

2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

EPA CCR RULE COMPLIANCE

SOUTH CAROLINA ELECTRIC & GAS: Wateree Station: FGD Pond

January 2018

Prepared by:

No. 1178 CAROLONAL CAROLON

Brian S. Boutin, PG
Nautilus Geologic Consulting, PLLC

22411 E

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) Wateree Generating Station in Wateree, Richland 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):

- 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

Five Type II groundwater monitoring wells (designated MW-FGD-01 through MW-FGD-05) were installed and developed at Wateree Station FGD Pond in March 2016 to serve as EPA CCR Rule Compliance monitoring wells. In July 2017, an additional Type II groundwater monitoring well (designated AS-FGD-01) was installed hydraulically up gradient of the FGD Pond to serve as an additional background water quality monitoring location. Rising head permeability (slug) tests were conducted at monitoring wells MW-FGD-01 through MW-FGD-05 in May 2016. A site location map is presented as Figure 1 and a site map showing the locations and designations of the monitoring wells at Wateree Station is presented as Figure 2. A South Carolina licensed well driller with Terracon, Inc. of Columbia, South Carolina (SC License #2116) performed the drilling and installations for monitoring wells MW-FGD-01 through MW-FGD-05. A South Carolina licensed well driller with Red Dog Drilling, LLC of Midland, North Carolina (SC License #1230) performed the drilling and installation of monitoring well AS-FGD-01. 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 six 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-01, AS-FGD-01, and MW-AP-01A, serve as background wells to monitor the quality of groundwater in the surficial aquifer up gradient of the area of the FGD Pond. The remaining monitoring wells (MW-FGD-02 through MW-FGD-05) 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-01 through MW-FGD-05and MW-AP-01A beginning in May 2016 and ending in July 2017. Groundwater samples were collected from monitoring wells MW-FGD-01 through MW-FGD-05 and MW-AP-01A 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 July 2016 and October 2016). One groundwater sample was collected for analysis during each of the independent monitoring events. Monitoring well AS-FGD-01 was added to the monitoring well network as an additional background monitoring well beginning with the July 2017 groundwater monitoring event. Five independent groundwater samples were collected for field and laboratory analysis from background monitoring well AS-FGD-01during the period of July 2017 through November 2017 in accordance with the stipulations of the *Groundwater Sampling and* Analysis Plan for the Class 3 Landfill (May 2016; revised July 2016 and October 2016). One groundwater sample was collected from monitoring well AS-FGD-01 during each of the independent monitoring events.

All independent groundwater samples collected from monitoring wells MW-FGD-01 through MW-FGD-05 and MW-AP-01A 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). The independent groundwater sample collected from monitoring well AS-FGD-01 in accordance with 40 CFR Part 257.84 (b) during the monitoring event conducted in July 2017 was 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). The independent groundwater sample collected from monitoring well AS-FGD-01in accordance with 40 CFR Part 257.84 (b) during the monitoring event conducted on September 27, 2017 was analyzed by South Carolina Certified laboratories (SCE&G Central Laboratory (Certification Number 32006) and GEL Laboratories, LLC (Certification Numbers 10120001 and 10120002) for total boron and



calcium. The independent groundwater samples collected from monitoring well AS-FGD-01 in accordance with 40 CFR Part 257.84 (b) during the monitoring events conducted on October 11, 2017, November 1, 2017 and November 14, 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 all the constituents listed in Appendix III and Appendix IV of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107) except Radium 226 and 228.

In accordance with 40 CFR Part 257.94, the first round of Detection Monitoring was conducted on September 27, 2017 and included groundwater sampling from monitoring wells MW-FGD-01 through MW-FGD-05 and MW-AP-01A. 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 27, 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). It is noted that a groundwater sample was also collected from monitoring well AS-FGD-01 on September 27, 2017 and was analyzed by South Carolina Certified laboratories (SCE&G Central Laboratory and GEL Laboratories, LLC) for total boron and calcium.

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 the site, including at background locations, consistently falls below the EPA CCR Rule standard range of 6.5 to 8.5 standard units (generally within the range of 3.4 to 6.5 standard units). The results further indicate that the reported concentrations of chloride, fluoride, sulfate and total dissolved solids (TDS) for the groundwater samples collected from the monitoring wells during the September 2017 detection monitoring event were all below the corresponding maximum contaminant levels (MCLs). In addition, boron was not detected in any of the groundwater samples collected from the monitoring wells during the September 2017 detection monitoring event.

