100	(80%-120%)		04/01/17	18:27
QC1203753177	MB										
Lithium			U		ND	ug/L				04/01/17	18:24
QC1203753181	419057001	MS									
Lithium	50.0	U	ND		50.8	ug/L	97.5	(75%-125%)		04/01/17	18:35
QC1203753182	419061001	MS									
Lithium	50.0	U	ND		47.0	ug/L	92.2	(75%-125%)		04/01/17	19:04
QC1203753183	419057001	SDILT									
Lithium		U	ND	U	ND	ug/L	N/A	(0%-10%)		04/01/17	18:37
QC1203753184	419061001	SDILT									
Lithium		U	ND	U	ND	ug/L	N/A	(0%-10%)		04/01/17	19:06
Rad Gas Flow											
Batch	1650030										
QC1203753433	419061008	DUP									
Radium-228			2.62	U	0.872	pCi/L	100	(0% - 100%)	AXM6	03/30/17	11:34
QC1203753434	LCS										
Radium-228	20.7				23.1	pCi/L	111	(75%-125%)		03/30/17	11:34
QC1203753432	MB										
Radium-228			U		0.675	pCi/L				03/30/17	11:32

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 419061

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Ra-226											
Batch	1650031										
QC1203753436	419061006	DUP									
Radium-226		3.05		3.49	pCi/L	13.4		(0%-20%)	MXH8	04/04/17	09:18
QC1203753438	LCS										
Radium-226	26.0			26.3	pCi/L		101	(75%-125%)		04/04/17	09:18
QC1203753435	MB										
Radium-226			U	0.0849	pCi/L					04/04/17	09:18
QC1203753437	419061006	MS									
Radium-226	130	3.05		123	pCi/L		92.1	(75%-125%)		04/04/17	09:18

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FA Failed analysis.
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 419061

Page 4 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Q											
Q											
R											
R											
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26387**

Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: March 21, 2017 15:40
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIGFBTDS

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than	0.50	mg/L	4/11/17 09:19	EB
pH by SM4500HB(2011)	6.80	0.00	S.U.	3/24/17 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	4/11/17 09:19	EB
Total Dissolved Solid-SM2540C	36	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26391**

Williams Station GW 21-CCR

Date & Time Sampled: March 21, 2017 10:10
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG21TDS

GW 21

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.03	2.5	mg/L	4/11/17 09:19	EB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.06	0.00	S.U.	3/24/17 14:00	BF
Sulfates by IC EPA 300.0	106.1	2.5	mg/L	4/11/17 09:19	EB
Total Dissolved Solid-SM2540C	307	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26392**

Williams Station GW 16-NPDES/CCR

Date & Time Sampled: March 21, 2017 11:55
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG16TDS

GW 16

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	34.2	0.50	mg/L	4/11/17 09:19	EB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.51	0.00	S.U.	3/24/17 14:00	BF
Sulfates by IC EPA 300.0	17.4	0.50	mg/L	4/11/17 09:19	EB
Total Dissolved Solid-SM2540C	208	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26393**

Williams Station GW 17-NPDES/CCR

Date & Time Sampled: March 22, 2017 11:05
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG17TDS

GW 17

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1353	10	mg/L	4/11/17 09:19	EB
pH by SM4500HB(2011)	6.42	0.00	S.U.	3/24/17 14:00	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	182.5	10	mg/L	4/11/17 09:19	EB
Total Dissolved Solid-SM2540C	3040	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26394**

Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: March 22, 2017 11:05
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIGDUPTDS

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1343	10	mg/L	4/11/17 09:19	EB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.51	0.00	S.U.	3/24/17 14:00	BF
Sulfates by IC EPA 300.0	181.4	10	mg/L	4/11/17 09:19	EB
Total Dissolved Solid-SM2540C	3250	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26395**

Williams Station GW 18-NPDES/CCR

Date & Time Sampled: March 22, 2017 12:30
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG18TDS

GW 18

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1214	10	mg/L	4/13/17 12:01	LS
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.91	0.00	S.U.	3/24/17 14:00	BF
Sulfates by IC EPA 300.0	25.5	0.50	mg/L	4/13/17 12:01	LS
Total Dissolved Solid-SM2540C	2631	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26396**

Williams Station GW 19D-NPDES/CCR

Date & Time Sampled: March 22, 2017 13:25
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG19DTDS

GW 19D

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	169.7	5	mg/L	4/11/17 09:19	EB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.51	0.00	S.U.	3/24/17 14:00	BF
Sulfates by IC EPA 300.0	1.14	0.5	mg/L	4/11/17 09:19	EB
Total Dissolved Solid-SM2540C	812	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26397**

Williams Station GW 20D-NPDES/CCR

Date & Time Sampled: March 22, 2017 14:35
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG20DTDS

GW 20D

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	402.0	10	mg/L	4/11/17 09:19	EB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.98	0.00	S.U.	3/24/17 14:00	BF
Sulfates by IC EPA 300.0	9.08	0.50	mg/L	4/11/17 09:19	EB
Total Dissolved Solid-SM2540C	1045	2.0	mg/L	3/27/17 14:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26401**

Will Sta Field Blank, T. Metals-NPDES/CCR

Date & Time Sampled: March 21, 2017 15:40
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIGFBTM

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	Less than	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	Less than	100	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



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January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26405**

Will Sta GW 21, T. Metals-NPDES/CCR

Date & Time Sampled: March 21, 2017 10:10
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG21TM2

GW 21

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	38.6	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	52600	1000	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	4.2	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
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 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26406**

Will Sta GW 16, T. Metals-NPDES/CCR

Date & Time Sampled: March 21, 2017 11:55
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG16TM

GW 16

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	1.8	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	103	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	28200	1000	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	13.8	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	6.6	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
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 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26407**

Will Sta GW 17, T. Metals-NPDES/CCR

Date & Time Sampled: March 22, 2017 11:05
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG17TM

GW 17

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	11.6	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	384	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	7590	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	558000	1000	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	8.0	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	1.2	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26408**

Will Sta Duplicate, T. Metals-NPDES/CCR

Date & Time Sampled: March 22, 2017 11:05
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIGDUPTM

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	11.0	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	388	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	8090	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	564000	1000	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	8.3	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	1.1	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26409**

Will Sta GW 18, T. Metals-NPDES/CCR

Date & Time Sampled: March 22, 2017 12:30
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG18TM

GW 18

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	3.9	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	373	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	1460	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	99300	1000	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	8.2	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	1.3	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26410**

Will Sta GW 19D, T. Metals-NPDES/CCR

Date & Time Sampled: March 22, 2017 13:25
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG19DTM

GW 19D

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	2.6	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	96.0	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	40600	1000	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	4.7	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	14.1	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore C221

Sample ID: **AB26411**

Will Sta GW 20D, T. Metals-NPDES/CCR

Date & Time Sampled: March 22, 2017 14:35
 Date & Time Submitted: March 23, 2017 09:45
 Collected by: R.GARDNER Location Code: WIG20DTM

GW 20D

Login Record File: 170323004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Barium by ICP-OES 200.7	113	10.0	ppb	3/24/17 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 14:46	MC
Boron - EPA 200.7	2040	1000	ppb	3/24/17 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Calcium EPA 200.7	193000	1000	ppb	3/24/17 14:46	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Lithium (CWA) 200.7	9.7	2.0	ppb	3/24/17 14:46	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	3/24/17 14:55	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	3/29/17 14:26	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/29/17 14:26	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/29/17 14:26	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C**

Williams Station FGD Pond C

				Gauging Date: 5/22/17									
Well Data				Initial Gauging		Final Gauging		Final Water Quality Indicator Parameters					
Monitoring Well ID	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
GW-16	12.65	9.85	2.80	9.91	2.74	10.10	2.55	21.3	5.2	328	6.28	32.6	1.11
GW-17	12.12	12.12	0.00	8.34	3.78	8.39	3.73	21.3	6.2	2,075	5.83	-67.7	1.36
GW-18	11.93	11.93	0.00	9.34	2.59	9.36	2.57	21.2	6.6	4,880	6.45	-73.1	1.08
GW-19D	12.56	12.50	0.06	9.81	2.75	10.03	2.53	20.6	7.1	1,443	8.38	-127	0.93
GW-20D	12.17	12.10	0.07	9.39	2.78	9.68	2.49	22.70	6.5	1,957	6.1	-84.7	0.92
GW-21	13.80	11.28	2.52	10.85	2.95	11.19	2.61	20.5	5.4	425	9.41	12.8	1.32

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GEEL003 GEL Engineering, LLC

Client SDG: 423777 GEL Work Order: 423777

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- H Analytical holding time was exceeded
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-17	Project: SCEG01516C
Sample ID: 423777001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 09:20	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.430	0.033	0.100	mg/L		1	MXL2	05/24/17	0511	1667912	1
Chloride		602	6.70	20.0	mg/L		100	MXL2	05/24/17	1909	1667912	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	4.42	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0004	1667485	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.87	3.00	pCi/L			BXF1	05/31/17	1211	1667567	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.44	0.353	1.00	pCi/L			MXH8	05/31/17	0825	1667568	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			97.2	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17
Sample ID: 423777001

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Dup	Project: SCEG01516C
Sample ID: 423777002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 09:35	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.425	0.033	0.100	mg/L		1	MXL2	05/24/17	0637	1667912	1
Chloride		606	6.70	20.0	mg/L		100	MXL2	05/24/17	2036	1667912	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	4.61	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0027	1667485	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.18	1.61	3.00	pCi/L			BXF1	05/31/17	1211	1667567	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.43	0.230	1.00	pCi/L			MXH8	05/31/17	0825	1667568	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92.7	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: Dup

Sample ID: 423777002

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Field Blank	Project: SCEG01516C
Sample ID: 423777003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 10:10	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride	J	0.0894	0.067	0.200	mg/L		1	MXL2	05/24/17	0706	1667912	1
Fluoride	U	ND	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0031	1667485	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.95	3.00	pCi/L			BXF1	05/31/17	1214	1667567	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	ND	0.398	1.00	pCi/L			MXH8	05/31/17	0825	1667568	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.8	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 423777004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 10:20	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.631	0.033	0.100	mg/L		1	MXL2	05/24/17	0735	1667912	1
Chloride		1170	13.4	40.0	mg/L		200	MXL2	05/24/17	2105	1667912	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		12.4	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0035	1667485	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.59	3.00	pCi/L			BXF1	05/31/17	1216	1667567	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.64	0.283	1.00	pCi/L			MXH8	05/31/17	0825	1667568	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			88.2	(15%-125%)

Notes:

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-18

Sample ID: 423777004

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-19D	Project: SCEG01516C
Sample ID: 423777005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 11:01	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.860	0.033	0.100	mg/L		1	MXL2	05/24/17	0804	1667912	1
Chloride		169	3.35	10.0	mg/L		50	MXL2	05/24/17	2134	1667912	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.76	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0039	1667485	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.76	3.00	pCi/L			BXF1	05/31/17	1216	1667567	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.26	0.387	1.00	pCi/L			MXH8	05/31/17	0825	1667568	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			95.2	(15%-125%)

Notes:

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-19D
Sample ID: 423777005

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-20D	Project: SCEG01516C
Sample ID: 423777006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 11:40	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.300	0.033	0.100	mg/L		1	MXL2	05/24/17	0833	1667912	1
Chloride		414	6.70	20.0	mg/L		100	MXL2	05/24/17	2203	1667912	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.8	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0043	1667485	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.68	2.63	3.00	pCi/L			BXF1	05/31/17	1217	1667567	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		3.54	0.446	1.00	pCi/L			MXH8	05/31/17	0825	1667568	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.5	(15%-125%)

Notes:

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-20D
Sample ID: 423777006

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: MW-16	Project: SCEG01516C
Sample ID: 423777007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 12:35	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.480	0.033	0.100	mg/L		1	MXL2	05/24/17	1000	1667912	1
Chloride		37.4	0.335	1.00	mg/L		5	MXL2	05/24/17	2231	1667912	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.6	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0047	1667485	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.54	3.00	pCi/L			BXF1	05/31/17	1217	1667567	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		13.4	0.359	1.00	pCi/L			MXH8	05/31/17	0825	1667568	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			95	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: MW-16

Sample ID: 423777007

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 2, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: MW-21	Project: SCEG01516C
Sample ID: 423777008	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 22-MAY-17 13:19	
Receive Date: 22-MAY-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride		3.97	0.067	0.200	mg/L		1	MXL2	05/24/17	1029	1667912	1
Fluoride		0.109	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	05/26/17	0051	1667485	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	2.32	3.00	pCi/L			BXF1	05/31/17	1217	1667567	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.39	0.451	1.00	pCi/L			MXH8	05/31/17	0825	1667568	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CXW4	05/22/17	1730	1667484

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.9	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: June 2, 2017

Page 1 of 4

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 423777

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1667912										
QC1203796228	423777001	DUP									
Chloride		602		601	mg/L	0.14		(0%-20%)	MXL2	05/24/17	19:38
Fluoride		0.430		0.427	mg/L	0.537	^	(+/-0.100)		05/24/17	05:40
QC1203796227	LCS										
Chloride	5.00			4.74	mg/L			94.8	(90%-110%)	05/24/17	04:42
Fluoride	2.50			2.44	mg/L			97.8	(90%-110%)		
QC1203796226	MB										
Chloride			U	ND	mg/L					05/24/17	04:13
Fluoride			U	ND	mg/L						
QC1203796229	423777001	PS									
Chloride	5.00	6.02		11.5	mg/L			110	(90%-110%)	05/24/17	20:07
Fluoride	2.50	0.430		2.87	mg/L			97.6	(90%-110%)	05/24/17	23:00
Metals Analysis - ICPMS											
Batch	1667485										
QC1203795197	423777001	DUP									
Lithium		J	4.42	J	4.37	ug/L	1.07	^	(+/-10.0)	SKJ	05/26/17 00:07
QC1203795196	LCS										
Lithium	50.0			49.9	ug/L			99.8	(80%-120%)	05/26/17	00:00
QC1203795195	MB										
Lithium			U	ND	ug/L					05/25/17	23:56

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 423777

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1667485										
QC1203795198	423777001	MS									
Lithium	50.0	J	4.42	53.9	ug/L		99.1	(75%-125%)	SKJ	05/26/17	00:11
QC1203795199	423777001	SDILT									
Lithium		J	4.42	ND	ug/L	N/A		(0%-10%)		05/26/17	00:15
Rad Gas Flow											
Batch	1667567										
QC1203795333	423777008	DUP									
Radium-228		U	0.895	2.83	pCi/L	104*		(0% - 100%)	BXF1	05/31/17	12:17
QC1203795334	LCS										
Radium-228	20.3			21.3	pCi/L		105	(75%-125%)		05/31/17	12:11
QC1203795332	MB										
Radium-228		U		1.39	pCi/L					05/31/17	12:17
Rad Ra-226											
Batch	1667568										
QC1203795336	423777006	DUP									
Radium-226			3.54	3.95	pCi/L	11.1		(0%-20%)	MXH8	05/31/17	09:00
QC1203795338	LCS										
Radium-226	26.0			23.1	pCi/L		89.2	(75%-125%)		05/31/17	09:00
QC1203795335	MB										
Radium-226		U		-0.0458	pCi/L					05/31/17	09:00
QC1203795337	423777006	MS									
Radium-226	130		3.54	107	pCi/L		79.6	(75%-125%)		05/31/17	09:00

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported

GEL LABORATORIES LLC

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QC Summary

Workorder: 423777

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
B											
BD											
E											
E											
FA											
FB											
H											
J											
K											
L											
M											
M											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											

GEL LABORATORIES LLC

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QC Summary

Workorder: 423777

Page 4 of 4

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
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N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27155**

Williams Station GW 17-NPDES/CCR

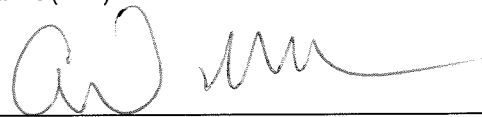
Date & Time Sampled: May 22, 2017 09:20
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG17TDS

GW 17

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	742	5.0	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.62	0.00	S.U.	5/23/17 14:10	BF
Sulfates by IC EPA 300.0	91.2	0.50	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	2243	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27156**

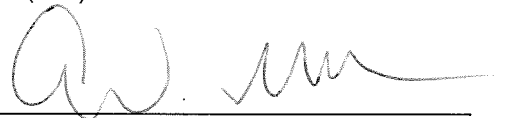
Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: May 22, 2017 09:35
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIGDUPTDS

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	740	5.0	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.65	0.00	S.U.	5/23/17 14:10	BF
Sulfates by IC EPA 300.0	88.8	0.50	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	2206	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
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May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27157**

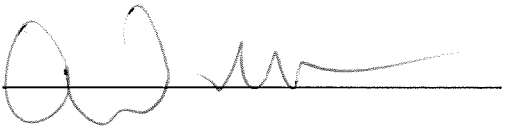
Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: May 22, 2017 10:10
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIGFBTDS

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than	0.50	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011)	7.30	0.00	S.U.	5/23/17 14:10	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	48	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27158**

Williams Station GW 18-NPDES/CCR

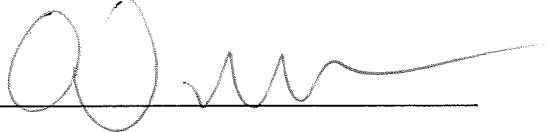
Date & Time Sampled: May 22, 2017 10:20
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG18TDS

GW 18

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1167	7.5	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.95	0.00	S.U.	5/23/17 14:10	BF
Sulfates by IC EPA 300.0	35.5	0.50	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	2597	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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 Columbia, SC 29212
 Tel: (803)217-9384
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May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27159**

Williams Station GW 19D-NPDES/CCR

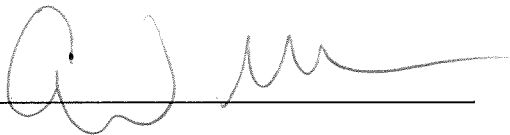
Date & Time Sampled: May 22, 2017 11:01
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG19DTDS

GW 19D

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	182	1.0	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.41	0.00	S.U.	5/23/17 14:10	BF
Sulfates by IC EPA 300.0	0.89	0.50	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	826	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Columbia, SC 29212
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May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27160**

Williams Station GW 20D-NPDES/CCR

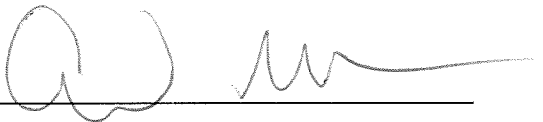
Date & Time Sampled: May 22, 2017 11:40
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG20DTDS

GW 20D

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	446	2.5	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011)	7.02	0.00	S.U.	5/23/17 14:10	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	8.9	0.50	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	1159	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
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 Tel: (803)217-9384
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May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27161**

Williams Station GW 16-NPDES/CCR

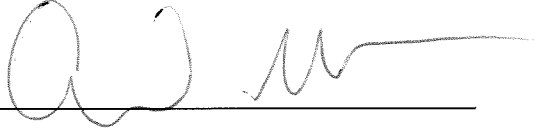
Date & Time Sampled: May 22, 2017 12:35
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG16TDS

GW 16

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	36.46	0.50	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	5.71	0.00	S.U.	5/23/17 14:10	BF
Sulfates by IC EPA 300.0	12.3	0.50	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	239	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

May 25, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27162**

Williams Station GW 21-CCR

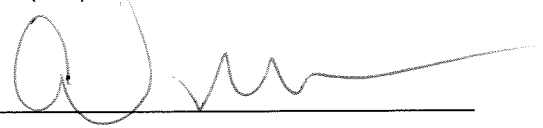
Date & Time Sampled: May 22, 2017 13:19
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG21TDS

GW 21

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	3.78	0.50	mg/L	5/25/17 16:14	BB
pH by SM4500HB(2011)	6.04	0.00	S.U.	5/23/17 14:10	BF
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	103	1.0	mg/L	5/25/17 16:14	BB
Total Dissolved Solid-SM2540C	264	2.0	mg/L	5/24/17 14:30	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27163**

Will Sta GW 17, T. Metals-NPDES/CCR

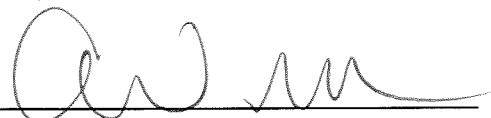
Date & Time Sampled: May 22, 2017 09:20
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG17TM

GW 17

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	26.2	1.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	158	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	148580	10000	ppb	5/25/17 11:06	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	2.7	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	1.0	1.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
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 Fax: (803) 217-9911

June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27164**

Will Sta Duplicate, T. Metals-NPDES/CCR

Date & Time Sampled: May 22, 2017 09:35
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIGDUPTM

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	27.1	1.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	155	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	147680	10000	ppb	5/25/17 11:06	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	2.7	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	1.0	1.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27165**

Will Sta Field Blank, T. Metals-NPDES/CCR

Date & Time Sampled: May 22, 2017 10:10
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIGFBTM

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	Less than	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	Less than	100	ppb	5/25/17 11:06	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27166**