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 calcium and sulfate in the groundwater samples collected from compliance monitoring wells MW-FGD-02 through MW-FGD-05 show statistically significant increases over background concentrations (as determined from the data for groundwater samples collected from background monitoring wells MW-FGD-01, MW-AP-01A and AS-FGD-01). In addition, the statistical analysis indicates that the concentration of chloride in the groundwater sample collected from compliance monitoring well MW-FGD-05 shows a statistically significant increase over background concentrations (as determined from the data for groundwater samples collected from background monitoring wells MW-FGD-01, MW-AP-01A and AS-FGD-01). 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.

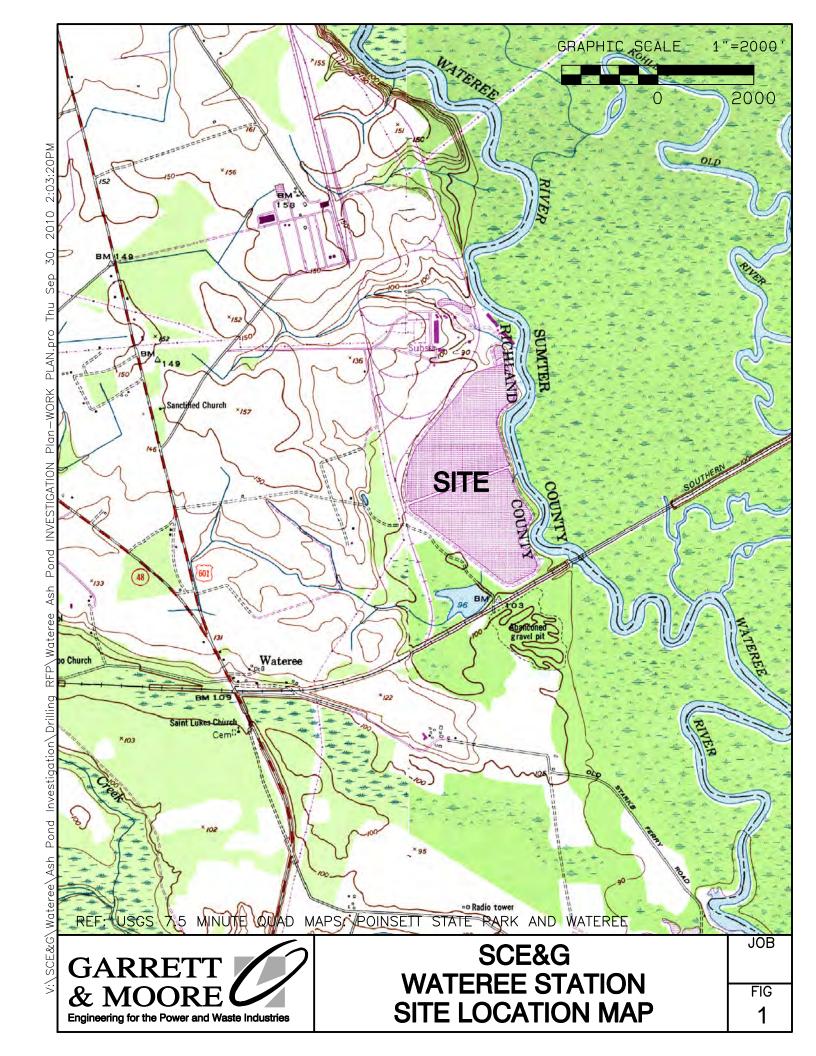
3.3 Alternate Source Demonstration

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 calcium, chloride and sulfate 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, the results of laboratory analyses of water samples collected from the FGD Pond and nearby coal pile runoff ditch, and sampling and laboratory analysis of gypsum and limestone from storage piles located immediately adjacent to 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 calcium, chloride and sulfate observed at monitoring wells MW-FGD-02 through MW-FGD-05 during the September 2017 detection monitoring event are likely attributable to a source(s) other than 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-01 through MW-FGD-05, AS-FGD-01 and MW-AP-01A.