Will Sta GW 18, T. Metals-NPDES/CCR

Date & Time Sampled: May 22, 2017 10:20
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG18TM

GW 18

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	2.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	Less than	2.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	418	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	1886	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	2.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	121360	10000	ppb	5/25/17 11:06	CDB
Chromium by ICP_MS 200.8	Less than	2.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	Less than	2.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	2.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	8.7	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	0.32	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	Less than	2.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	10.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	2.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Columbia, SC 29212
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June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27167**

Will Sta GW 19D, T. Metals-NPDES/CCR

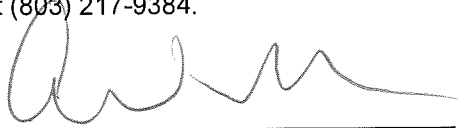
Date & Time Sampled: May 22, 2017 11:01
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG19DTM

GW 19D

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	3.3	1.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	105	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	42810	1000	ppb	5/25/17 11:06	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	4.4	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	13.6	1.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27168**

Will Sta GW 20D, T. Metals-NPDES/CCR

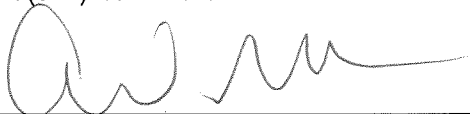
Date & Time Sampled: May 22, 2017 11:40
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG20DTM

GW 20D

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	103	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	1936	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	180820	2000	ppb	5/25/17 12:11	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	8.3	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27169**

Will Sta GW 16, T. Metals-NPDES/CCR

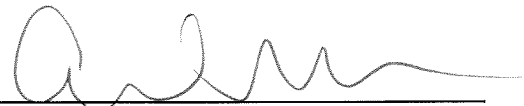
Date & Time Sampled: May 22, 2017 12:35
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG16TM

GW 16

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	2.6	1.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	115	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	28490	1000	ppb	5/25/17 11:06	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	14.4	1.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	8.3	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

June 19, 2017

REPORT TO:
Mike Moore C221

Sample ID: **AB27170**

Will Sta GW 21, T. Metals-NPDES/CCR

Date & Time Sampled: May 22, 2017 13:19
 Date & Time Submitted: May 23, 2017 12:59
 Collected by: C.SANDEL Location Code: WIG21TM2

GW 21

Login Record File: 170523001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Arsenic by ICP_MS 200.8	1.5	1.0	ppb	5/25/17 08:21	MC
Barium by ICP-OES 200.7	37.4	10.0	ppb	5/25/17 11:06	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 11:06	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Calcium EPA 200.7	45810	1000	ppb	5/25/17 11:06	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Cobalt by ICP_MS 200.8	3.8	1.0	ppb	5/25/17 08:21	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Lithium (CWA) 200.7	Less than	2.0	ppb	5/25/17 11:06	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	6/16/17 14:33	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/25/17 08:21	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 08:21	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 08:21	MC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C**

Williams Station FGD Pond C

Gauging Date: 7/24/17													
Monitoring Well ID	Well Data			Initial Gauging		Final Gauging		Final Water Quality Indicator Parameters					
	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
GW-16	12.65	9.85	2.80	8.50	4.15	8.65	4.00	21.9	5.2	295	6.48	110.0	1.43
GW-17	12.12	12.12	0.00	7.63	4.49	7.69	4.43	21	6.4	2,007	6.18	-85.0	0.77
GW-18	11.93	11.93	0.00	8.69	3.24	8.71	3.22	20.6	6.7	4,905	5.72	-79.4	0.74
GW-19D	12.56	12.50	0.06	9.02	3.54	9.30	3.26	20.7	7.2	1,386	7.33	-115	0.96
GW-20D	12.17	12.10	0.07	8.78	3.39	9.02	3.15	22.0	6.6	2,143	8.25	-57.1	0.92
GW-21	13.80	11.28	2.52	9.17	4.63	9.54	4.26	20.7	5.7	428	6.35	34.7	0.59

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC

Client SDG: 428700 GEL Work Order: 428700

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- H Analytical holding time was exceeded
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-20D	Project: SCEG01516C
Sample ID: 428700001	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 10:07	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.275	0.033	0.100	mg/L		1	MAR1	07/28/17	1303	1685532	1
Chloride		407	6.70	20.0	mg/L		100	MAR1	08/01/17	1930	1685532	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		10.6	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1239	1685293	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.99	3.00	pCi/L			JXC9	07/31/17	1113	1685261	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.59	0.524	1.00	pCi/L			MXH8	07/28/17	0935	1685260	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			99	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-20D
Sample ID: 428700001

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Field Blank	Project: SCEG01516C
Sample ID: 428700002	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 10:55	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride	J	0.0899	0.067	0.200	mg/L		1	MAR1	07/28/17	1332	1685532	1
Fluoride	U	ND	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1331	1685293	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.52	3.00	pCi/L			JXC9	07/31/17	1113	1685261	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226	U	ND	0.372	1.00	pCi/L			MXH8	07/28/17	0935	1685260	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92.7	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-17	Project: SCEG01516C
Sample ID: 428700003	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 10:56	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.355	0.033	0.100	mg/L		1	MAR1	07/28/17	1401	1685532	1
Chloride		858	13.4	40.0	mg/L		200	MAR1	08/01/17	1959	1685532	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	4.29	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1332	1685293	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.18	3.00	pCi/L			JXC9	07/31/17	1113	1685261	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.51	0.520	1.00	pCi/L			MXH8	07/28/17	0935	1685260	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			96.8	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17

Sample ID: 428700003

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: Dup	Project: SCEG01516C
Sample ID: 428700004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 11:10	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.283	0.033	0.100	mg/L		1	MAR1	07/28/17	1430	1685532	1
Chloride		853	13.4	40.0	mg/L		200	MAR1	08/01/17	2027	1685532	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	4.07	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1334	1685293	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.40	3.00	pCi/L			JXC9	07/31/17	1113	1685261	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.99	0.668	1.00	pCi/L			MXH8	07/28/17	0935	1685260	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86.4	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID:	Dup	Project:	SCEG01516C
Sample ID:	428700004	Client ID:	GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 428700005	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 12:09	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.473	0.033	0.100	mg/L		1	MAR1	07/28/17	1459	1685532	1
Chloride		1280	13.4	40.0	mg/L		200	MAR1	08/01/17	2056	1685532	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium		11.4	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1335	1685293	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.49	3.00	pCi/L			JXC9	07/31/17	1119	1685261	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.45	0.415	1.00	pCi/L			MXH8	07/28/17	0935	1685260	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			99.3	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-18

Sample ID: 428700005

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-19D	Project: SCEG01516C
Sample ID: 428700006	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 12:55	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.825	0.033	0.100	mg/L		1	MAR1	07/28/17	1528	1685532	1
Chloride		164	6.70	20.0	mg/L		100	MAR1	08/01/17	2125	1685532	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	5.69	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1324	1685293	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.58	3.00	pCi/L			JXC9	07/31/17	1119	1685261	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		6.37	0.292	1.00	pCi/L			MXH8	07/28/17	0935	1685260	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			94.4	(15%-125%)

Notes:

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-19D
Sample ID: 428700006

Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: MW-16	Project: SCEG01516C
Sample ID: 428700007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 14:02	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.443	0.033	0.100	mg/L		1	MAR1	07/28/17	1654	1685532	1
Chloride		38.2	0.670	2.00	mg/L		10	MAR1	08/01/17	2154	1685532	2
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	J	9.84	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1325	1685293	3
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.77	3.00	pCi/L			JXC9	07/31/17	1119	1685261	4
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		4.83	0.566	1.00	pCi/L			MXH8	07/28/17	0935	1685260	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	
3	EPA 200.8 SC_NPDES	
4	EPA 904.0/SW846 9320 Modified	
5	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			98.5	(15%-125%)

Notes:

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: MW-16

Sample ID: 428700007

Project: SCEG01516C

Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
-----------	-----------	--------	----	----	-------	----	----	---------	------	------	-------	--------

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 7, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: MW-21	Project: SCEG01516C
Sample ID: 428700008	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 24-JUL-17 15:00	
Receive Date: 24-JUL-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride		4.08	0.067	0.200	mg/L		1	MAR1	07/28/17	1723	1685532	1
Fluoride	J	0.0771	0.033	0.100	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	07/31/17	1329	1685293	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	ND	1.24	3.00	pCi/L			JXC9	07/31/17	1119	1685261	3
Rad Radium-226												
Lucas Cell, Ra226, liquid "As Received"												
Radium-226		5.79	0.345	1.00	pCi/L			MXH8	07/28/17	0935	1685260	4

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	JXM8	07/25/17	1655	1685292

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 200.8 SC_NPDES	
3	EPA 904.0/SW846 9320 Modified	
4	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			81.2	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: August 7, 2017

Page 1 of 4

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 428700

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1685532										
QC1203838982	428700008	DUP									
Chloride		4.08		4.07	mg/L	0.26		(0%-20%)	MAR1	07/28/17	17:52
Fluoride	J	0.0771	J	0.0756	mg/L	1.96	^	(+/-0.100)			
QC1203838981	LCS										
Chloride	5.00			4.76	mg/L		95.3	(90%-110%)		07/28/17	12:34
Fluoride	2.50			2.47	mg/L		98.7	(90%-110%)			
QC1203838980	MB										
Chloride			U	ND	mg/L					07/28/17	12:06
Fluoride			U	ND	mg/L						
QC1203838983	428700008	PS									
Chloride	5.00	4.08		9.42	mg/L		107	(90%-110%)		07/28/17	18:21
Fluoride	2.50	J	0.0771	2.56	mg/L		99.4	(90%-110%)			
Metals Analysis - ICPMS											
Batch	1685293										
QC1203838395	428700001	DUP									
Lithium		10.6		10.8	ug/L	1.79	^	(+/-10.0)	SKJ	07/31/17	12:41
QC1203838394	LCS										
Lithium	50.0			52.3	ug/L		105	(80%-120%)		07/31/17	12:38
QC1203838393	MB										
Lithium			U	ND	ug/L					07/31/17	12:36

GEL LABORATORIES LLC

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QC Summary

Workorder: 428700

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis - ICPMS											
Batch	1685293										
QC1203838396	428700001	MS									
Lithium	50.0	10.6		56.5	ug/L		91.8	(75%-125%)	SKJ	07/31/17	12:42
QC1203838397	428700001	SDILT									
Lithium		10.6	J	2.28	ug/L	7.24		(0%-10%)		07/31/17	12:43
Rad Gas Flow											
Batch	1685261										
QC1203838334	428700002	DUP									
Radium-228		U	-0.153	U	0.388	pCi/L	N/A		N/A	JXC9	07/31/17 11:19
QC1203838335	LCS										
Radium-228	19.9			17.1	pCi/L		85.9	(75%-125%)		07/31/17	11:19
QC1203838333	MB										
Radium-228		U	-0.284		pCi/L					07/31/17	11:19
Rad Ra-226											
Batch	1685260										
QC1203838330	428700001	DUP									
Radium-226		5.59		4.38	pCi/L	24.1*		(0%-20%)	MXH8	07/28/17	10:10
QC1203838332	LCS										
Radium-226	26.0			24.1	pCi/L		92.8	(75%-125%)		07/28/17	10:10
QC1203838329	MB										
Radium-226		U		0.232	pCi/L					07/28/17	10:10
QC1203838331	428700001	MS									
Radium-226	130	5.59		159	pCi/L		118	(75%-125%)		07/28/17	10:10

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported

GEL LABORATORIES LLC

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QC Summary

Workorder: 428700

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
B											
BD											
E											
E											
FA											
FB											
H											
J											
K											
L											
M											
M											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											

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QC Summary

Workorder: 428700

Page 4 of 4

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
-----------------	------------	--------------------	-----------	--------------	-------------	-------------	--------------	--------------	-------------	-------------

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB27999**

Williams Station GW 20D-NPDES/CCR

Date & Time Sampled: July 24, 2017 10:07
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG20DTDS

GW 20D

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	452	2.5	mg/L	7/28/17 06:47	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.14	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	85.79	2.5	mg/L	7/28/17 06:47	BB
Total Dissolved Solid-SM2540C	1166	2.0	mg/L	7/28/17 12:10	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28000**

Williams Station GW 17-NPDES/CCR

Date & Time Sampled: July 24, 2017 10:56
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG17TDS

GW 17

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1073	7.5	mg/L	7/28/17 06:47	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.55	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	133	7.5	mg/L	7/28/17 06:47	BB
Total Dissolved Solid-SM2540C	2696	2.0	mg/L	7/28/17 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
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 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28001**

Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: July 24, 2017 10:55
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIGFBTDS

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than	0.50	mg/L	7/28/17 06:47	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.28	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	7/28/17 06:47	BB
Total Dissolved Solid-SM2540C	111	2.0	mg/L	7/28/17 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
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 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28002**

Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: July 24, 2017 11:10
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIGDUPTDS

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1133	7.5	mg/L	7/28/17 06:47	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.55	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	141	7.5	mg/L	7/28/17 06:47	BB
Total Dissolved Solid-SM2540C	2715	2.0	mg/L	7/28/17 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28003**

Williams Station GW 18-NPDES/CCR

Date & Time Sampled: July 24, 2017 12:09
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG18TDS

GW 18

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1325	7.5	mg/L	7/28/17 06:47	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.01	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	43.33	7.5	mg/L	7/28/17 06:47	BB
Total Dissolved Solid-SM2540C	2752	2.0	mg/L	7/28/17 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28004**

Williams Station GW 19D-NPDES/CCR

Date & Time Sampled: July 24, 2017 12:55
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG19DTDS

GW 19D

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	174	2.5	mg/L	7/28/17 06:47	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.58	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	<2.5	2.5	mg/L	7/28/17 06:47	BB
Total Dissolved Solid-SM2540C	837	2.0	mg/L	7/28/17 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
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January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28005**

Williams Station GW 16-NPDES/CCR

Date & Time Sampled: July 24, 2017 14:02
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG16TDS

GW 16

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	40.32	0.50	mg/L	7/28/17 06:47	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.02	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	20.56	0.50	mg/L	7/28/17 06:47	BB
Total Dissolved Solid-SM2540C	197	2.0	mg/L	7/28/17 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28006**

Williams Station GW 21-CCR

Date & Time Sampled: July 24, 2017 15:00
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG21TDS

GW 21

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	2.03	0.50	mg/L	7/28/17 06:47	EB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.41	0.00	S.U.	7/31/17 11:53	PRC
Sulfates by IC EPA 300.0	50.38	0.50	mg/L	7/28/17 06:47	EB
Total Dissolved Solid-SM2540C	247	2.0	mg/L	7/28/17 13:00	BF

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28007**

Will Sta GW 20D, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 10:07
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG20DTM

GW 20D

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	98.7	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	1979	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	199300	1000	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	9.0	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	8/1/17 14:16	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28008**

Will Sta GW 17, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 10:56
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG17TM

GW 17

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	20.3	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	342	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	3576	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	312700	1000	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	5.0	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	8/1/17 14:16	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28009**

Will Sta Field Blank, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 10:55
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIGFBTM

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	Less than	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	Less than	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	Less than	100	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	8/1/17 14:16	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28010**

Will Sta Duplicate, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 11:10
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIGDUPTM

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	20.1	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	337	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	3490	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	304000	1000	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	4.9	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	8/2/17 14:27	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28011**

Will Sta GW 18, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 12:09
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG18TM

GW 18

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	521	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	2682	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	160700	1000	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	10.7	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	1.0	ppb	8/2/17 14:27	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28012**

Will Sta GW 19D, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 12:55
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG19DTM

GW 19D

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	2.6	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	110	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	Less than	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	42790	1000	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	4.7	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	8/2/17 14:27	MC
Molybdenum - EPA 200.8	14.6	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28013**

Will Sta GW 16, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 14:02
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG16TM

GW 16

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	109	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	Less than	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	22190	1000	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	7.8	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	7.8	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	8/2/17 14:27	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

January 25, 2018

REPORT TO:
Mike Moore

Sample ID: **AB28014**

Will Sta GW 21, T. Metals-NPDES/CCR

Date & Time Sampled: July 24, 2017 15:00
 Date & Time Submitted: July 26, 2017 16:15
 Collected by: C.SANDEL Location Code: WIG21TM2

GW 21

Login Record File: 170727001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Arsenic by ICP_MS 200.8	1.4	1.0	ppb	8/2/17 12:39	CDB
Barium by ICP-OES 200.7	37.5	10.0	ppb	8/1/17 13:40	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Boron - EPA 200.7	Less than	1000	ppb	8/1/17 13:40	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Calcium EPA 200.7	44460	1000	ppb	8/1/17 13:40	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Cobalt by ICP_MS 200.8	4.4	1.0	ppb	8/2/17 12:39	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	8/1/17 13:40	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	8/2/17 14:27	MC
Molybdenum - EPA 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	8/2/17 12:39	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	8/2/17 12:39	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____

**EPA CCR Rule Compliance Monitoring Wells
Groundwater Monitoring Data
South Carolina Electric & Gas: Williams Station FGD Pond C**

Williams Station FGD Pond C

Gauging Date: 9/19/17													
Monitoring Well ID	Well Data			Initial Gauging		Final Gauging		Final Water Quality Indicator Parameters					
	PVC Pipe Elevation, ft.	Ground Surface Elevation, ft.	Stickup, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Depth to Groundwater, ft.	Groundwater Elevation, ft.	Temperature °C	pH S.U.	Sp. Cond. µS/cm	Turbidity NTU	ORP mV	DO mg/L
MW-FGD-16	12.65	9.85	2.80	8.36	4.29	8.50	4.15	25.1	5.2	310	7.86	187.0	0.30
MW-FGD-17	12.12	12.12	0.00	7.60	4.52	7.63	4.49	23.4	6.4	2,402	8.54	-94.3	0.25
MW-FGD-18	11.93	11.93	0.00	8.58	3.35	8.58	3.35	22.6	6.8	5,277	6.31	-27.7	0.28
MW-FGD-19D	12.56	12.50	0.06	8.41	4.15	8.55	4.01	22.5	7.2	1,480	6.03	-130	0.51
MW-FGD-20D	12.17	12.10	0.07	8.12	4.05	8.49	3.68	24.6	6.7	2,675	6.27	-37.6	0.21
MW-FGD-21	13.80	11.28	2.52	9.11	4.69	9.60	4.20	22.7	5.7	457	7.95	54.7	0.32

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report
for**

GEEL003 GEL Engineering, LLC

Client SDG: 433141 GEL Work Order: 433141

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a Tracer compound
- ** Analyte is a surrogate compound
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.



Reviewed by _____

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-17
Sample ID: 433141001
Matrix: Ground Water
Collect Date: 19-SEP-17 09:30
Receive Date: 19-SEP-17
Collector: Client
Project: SCEG01516C
Client ID: GEEL003

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.364	0.033	0.100	mg/L		1	MXL2	09/20/17	0122	1702026	1
Chloride		912	13.4	40.0	mg/L		200	MXL2	09/20/17	1835	1702026	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	EPA 300.0		

Notes:

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: DUP Project: SCEG01516C
Sample ID: 433141002 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 19-SEP-17 09:40
Receive Date: 19-SEP-17
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.414	0.033	0.100	mg/L		1	MXL2	09/20/17	0250	1702026	1
Chloride		943	13.4	40.0	mg/L		200	MXL2	09/20/17	2003	1702026	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	EPA 300.0		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Williams

Client Sample ID: Field Blank

Project: SCEG01516C

Sample ID: 433141003

Client ID: GEEL003

Matrix: Water

Collect Date: 19-SEP-17 10:15

Receive Date: 19-SEP-17

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride	J	0.0746	0.067	0.200	mg/L		1	MXL2	09/20/17	0320	1702026	1
Fluoride	U	ND	0.033	0.100	mg/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd

 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: GW-18	Project: SCEG01516C
Sample ID: 433141004	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 19-SEP-17 10:21	
Receive Date: 19-SEP-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.470	0.033	0.100	mg/L		1	MXL2	09/20/17	0349	1702026	1
Chloride		1240	13.4	40.0	mg/L		200	MXL2	09/20/17	2032	1702026	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	
2	EPA 300.0	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-19D Project: SCEG01516C
Sample ID: 433141005 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 19-SEP-17 11:00
Receive Date: 19-SEP-17
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.780	0.033	0.100	mg/L		1	MXL2	09/20/17	0419	1702026	1
Chloride		165	3.35	10.0	mg/L		50	MXL2	09/20/17	2102	1702026	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	EPA 300.0		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID: GW-20D Project: SCEG01516C
Sample ID: 433141006 Client ID: GEEL003
Matrix: Ground Water
Collect Date: 19-SEP-17 11:40
Receive Date: 19-SEP-17
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.277	0.033	0.100	mg/L		1	MXL2	09/20/17	0448	1702026	1
Chloride		383	6.70	20.0	mg/L		100	MXL2	09/20/17	2131	1702026	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	EPA 300.0		

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
 Address : 2040 Savage Rd
 Charleston, South Carolina 29417
 Contact: Robert Gardner
 Project: Williams