EPA CCR Rule Compliance Groundwater Monitoring Wells

Class Three Landfill

- Existing well used for background and down gradient water quality monitoring
- Well used for down gradient water quality monitoring
- Additional background monitoring well

FGD Wastewater Pond

- Background and down gradient monitoring wells
- Additional background monitoring well

Ash Pond 1

- Existing well used for background and down gradient water quality monitoring
- Well used for down gradient water quality monitoring

Nautilus Geologic Consulting, PLLC

SCE&G WATEREE STATION

CCR Rule Compliance Groundwater Monitoring Wells JOB NUMBER

SHEET

2



APPENDIX A

Results of Field and Laboratory Analyses of Groundwater Samples

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permi	t No.:	County: Richland
Date Sampled: 05/11/2016		_	Time Sampled:	12:00:00PM
year-month-day (Nu	imerical)			
			STATION NUMBERS	
PARAMETER NUMBER	MW-AP-01A	MW-FGD-01		
NAME Lab. Certificate No.	32006	32006		
Field pH S.U.	4.740	3.440		
Field Sp. Conductivity micromhos/cm	51.000	33.000		
Field Turbidity NTU	0.70	5.50		
ORP mV	198.500	227.300		
Oxygen, dissolved mg/L	3.400	4.470		
Temp (Celcius) degrees C	20.890	21.350		
Water level elevation ft	115.56	117.30		

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	Permit No.:	County: Richland		
Date Sampled:	05/11/2016	Time Sampled:	12:00:00PM		
	year-month-day (Numerical)				
		STATION NUMBERS			

STATION NUMBERS

PARAMETER NUMBER		MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		4.490	5.900	4.610	4.550
Field Sp. Conductivity	micromhos/cm	141.000	434.000	62.000	85.000
Field Turbidity NTU		0.70	5.10	1.40	1.10
ORP mV		158.200	126.900	178.500	185.000
Oxygen, dissolved mg/	L	2.110	0.790	1.990	0.660
Temp (Celcius) degrees	s C	19.530	19.260	19.360	20.140
Water level elevation f	t	111.72	111.98	112.54	112.58

Authorized Release By:	 Date:	

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 397457 GEL Work Order: 397457

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.

Jack N Cook Reviewed by

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Certificate of Analysis

Project:

Client ID:

Report Date: May 27, 2016

SCEG01716C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-1A
Sample ID: 397457001
Matrix: Ground Water

Collect Date: 11-MAY-16 14:25
Receive Date: 14-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF Analyst Date Time Batch Metho	od				
Ion Chromatography											
SW846 9056A Anion	s "As Received	"									
Fluoride	U	ND	0.033	0.100	mg/L	1 MAR1 05/16/16 2239 1567543 1					
Metals Analysis-ICP-MS											
SW846 3005A/6020A Liquid "As Received"											
Lithium	U	ND	2.00	10.0	ug/L	1 BCD1 05/19/16 1442 1567595 2	,				
Rad Gas Flow Propor	tional Counting	5									
GFPC, Ra228, Liquid	l "As Received"	'									
Radium-228	U	ND	1.96	3.00	pCi/L	AXM6 05/24/16 1458 1567555 3					
Rad Radium-226											
Lucas Cell, Ra226, lie	quid "As Receiv	ved"									
Radium-226		1.15	0.532	1.00	pCi/L	LXP1 05/23/16 0810 1568375 4					
The following Prep M	The following Prep Methods were performed:										
Method	Description	1		Analyst	Date	Time Prep Batch					
SW846 3005A	ICP-MS 3005	A PREP		JP1	05/16/16	1725 1567594					

The following Analytical Methods were performed:

The following .	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/Trace	er Recovery Test	Result	Nominal	Recovery%	Acceptable Limits						

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

84.5 (15%-125%)

Notes:

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Certificate of Analysis

Project:

Client ID:

Report Date: May 27, 2016

SCEG01716C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-01 Sample ID: 397457016 Matrix: Ground Water