Client Sample ID: MW-16	Project: SCEG01516C
Sample ID: 433141007	Client ID: GEEL003
Matrix: Ground Water	
Collect Date: 19-SEP-17 12:38	
Receive Date: 19-SEP-17	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Fluoride		0.368	0.033	0.100	mg/L		1	MXL2	09/20/17	0616	1702026	1
Chloride		37.5	0.335	1.00	mg/L		5	MXL2	09/20/17	2201	1702026	2

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		
2	EPA 300.0		

Notes:

Column headers are defined as follows:

- | | |
|---------------------------------------|--------------------------------|
| DF: Dilution Factor | Lc/LC: Critical Level |
| DL: Detection Limit | PF: Prep Factor |
| MDA: Minimum Detectable Activity | RL: Reporting Limit |
| MDC: Minimum Detectable Concentration | SQL: Sample Quantitation Limit |

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: September 27, 2017

Company : GEL Engineering, LLC
Address : 2040 Savage Rd

Charleston, South Carolina 29417
Contact: Robert Gardner
Project: Williams

Client Sample ID:	MW-21	Project:	SCEG01516C
Sample ID:	433141008	Client ID:	GEEL003
Matrix:	Ground Water		
Collect Date:	19-SEP-17 13:18		
Receive Date:	19-SEP-17		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in Liquid "As Received"												
Chloride		3.79	0.067	0.200	mg/L		1	MXL2	09/20/17	0646	1702026	1
Fluoride		0.104	0.033	0.100	mg/L		1					

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	EPA 300.0		

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: September 27, 2017

Page 1 of 2

GEL Engineering, LLC
2040 Savage Rd
Charleston, South Carolina

Contact: Robert Gardner

Workorder: 433141

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography											
Batch	1702026										
QC1203878633	433141001	DUP									
Chloride		912		896	mg/L	1.77		(0%-20%)	MXL2	09/20/17	19:04
Fluoride		0.364		0.373	mg/L	2.47 ^		(+/-0.100)		09/20/17	01:51
QC1203878632	LCS										
Chloride	5.00			4.65	mg/L		93	(90%-110%)		09/20/17	00:53
Fluoride	2.50			2.37	mg/L		95	(90%-110%)			
QC1203878631	MB										
Chloride			U	ND	mg/L					09/20/17	00:23
Fluoride			U	ND	mg/L						
QC1203878634	433141001	PS									
Chloride	5.00	4.56		9.75	mg/L		104	(90%-110%)		09/20/17	19:34
Fluoride	2.50	0.364		2.68	mg/L		92.7	(90%-110%)		09/20/17	02:21

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J Value is estimated
- N/A RPD or %Recovery limits do not apply.
- NI See case narrative
- ND Analyte concentration is not detected above the detection limit

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 433141

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
NJ		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Q		One or more quality control criteria have not been met. Refer to the applicable narrative or DER.									
R		Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.									
R		Sample results are rejected									
U		Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.									
X		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Z		Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.									
^		RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
d		5-day BOD--The 2:1 depletion requirement was not met for this sample									
e		5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes									
h		Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28658**

Williams Station GW 17-NPDES/CCR

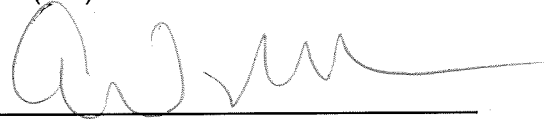
Date & Time Sampled: September 19, 2017 09:30
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIG17TDS

GW 17

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1217	7.5	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.60	0.00	S.U.	9/22/17 11:18	PRC
Sulfates by IC EPA 300.0	156	7.5	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	2984	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28659**

Williams Station Duplicate-NPDES/CCR

Date & Time Sampled: September 19, 2017 09:40
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIGDUPTDS

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1181	7.5	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	6.61	0.00	S.U.	9/22/17 11:18	PRC
Sulfates by IC EPA 300.0	150	7.5	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	2922	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28660**

Williams Sta Field Blank-NPDES/CCR

Date & Time Sampled: September 19, 2017 10:15
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIGFBTDS

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	Less than	0.50	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011)	7.48	0.00	S.U.	9/22/17 11:18	PRC
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	Less than	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28661**

Williams Station GW 18-NPDES/CCR

Date & Time Sampled: September 19, 2017 10:21
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIG18TDS

GW 18

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	1267	7.5	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded.	7.12	0.00	S.U.	9/22/17 11:18	PRC
Sulfates by IC EPA 300.0	50.0	7.5	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	2758	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28662**

Williams Station GW 19D-NPDES/CCR

Date & Time Sampled: September 19, 2017 11:00

Date & Time Submitted: September 21, 2017 14:18

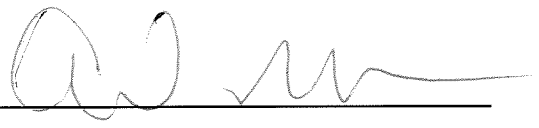
Collected by: C.SANDEL Location Code: WIG19DTDS

GW 19D

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	190	1.0	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011)	7.62	0.00	S.U.	9/22/17 11:18	PRC
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	1.2	1.0	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	767	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28663**

Williams Station GW 20D-NPDES/CCR

Date & Time Sampled: September 19, 2017 11:40

Date & Time Submitted: September 21, 2017 14:18

Collected by: C.SANDEL Location Code: WIG20DTDS

GW 20D

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	419	2.5	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011)	7.12	0.00	S.U.	9/22/17 11:18	PRC
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	313	2.5	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	1506	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: _____



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 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28664**

Williams Station GW 16-NPDES/CCR

Date & Time Sampled: September 19, 2017 12:38

Date & Time Submitted: September 21, 2017 14:18

Collected by: C.SANDEL Location Code: WIG16TDS

GW 16

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	37.6	0.50	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011)	5.87	0.00	S.U.	9/22/17 11:18	PRC
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	20.2	0.50	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	212	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 26, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28665**

Williams Station GW 21-CCR

Date & Time Sampled: September 19, 2017 13:18

Date & Time Submitted: September 21, 2017 14:18

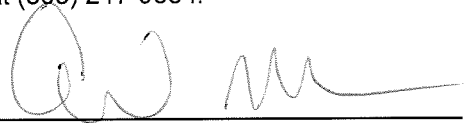
Collected by: C.SANDEL Location Code: WIG21TDS

GW 21

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.1	1.0	mg/L	9/25/17 11:46	BB
pH by SM4500HB(2011)	6.29	0.00	S.U.	9/22/17 11:18	PRC
Holding Time of 15 minutes has been exceeded.					
Sulfates by IC EPA 300.0	97.1	1.0	mg/L	9/25/17 11:46	BB
Total Dissolved Solid-SM2540C	258	2.0	mg/L	9/25/17 16:20	PRC

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

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September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28666**

Will Sta GW 17, T. Metals-NPDES/CCR

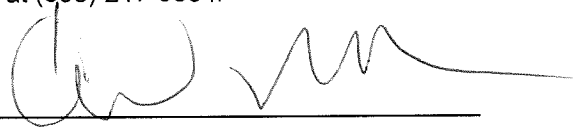
Date & Time Sampled: September 19, 2017 09:30
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIG17TM

GW 17

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	4297	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	346800	1000	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 Columbia, SC 29212
 Tel: (803)217-9384
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September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28667**

Will Sta Duplicate, T. Metals-NPDES/CCR

Date & Time Sampled: September 19, 2017 09:40
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIGDUPTM

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	4222	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	342000	1000	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28668**

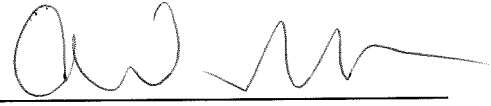
Will Sta Field Blank, T. Metals-NPDES/CCR

Date & Time Sampled: September 19, 2017 10:15
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIGFBTM

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	Less than	100	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28669**

Will Sta GW 18, T. Metals-NPDES/CCR

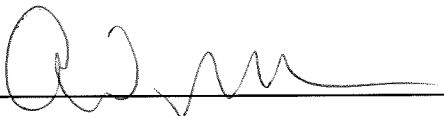
Date & Time Sampled: September 19, 2017 10:21
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIG18TM

GW 18

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	2830	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	167200	1000	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
 Fax: (803) 217-9911

September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28670**

Will Sta GW 19D, T. Metals-NPDES/CCR

Date & Time Sampled: September 19, 2017 11:00
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIG19DTM

GW 19D

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	42440	1000	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



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 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28671**

Will Sta GW 20D, T. Metals-NPDES/CCR

Date & Time Sampled: September 19, 2017 11:40
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIG20DTM

GW 20D

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	1476	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	263500	1000	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
 2102 North Lake Drive
 Columbia, SC 29212
 Tel: (803)217-9384
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September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28672**

Will Sta GW 16, T. Metals-NPDES/CCR

Date & Time Sampled: September 19, 2017 12:38
 Date & Time Submitted: September 21, 2017 14:18
 Collected by: C.SANDEL Location Code: WIG16TM

GW 16

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	25690	1000	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



Central Laboratory (P-08)
2102 North Lake Drive
Columbia, SC 29212
Tel: (803)217-9384
Fax: (803) 217-9911

September 25, 2017

REPORT TO:
Mike Moore

Sample ID: **AB28673**

Will Sta GW 21, T. Metals-NPDES/CCR

Date & Time Sampled: September 19, 2017 13:18
Date & Time Submitted: September 21, 2017 14:18
Collected by: C.SANDEL Location Code: WIG21TM2

GW 21

Login Record File: 170921002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	9/25/17 14:59	CDB
Calcium EPA 200.7	45380	1000	ppb	9/25/17 14:59	CDB

If there are any questions concerning this sample, please contact the lab at (803) 217-9384.

Approved By: 



APPENDIX B

Statistical Analysis of Detection Monitoring Groundwater Quality Results

Williams Station
Detection Monitoring Summary

Run Id: 1

Location Id: MW-FGD-17

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, tot mg/L	07/24/2017	AB28008	--	--	3.580	y		None
Boron, tot mg/L	09/19/2017	AB28666	--	--	4.297	y		None

Run Id: 2

Location Id: MW-FGD-17

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	07/24/2017	AB28008	1 of 2	158.000	313.000	y		None
Calcium, tot ug/L	09/19/2017	AB28666	1 of 2	158.000	346.800	y		None

Run Id: 3

Location Id: MW-FGD-17

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	07/24/2017	AB28000	1 of 2	40.32	1073.00	y		None
Chloride, tot mg/L	09/19/2017	AB28658	1 of 2	40.32	1217.00	y		None

Run Id: 4

Location Id: MW-FGD-17

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Williams Station

Detection Monitoring Summary

Run Id: 4**Location Id:** MW-FGD-17**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re</u> <u>Testing</u>	<u>Upper Limit</u>	<u>Compliance</u> <u>Result</u>	<u>Exceedance</u>	<u>Possible</u> <u>SSI</u>	<u>Post-Hoc</u> <u>Trend</u>
F, tot mg/L	07/24/2017	428700003	1 of 2	0.480	0.355	n		--
F, tot mg/L	09/19/2017	433141001	1 of 2	0.480	0.364	n		--

Run Id: 5**Location Id:** MW-FGD-17**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re</u> <u>Testing</u>	<u>Upper Limit</u>	<u>Compliance</u> <u>Result</u>	<u>Exceedance</u>	<u>Possible</u> <u>SSI</u>	<u>Post-Hoc</u> <u>Trend</u>
Field pH S.U.	07/24/2017	FLD20170724	1 of 2	6.453	6.400	n/n		--
Field pH S.U.	09/19/2017	FLD20170919	1 of 2	6.453	6.400	n/n		--

Run Id: 6**Location Id:** MW-FGD-17**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re</u> <u>Testing</u>	<u>Upper Limit</u>	<u>Compliance</u> <u>Result</u>	<u>Exceedance</u>	<u>Possible</u> <u>SSI</u>	<u>Post-Hoc</u> <u>Trend</u>
Sulfate, tot mg/L	07/24/2017	AB28000	1 of 2	125.000	133.000	y		None
Sulfate, tot mg/L	09/19/2017	AB28658	1 of 2	125.000	156.000	y		None

Run Id: 7**Location Id:** MW-FGD-17

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Detection Monitoring Summary

Run Id: 7

Location Id: MW-FGD-17

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Total Dissolved Solids mg/L	07/24/2017	AB28000	1 of 2	495.000	2696.000	y		None
Total Dissolved Solids mg/L	09/19/2017	AB28658	1 of 2	495.000	2984.000	y		None

Run Id: 8

Location Id: MW-FGD-18

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, tot mg/L	07/24/2017	AB28011	--	--	2.680	y		Upward
Boron, tot mg/L	09/19/2017	AB28669	--	--	2.830	y		Upward

Run Id: 9

Location Id: MW-FGD-18

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	07/24/2017	AB28011	1 of 2	158.000	161.000	y		Upward
Calcium, tot ug/L	09/19/2017	AB28669	1 of 2	158.000	167.200	y		Upward

Run Id: 10

Location Id: MW-FGD-18

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Williams Station

Detection Monitoring Summary

Run Id: 10**Location Id:** MW-FGD-18**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	07/24/2017	AB28003	1 of 2	40.32	1325.00	y		None
Chloride, tot mg/L	09/19/2017	AB28661	1 of 2	40.32	1267.00	y		None

Run Id: 11**Location Id:** MW-FGD-18**Compliance Test:** Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
F, tot mg/L	07/24/2017	428700005	1 of 2	0.480	0.473	n		--
F, tot mg/L	09/19/2017	433141004	1 of 2	0.480	0.470	n		--

Run Id: 12**Location Id:** MW-FGD-18**Compliance Test:** Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	07/24/2017	FLD20170724	1 of 2	6.453	6.700	y/n		--
Field pH S.U.	09/19/2017	FLD20170919	1 of 2	6.453	6.800	y/n		--

Run Id: 13**Location Id:** MW-FGD-18

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Williams Station

Detection Monitoring Summary

Run Id: 13**Location Id:** MW-FGD-18**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	07/24/2017	AB28003	1 of 2	125.000	43.330	n		--
Sulfate, tot mg/L	09/19/2017	AB28661	1 of 2	125.000	50.000	n		--

Run Id: 14**Location Id:** MW-FGD-18**Compliance Test:** Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Total Dissolved Solids mg/L	07/24/2017	AB28003	1 of 2	495.000	2752.000	y		Upward
Total Dissolved Solids mg/L	09/19/2017	AB28661	1 of 2	495.000	2758.000	y		Upward

Run Id: 15**Location Id:** MW-FGD-19D**Compliance Test:** Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, tot mg/L	07/24/2017	AB28012	--	--	< 1.000	n		--
Boron, tot mg/L	09/19/2017	AB28670	--	--	< 1.000	n		--

Run Id: 16**Location Id:** MW-FGD-19D

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Detection Monitoring Summary

Run Id: 16

Location Id: MW-FGD-19D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	07/24/2017	AB28012	1 of 2	158.000	42.800	n		--
Calcium, tot ug/L	09/19/2017	AB28670	1 of 2	158.000	42.440	n		--

Run Id: 17

Location Id: MW-FGD-19D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	07/24/2017	AB28004	1 of 2	40.32	174.00	y		Upward
Chloride, tot mg/L	09/19/2017	AB28662	1 of 2	40.32	190.00	y		Upward

Run Id: 18

Location Id: MW-FGD-19D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
F, tot mg/L	07/24/2017	428700006	1 of 2	0.480	0.825	y		None
F, tot mg/L	09/19/2017	433141005	1 of 2	0.480	0.780	y		None

Run Id: 19

Location Id: MW-FGD-19D

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Detection Monitoring Summary

Run Id: 19

Location Id: MW-FGD-19D

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	07/24/2017	FLD20170724	1 of 2	6.453	7.200	y/n		--
Field pH S.U.	09/19/2017	FLD20170919	1 of 2	6.453	7.200	y/n		--

Run Id: 20

Location Id: MW-FGD-19D

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	07/24/2017	AB28004	1 of 2	125.000	0.500	n		--
Sulfate, tot mg/L	09/19/2017	AB28662	1 of 2	125.000	1.200	n		--

Run Id: 21

Location Id: MW-FGD-19D

Compliance Test: Non-Parametric Prediction Interval on Background Using largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Total Dissolved Solids mg/L	07/24/2017	AB28004	1 of 2	495.000	837.000	y		None
Total Dissolved Solids mg/L	09/19/2017	AB28662	1 of 2	495.000	767.000	y		None

Run Id: 22

Location Id: MW-FGD-20D

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Detection Monitoring Summary

Run Id: 22

Location Id: MW-FGD-20D

Compliance Test: Double Quantification Rule

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Boron, tot mg/L	07/24/2017	AB28007	--	--	1.980	y		None
Boron, tot mg/L	09/19/2017	AB28671	--	--	1.476	y		None

Run Id: 23

Location Id: MW-FGD-20D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Calcium, tot ug/L	07/24/2017	AB28007	1 of 2	158.000	199.000	y		Upward
Calcium, tot ug/L	09/19/2017	AB28671	1 of 2	158.000	263.500	y		Upward

Run Id: 24

Location Id: MW-FGD-20D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Chloride, tot mg/L	07/24/2017	AB27999	1 of 2	40.32	452.00	y		None
Chloride, tot mg/L	09/19/2017	AB28663	1 of 2	40.32	419.00	y		None

Run Id: 25

Location Id: MW-FGD-20D

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Detection Monitoring Summary

Run Id: 25

Location Id: MW-FGD-20D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
F, tot mg/L	07/24/2017	428700001	1 of 2	0.480	0.275	n		--
F, tot mg/L	09/19/2017	433141006	1 of 2	0.480	0.277	n		--

Run Id: 26

Location Id: MW-FGD-20D

Compliance Test: Parametric Prediction Interval on Background

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Field pH S.U.	07/24/2017	FLD20170724	1 of 2	6.453	6.600	y/n		--
Field pH S.U.	09/19/2017	FLD20170919	1 of 2	6.453	6.700	y/n		--

Run Id: 27

Location Id: MW-FGD-20D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Sulfate, tot mg/L	07/24/2017	AB27999	1 of 2	125.000	85.790	n		--
Sulfate, tot mg/L	09/19/2017	AB28663	1 of 2	125.000	313.000	y		None

Run Id: 28

Location Id: MW-FGD-20D

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Detection Monitoring Summary

Run Id: 28

Location Id: MW-FGD-20D

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	<u>Sample Date</u>	<u>Lab Id</u>	<u>Re Testing</u>	<u>Upper Limit</u>	<u>Compliance Result</u>	<u>Exceedance</u>	<u>Possible SSI</u>	<u>Post-Hoc Trend</u>
Total Dissolved Solids mg/L	07/24/2017	AB27999	1 of 2	495.000	1166.000	y		None
Total Dissolved Solids mg/L	09/19/2017	AB28663	1 of 2	495.000	1506.000	y		None

NOTE: If trend test is performed, the background slope is listed under the Upper Limit heading and the compliance slope is listed under the Compliance Result heading.

Williams Station

January 18, 2018

2:03:02 PM

All Background Results Non-Detect

Location Id: MW-FGD-17

Run Id: 1

Parameter: Boron, tot

Method: Double Quantification Rule

Percent ND: 0

ND Approach: 0% to <= 15% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>PQL</u>	<u>RL</u>	<u>Non Detect</u>	<u>Exceedance</u>
07/24/2017	3.580	3.580	0.044	1.000	0.000	N	N
09/19/2017	4.297	4.297	0.044	1.000	0.000	N	y

All Background Results Non-Detect

Location Id: MW-FGD-18

Run Id: 8

Parameter: Boron, tot

Method: Double Quantification Rule

Percent ND: 0

ND Approach: 0% to <= 15% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>PQL</u>	<u>RL</u>	<u>Non Detect</u>	<u>Exceedance</u>
07/24/2017	2.680	2.680	0.044	1.000	0.000	N	N
09/19/2017	2.830	2.830	0.044	1.000	0.000	N	y

All Background Results Non-Detect

Location Id: MW-FGD-19D

Run Id: 15

Parameter: Boron, tot

Method: Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100 % Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>PQL</u>	<u>RL</u>	<u>Non Detect</u>	<u>Exceedance</u>
07/24/2017	1.000	0.364	0.044	1.000	0.000	Y	N
09/19/2017	1.000	0.365	0.044	1.000	0.000	Y	N

All Background Results Non-Detect

Location Id: MW-FGD-20D

Run Id: 22

Parameter: Boron, tot

Method: Double Quantification Rule

Percent ND: 0

ND Approach: 0% to <= 15% Substitute PQL

<u>Sample Date</u>	<u>Modified Result</u>	<u>Analysis Result</u>	<u>Detection Limit</u>	<u>PQL</u>	<u>RL</u>	<u>Non Detect</u>	<u>Exceedance</u>
07/24/2017	1.980	1.980	0.044	1.000	0.000	N	N
09/19/2017	1.476	1.476	0.044	1.000	0.000	N	y

All Background Results Non-Detect

2:03:02 PM

Williams Station
Parametric Prediction Interval on Background - Background Data Calculation