Collect Date: 11-MAY-16 16:52
Receive Date: 14-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF Analyst Date	Time Batch Method			
Ion Chromatography										
EPA300.0 Fluoride in	Liquid "As Re	eceived"								
Fluoride	U	ND	0.033	0.100	mg/L	1 MAR1 05/17/16	1340 1567544 1			
Metals Analysis-ICP-MS										
200.8/200.2 NPDES Metals "As Received"										
Lithium	U	ND	2.00	10.0	ug/L	1 BCD1 05/19/16	1808 1567593 2			
Rad Gas Flow Propor	tional Counting	5								
GFPC, Ra228, Liquid	l "As Received"	'								
Radium-228	U	ND	1.99	3.00	pCi/L	AXM6 05/24/16	5 1501 1567555 3			
Rad Radium-226										
Lucas Cell, Ra226, lic	quid "As Receiv	ved"								
Radium-226		2.32	0.719	1.00	pCi/L	LXP1 05/22/16	1050 1567603 4			
The following Prep Methods were performed:										
Method	Description	1		Analyst	Date	Time Prep Bate	ch			
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	05/16/16	1800 1567592				

The following Analytical Methods were performed:

The following A	the following Analytical Methods were performed.										
Method	Description	Analyst Comments									
1	SW846 9056A		-								
2	EPA 200.8 SC_NPDES										
3	EPA 904.0/SW846 9320 Modified										
4	EPA 903.1 Modified										
Surrogate/Trace	r Recovery Test	Result	Nominal	Recovery%	Acceptable Limits						

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 88.2 (15%-125%)

Notes:

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QC Summary

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 397457

Parmname			NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography Batch 1567	y 37543													
QC1203549409 Fluoride	397457010	DUP		U	ND	U	ND	mg/L	N/A			MAR1	05/17/1	16 05:02
QC1203549408 Fluoride	LCS		2.50				2.35	mg/L		93.9	(90%-110%)		05/16/1	16 22:07
QC1203549407 Fluoride	MB					U	ND	mg/L					05/16/1	16 21:35
QC1203549410 Fluoride	397457010	PS	2.50	U	ND		2.44	mg/L		96.3	(90%-110%)		05/17/1	16 05:34
Batch 1567	7544													
QC1203549413 Fluoride	397457011	DUP			0.329		0.336	mg/L	2.1 ^		(+/-0.100)	MAR1	05/17/1	16 10:29
QC1203549412 Fluoride	LCS		2.50				2.38	mg/L		95.3	(90%-110%)		05/17/1	16 09:25
QC1203549411 Fluoride	MB					U	ND	mg/L					05/17/1	16 08:53
QC1203549414 Fluoride	397457011	PS	2.50		0.329		2.70	mg/L		94.6	(90%-110%)	1	05/17/1	16 11:01
Metals Analysis - ICI Batch 156	PMS 7593													
QC1203549549 Lithium	397457003	DUP		U	ND	U	ND	ug/L	N/A			BCD1	05/19/1	16 17:05
QC1203549550 Lithium	397457016	DUP		U	ND	U	ND	ug/L	N/A				05/19/1	16 18:12
QC1203549548 Lithium	LCS		50.0				50.0	ug/L		100	(80%-120%)	í	05/19/1	16 16:58
QC1203549547 Lithium	MB					U	ND	ug/L					05/19/1	16 16:55
QC1203549551 Lithium	397457003	MS	50.0	U	ND		46.9	ug/L		92.5	(75%-125%)	ı	05/19/1	16 17:09
QC1203549552	397457016	MS					50.2				(75%-125%)	ı		

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Report Date: May 27, 2016

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QC Summary

Workorder: 3	97457				_			_				Page 2 of 4
Parmname			NOM		Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - IC Batch 156	PMS 57593											
Lithium			50.0	U	ND			ug/L		97.5		05/19/16 18:15
QC1203549553 Lithium	397457003	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%) BCD1	05/19/16 17:12
QC1203549554 Lithium	397457016	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%)	05/19/16 18:19
Batch 156	7595											
QC1203549557 Lithium	397457001	DUP		U	ND	U	ND	ug/L	N/A		BCD1	05/19/16 14:46
QC1203549556 Lithium	LCS		50.0				52.8	ug/L		106	(80%-120%)	05/19/16 14:39
QC1203549555 Lithium	MB					U	ND	ug/L				05/19/16 14:35
QC1203549558 Lithium	397457001	MS	50.0	U	ND		52.4	ug/L		102	(75%-125%)	05/19/16 14:49
QC1203549559 Lithium	397457001	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%)	05/19/16 14:56
Rad Gas Flow Batch 156	57555											
QC1203549448 Radium-228	397457008	DUP			1.63		1.69	pCi/L	3.88		(0% - 100%) AXM6	05/24/16 15:05
QC1203549449 Radium-228	LCS		46.0				38.2	pCi/L		83	(75%-125%)	05/24/16 16:33
QC1203549447 Radium-228	MB					U	0.830	pCi/L				05/24/16 15:05
Rad Ra-226 Batch 156	57603											
QC1203549580 Radium-226	397457016	DUP			2.32		3.17	pCi/L	31.1		(0% - 100%) LXP1	05/22/16 10:50
QC1203549582 Radium-226	LCS		24.4				29.5	pCi/L		121	(75%-125%)	05/25/16 10:30
QC1203549579 Radium-226	MB					U	0.318	pCi/L				05/25/16 10:30
QC1203549581	397457016	MS										