<u>Number Of Locations:</u>	4	<u>Annual Site Wide False Positive Rate (SWFPR):</u>	0.10
<u>Number Of Parameters:</u>	7	<u>Sample Events per Year:</u>	2
<u>Sampling Plan:</u>	Interwell	<u>Verification Sampling:</u>	Pass 1 of 2 (one resample)

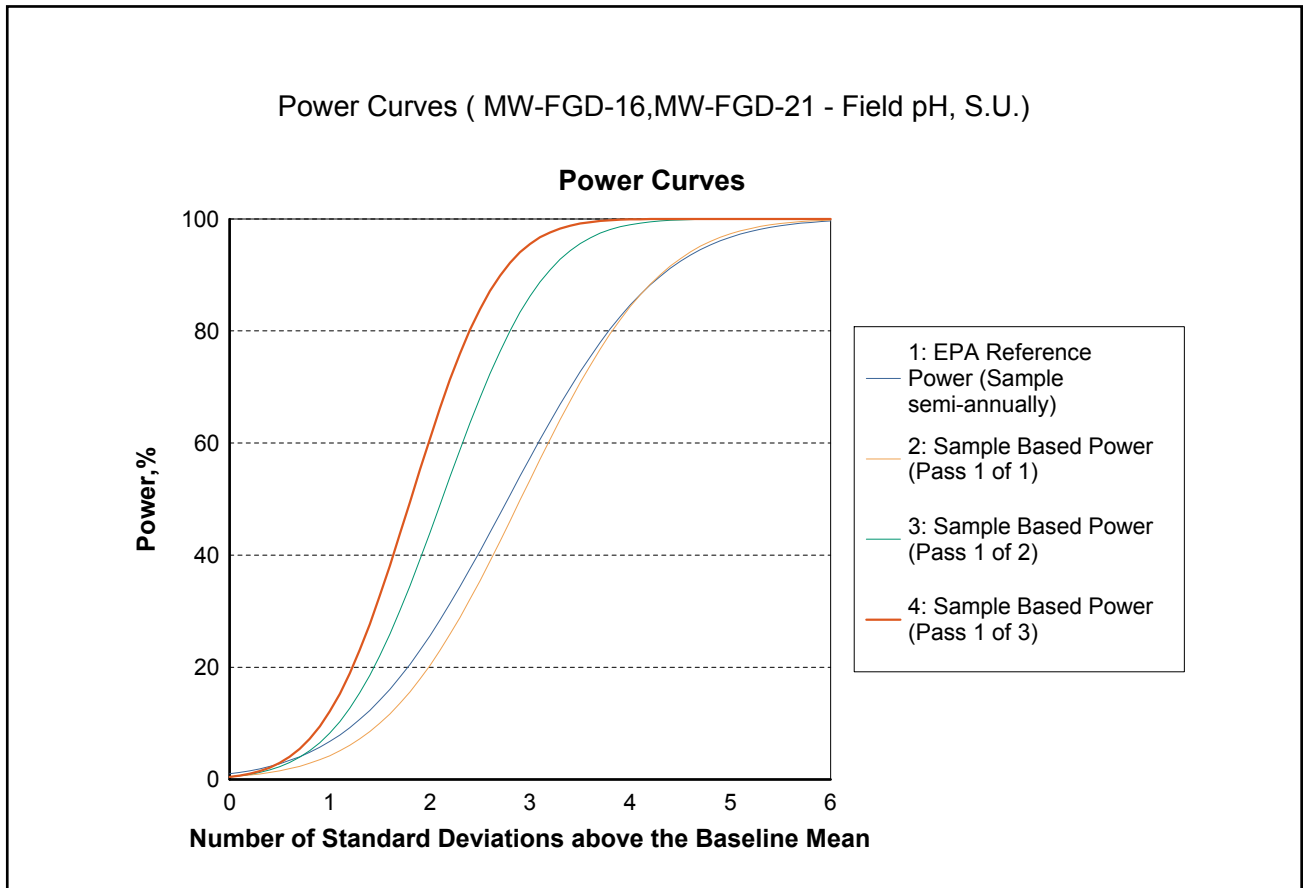
Background Locations: MW-FGD-16,MW-FGD-21

Insufficient Background: 0
DOR Tests: 1

<u>Parameter Name:</u>	Field pH, S.U.	<u>Background Date Range:</u>	05/10/2016 to 09/19/2017
<u>Alpha Per Test FPR:</u>	0.00218	<u>Option for LT Pts:</u>	0% to <= 15% Substitute ½ PQL
<u>Total Pts</u>	15	<u>Kappa for Selected Verification Plan:</u>	2.135
<u>LT Pts</u>	0	<u>Mean</u>	5.6733
<u>%LT Pts</u>	0	<u>StdDev</u>	0.3654
<u>Normal/Log Normal</u>	y/y	<u>ln Mean</u>	1.7339
<u>Log Transformed:</u>	n	<u>ln StdDev</u>	0.0640

Williams Station Parametric Prediction Interval on Background - Background Data Calculation

<u>Number Of Locations:</u>	4	<u>Annual Site Wide False Positive Rate (SWFPR):</u>	0.10
<u>Number Of Parameters:</u>	7	<u>Sample Events per Year:</u>	2
<u>Sampling Plan:</u>	Interwell	<u>Verification Sampling:</u>	Pass 1 of 2 (one resample)



Williams Station Parametric Prediction Interval on Background - Compliance Analysis

User Supplied Information

Sided: 2
Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
Compliance Locations: MW-FGD-17,MW-FGD-18,MW-FGD-19D,MW-FGD-20D
Background Locations: MW-FGD-16,MW-FGD-21

Location MW-FGD-17

Run Id: 5

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

<u>Sample Date</u>	<u>Analysis Result</u>	<u>Upper Limit</u>	<u>Upper Limit</u>	Result >	<u>Lower Limit</u>	<u>Lower Limit</u>	Result <
7/24/2017	6.400	6.453	n		4.893	n	
9/19/2017	6.400	6.453	n		4.893	n	

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

**Williams Station
Parametric Prediction Interval on Background - Compliance Analysis**

User Supplied Information

Sided: 2
Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
Compliance Locations: MW-FGD-17,MW-FGD-18,MW-FGD-19D,MW-FGD-20D
Background Locations: MW-FGD-16,MW-FGD-21

Location MW-FGD-18

Run Id: 12

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

<u>Sample Date</u>	<u>Analysis Result</u>	Result >		Result <	
		<u>Upper Limit</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Lower Limit</u>
7/24/2017	6.700	6.453	y	4.893	n
9/19/2017	6.800	6.453	y	4.893	n

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

**Williams Station
Parametric Prediction Interval on Background - Compliance Analysis**

User Supplied Information

Sided: 2
Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
Compliance Locations: MW-FGD-17,MW-FGD-18,MW-FGD-19D,MW-FGD-20D
Background Locations: MW-FGD-16,MW-FGD-21

Location MW-FGD-19D

Run Id: 19

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

<u>Sample Date</u>	<u>Analysis Result</u>	<u>Upper Limit</u>	<u>Upper Limit</u>	Result >	<u>Lower Limit</u>	<u>Lower Limit</u>	Result <
7/24/2017	7.200	6.453		y	4.893		n
9/19/2017	7.200	6.453		y	4.893		n

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

**Williams Station
Parametric Prediction Interval on Background - Compliance Analysis**

User Supplied Information

Sided: 2
Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
Compliance Locations: MW-FGD-17,MW-FGD-18,MW-FGD-19D,MW-FGD-20D
Background Locations: MW-FGD-16,MW-FGD-21

Location MW-FGD-20D

Run Id: 26

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

<u>Sample Date</u>	<u>Analysis Result</u>	Result >		Result <	
		<u>Upper Limit</u>	<u>Upper Limit</u>	<u>Lower Limit</u>	<u>Lower Limit</u>
7/24/2017	6.600	6.453	y	4.893	n
9/19/2017	6.700	6.453	y	4.893	n

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

Williams Station
Parametric Prediction Interval on Background - Compliance Analysis

User Supplied Information

Sided: 2
Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
Compliance Locations: MW-FGD-17,MW-FGD-18,MW-FGD-19D,MW-FGD-20D
Background Locations: MW-FGD-16,MW-FGD-21

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 2

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, %	PU (Upper) Value:
97.21	158.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-17	07/24/2017	313.000	y
MW-FGD-17	09/19/2017	346.800	y

Run Id: 3

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, %	PU (Upper) Value:
97.21	40.32

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-17	07/24/2017	1,073.00	y
MW-FGD-17	09/19/2017	1,217.00	y

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 4

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00951	F, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
 97.21 0.480

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-17	07/24/2017	0.355	n
MW-FGD-17	09/19/2017	0.364	n

Run Id: 6

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
 97.21 125.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-17	07/24/2017	133.000	y
MW-FGD-17	09/19/2017	156.000	y

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 7

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	Total Dissolved Solids	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
495.000
97.21

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-17	07/24/2017	2,696.000	y
MW-FGD-17	09/19/2017	2,984.000	y

Run Id: 9

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
158.000
97.21

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-18	07/24/2017	161.000	y
MW-FGD-18	09/19/2017	167.200	y

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 10

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 40.32

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-18	07/24/2017	1,325.00	y
MW-FGD-18	09/19/2017	1,267.00	y

Run Id: 11

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00951	F, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 0.480

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-18	07/24/2017	0.473	n
MW-FGD-18	09/19/2017	0.470	n

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 13

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
 97.21 125.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-18	07/24/2017	43.330	n
MW-FGD-18	09/19/2017	50.000	n

Run Id: 14

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	Total Dissolved Solids	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
 97.21 495.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-18	07/24/2017	2,752.000	y
MW-FGD-18	09/19/2017	2,758.000	y

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 16

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 158.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-19D	07/24/2017	42.800	n
MW-FGD-19D	09/19/2017	42.440	n

Run Id: 17

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 40.32

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-19D	07/24/2017	174.00	y
MW-FGD-19D	09/19/2017	190.00	y

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 18

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00951	F, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 0.480

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-19D	07/24/2017	0.825	y
MW-FGD-19D	09/19/2017	0.780	y

Run Id: 20

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 125.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-19D	07/24/2017	0.500	n
MW-FGD-19D	09/19/2017	1.200	n

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 21

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	Total Dissolved Solids	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
 97.21 495.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-19D	07/24/2017	837.000	y
MW-FGD-19D	09/19/2017	767.000	y

Run Id: 23

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00916	Calcium, tot	ug/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % **PU (Upper) Value:**
 97.21 158.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-20D	07/24/2017	199.000	y
MW-FGD-20D	09/19/2017	263.500	y

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 24

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00940	Chloride, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 40.32

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-20D	07/24/2017	452.00	y
MW-FGD-20D	09/19/2017	419.00	y

Run Id: 25

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00951	F, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 0.480

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-20D	07/24/2017	0.275	n
MW-FGD-20D	09/19/2017	0.277	n

**Williams Station
Non-Parametric Prediction Interval on Background**

User Supplied Information

Background Date Range: 05/10/2016 to 09/19/2017
Compliance Date Range: 07/24/2017 to 12/31/2100
No. of Verification Resamples: 1

Run Id: 27

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00945	Sulfate, tot	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 125.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-20D	07/24/2017	85.790	n
MW-FGD-20D	09/19/2017	313.000	y

Run Id: 28

Background Locations: MW-FGD-16,MW-FGD-21

<u>Parameter Code</u>	<u>Parameter Name</u>	<u>Units</u>	<u>Background Sample Count</u>	<u>Option for LT Pts.</u>
00515	Total Dissolved Solids	mg/L	15	0% to <= 15% Substitute PQL

One-Sided Upper Confidence Level, % 97.21 **PU (Upper) Value:** 495.000

<u>Location</u>	<u>Sample Date</u>	<u>Sample Result</u>	<u>Greater than PU (Upper)</u>
MW-FGD-20D	07/24/2017	1,166.000	y
MW-FGD-20D	09/19/2017	1,506.000	y

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 1

Location ID: MW-FGD-17	Parameter Code: 01022
Confidence Level: 0.95	Parameter: Boron, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: > 15% to <= 50% Substitute PQL	Percent of ND: 22

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	1.348	mg/L per year
Lower Confidence Limit of Slope, M1:	-2.032	mg/L per year
Upper Confidence Limit of Slope, M2+1:	7.589	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.629
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 2

Location ID: MW-FGD-17	Parameter Code: 00916
Confidence Level: 0.95	Parameter: Calcium, tot
Date Range: 05/10/2016 to 09/19/2017	Units: ug/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	55.726	ug/L per year
Lower Confidence Limit of Slope, M1:	-125.024	ug/L per year
Upper Confidence Limit of Slope, M2+1:	439.502	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.938
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 3

Location ID: MW-FGD-17

Parameter Code: 00940

Confidence Level: 0.95

Parameter: Chloride, tot

Date Range: 05/10/2016 to 09/19/2017

Units: mg/L

Option for LT Points: 0% to <= 15% Substitute PQL

Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	270.66	mg/L per year
Lower Confidence Limit of Slope, M1:	-227.03	mg/L per year
Upper Confidence Limit of Slope, M2+1:	911.79	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.15
Z test:	1.64
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 4

Location ID: MW-FGD-17	Parameter Code: 00951
Confidence Level: 0.95	Parameter: F, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.029	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.112	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.168	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.147
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 5

Location ID: MW-FGD-17	Parameter Code: 00400
Confidence Level: 0.95	Parameter: Field pH
Date Range: 05/10/2016 to 09/19/2017	Units: S.U.
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.154	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.449	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.000	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.205
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 6

Location ID: MW-FGD-17	Parameter Code: 00945
Confidence Level: 0.95	Parameter: Sulfate, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	54.480	mg/L per year
Lower Confidence Limit of Slope, M1:	-40.463	mg/L per year
Upper Confidence Limit of Slope, M2+1:	169.463	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.938
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 7

Location ID: MW-FGD-17	Parameter Code: 00515
Confidence Level: 0.95	Parameter: Total Dissolved Solids
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	476.854	mg/L per year
Lower Confidence Limit of Slope, M1:	-649.223	mg/L per year
Upper Confidence Limit of Slope, M2+1:	1,820.892	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.104
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 8

Location ID: MW-FGD-18

Parameter Code: 01022

Confidence Level: 0.95

Parameter: Boron, tot

Date Range: 05/10/2016 to 09/19/2017

Units: mg/L

Option for LT Points: 0% to <= 15% Substitute PQL

Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	1.160	mg/L per year
Lower Confidence Limit of Slope, M1:	0.480	mg/L per year
Upper Confidence Limit of Slope, M2+1:	1.665	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.398
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	Upward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 9

Location ID: MW-FGD-18	Parameter Code: 00916
Confidence Level: 0.95	Parameter: Calcium, tot
Date Range: 05/10/2016 to 09/19/2017	Units: ug/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	51.856	ug/L per year
Lower Confidence Limit of Slope, M1:	20.859	ug/L per year
Upper Confidence Limit of Slope, M2+1:	88.260	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.097
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	Upward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 10

Location ID: MW-FGD-18

Parameter Code: 00940

Confidence Level: 0.95

Parameter: Chloride, tot

Date Range: 05/10/2016 to 09/19/2017

Units: mg/L

Option for LT Points: 0% to <= 15% Substitute PQL

Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	145.94	mg/L per year
Lower Confidence Limit of Slope, M1:	-6.92	mg/L per year
Upper Confidence Limit of Slope, M2+1:	246.75	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.56
Z test:	1.64
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 11

Location ID: MW-FGD-18	Parameter Code: 00951
Confidence Level: 0.95	Parameter: F, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.032	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.123	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.073	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-0.521
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 12

Location ID: MW-FGD-18	Parameter Code: 00400
Confidence Level: 0.95	Parameter: Field pH
Date Range: 05/10/2016 to 09/19/2017	Units: S.U.
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.308	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.583	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.000	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.696
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	Downward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 13

Location ID: MW-FGD-18	Parameter Code: 00945
Confidence Level: 0.95	Parameter: Sulfate, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	7.405	mg/L per year
Lower Confidence Limit of Slope, M1:	-6.655	mg/L per year
Upper Confidence Limit of Slope, M2+1:	21.725	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.730
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 14

Location ID: MW-FGD-18	Parameter Code: 00515
Confidence Level: 0.95	Parameter: Total Dissolved Solids
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	183.902	mg/L per year
Lower Confidence Limit of Slope, M1:	80.748	mg/L per year
Upper Confidence Limit of Slope, M2+1:	293.950	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	2.606
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	Upward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 15

Location ID: MW-FGD-19D	Parameter Code: 01022
Confidence Level: 0.95	Parameter: Boron, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: > 50% to <= 100 % Substitute PQL	Percent of ND: 100

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.000	mg/L per year
Lower Confidence Limit of Slope, M1:	0.000	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 16

Location ID: MW-FGD-19D

Parameter Code: 00916

Confidence Level: 0.95

Parameter: Calcium, tot

Date Range: 05/10/2016 to 09/19/2017

Units: ug/L

Option for LT Points: 0% to <= 15% Substitute PQL

Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-3.075	ug/L per year
Lower Confidence Limit of Slope, M1:	-9.547	ug/L per year
Upper Confidence Limit of Slope, M2+1:	1.618	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.258
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 17

Location ID: MW-FGD-19D	Parameter Code: 00940
Confidence Level: 0.95	Parameter: Chloride, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	18.80	mg/L per year
Lower Confidence Limit of Slope, M1:	5.36	mg/L per year
Upper Confidence Limit of Slope, M2+1:	34.86	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.98
Z test:	1.64
At the 1.0 % Confidence Level (One-Sided Test):	Upward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 18

Location ID: MW-FGD-19D	Parameter Code: 00951
Confidence Level: 0.95	Parameter: F, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.038	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.078	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.118	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.839
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 19

Location ID: MW-FGD-19D	Parameter Code: 00400
Confidence Level: 0.95	Parameter: Field pH
Date Range: 05/10/2016 to 09/19/2017	Units: S.U.
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.128	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.253	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.000	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-1.392
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 20

Location ID: MW-FGD-19D	Parameter Code: 00945
Confidence Level: 0.95	Parameter: Sulfate, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 11

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-4.193	mg/L per year
Lower Confidence Limit of Slope, M1:	-12.332	mg/L per year
Upper Confidence Limit of Slope, M2+1:	-1.872	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.189
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	Downward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 21

Location ID: MW-FGD-19D	Parameter Code: 00515
Confidence Level: 0.95	Parameter: Total Dissolved Solids
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	50.779	mg/L per year
Lower Confidence Limit of Slope, M1:	-22.121	mg/L per year
Upper Confidence Limit of Slope, M2+1:	81.031	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.147
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 22

Location ID: MW-FGD-20D	Parameter Code: 01022
Confidence Level: 0.95	Parameter: Boron, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.068	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.437	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.480	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.730
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 23

Location ID: MW-FGD-20D	Parameter Code: 00916
Confidence Level: 0.95	Parameter: Calcium, tot
Date Range: 05/10/2016 to 09/19/2017	Units: ug/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	26.292	ug/L per year
Lower Confidence Limit of Slope, M1:	0.830	ug/L per year
Upper Confidence Limit of Slope, M2+1:	92.243	ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.677
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	Upward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 24

Location ID: MW-FGD-20D

Parameter Code: 00940

Confidence Level: 0.95

Parameter: Chloride, tot

Date Range: 05/10/2016 to 09/19/2017

Units: mg/L

Option for LT Points: 0% to <= 15% Substitute PQL

Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	34.18	mg/L per year
Lower Confidence Limit of Slope, M1:	-4.90	mg/L per year
Upper Confidence Limit of Slope, M2+1:	52.02	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.47
Z test:	1.64
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 25

Location ID: MW-FGD-20D	Parameter Code: 00951
Confidence Level: 0.95	Parameter: F, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.053	mg/L per year
Lower Confidence Limit of Slope, M1:	-0.004	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.097	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.564
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 26

Location ID: MW-FGD-20D	Parameter Code: 00400
Confidence Level: 0.95	Parameter: Field pH
Date Range: 05/10/2016 to 09/19/2017	Units: S.U.
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	-0.249	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.379	S.U. per year
Upper Confidence Limit of Slope, M2+1:	-0.043	S.U. per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	-2.282
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	Downward

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 27

Location ID: MW-FGD-20D	Parameter Code: 00945
Confidence Level: 0.95	Parameter: Sulfate, tot
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	0.869	mg/L per year
Lower Confidence Limit of Slope, M1:	-10.259	mg/L per year
Upper Confidence Limit of Slope, M2+1:	201.883	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	0.000
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis

Post Hoc Trend Analysis

Run Id: 28

Location ID: MW-FGD-20D	Parameter Code: 00515
Confidence Level: 0.95	Parameter: Total Dissolved Solids
Date Range: 05/10/2016 to 09/19/2017	Units: mg/L
Option for LT Points: 0% to <= 15% Substitute PQL	Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:	86.161	mg/L per year
Lower Confidence Limit of Slope, M1:	-76.369	mg/L per year
Upper Confidence Limit of Slope, M2+1:	331.857	mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic:	1.147
Z test:	1.645
At the 1.0 % Confidence Level (One-Sided Test):	None

Williams Station
Theil Sen Mann-Kendall Trend Analysis