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QC Summary

				•/_				
Workorder: 397457								Page 3 of 4
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Ra-226 Batch 1567603								
Radium-226	122	2.32	131	pCi/L		105	(75%-125%)	05/22/16 10:50
Batch 1568375 ——								
QC1203551527 397689003 DUP Radium-226		1.02	1.04	pCi/L	1.86		(0% - 100%) LXP1	05/23/16 09:10
QC1203551529 LCS Radium-226	24.4		26.1	pCi/L		107	(75%-125%)	05/23/16 09:10
QC1203551526 MB Radium-226		U	0.190	pCi/L				05/23/16 09:10
QC1203551528 397689003 MS Radium-226	122	1.02	110	pCi/L		89	(75%-125%)	05/23/16 09:10

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

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QC Summary

Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- 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

397457

Workorder:

- 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.
- A 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.

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 397457 GEL Work Order: 397457

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.

Jack N Cook Reviewed by

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

Project:

Client ID:

Certificate of Analysis

Report Date: May 27, 2016

SCEG01716C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-02 Sample ID: 397457004 Matrix: Ground Water Collect Date: 11-MAY-16 18:00

Receive Date: 14-MAY-16

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF Analyst Date	Time Batch N	Method
Ion Chromatography								
EPA300.0 Fluoride in	n Liquid "As Re	eceived"						
Fluoride	J	0.0604	0.033	0.100	mg/L	1 MAR1 05/17/16	0015 1567543	1
Metals Analysis-ICP	-MS							
200.8/200.2 NPDES	Metals "As Re	ceived"						
Lithium	U	ND	2.00	10.0	ug/L	1 BCD1 05/19/16	1726 1567593	2
Rad Gas Flow Propor	rtional Counting	g						
GFPC, Ra228, Liquio	d "As Received	"						
Radium-228		2.67	1.77	3.00	pCi/L	AXM6 05/24/16	1459 1567555	3
Rad Radium-226								
Lucas Cell, Ra226, li	quid "As Recei	ved"						
Radium-226		2.04	0.645	1.00	pCi/L	LXP1 05/22/16	0950 1567603	4
The following Prep N	Methods were p	erformed:						
Method	Description	n		Analyst	Date	Time Prep Batc	1	
EPA 200.2	ICP-MS 200.	2 PREP		JP1	05/16/16	1800 1567592		

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1SW846 9056A

EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

79.7 (15%-125%)

Notes:

2

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

Certificate of Analysis

Project:

Client ID:

Report Date: May 27, 2016

SCEG01716C

75.2

(15%-125%)

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-03 Sample ID: 397457005 Matrix: Ground Water

Collect Date: 12-MAY-16 08:15
Receive Date: 14-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF An	alyst Date	Time Batch	Method
Ion Chromatography									
EPA300.0 Fluoride in	Liquid "As Re	eceived"							
Fluoride	J	0.083	0.033	0.100	mg/L	1 MA	R1 05/17/16	0047 1567543	1
Metals Analysis-ICP-l	MS								
200.8/200.2 NPDES 1	Metals "As Red	ceived"							
Lithium	U	ND	2.00	10.0	ug/L	1 BC	D1 05/19/16	1730 1567593	2
Rad Gas Flow Proport	tional Counting	5							
GFPC, Ra228, Liquid	"As Received"	'							
Radium-228	U	ND	2.56	3.00	pCi/L	AX	M6 05/24/16	1459 1567555	3
Rad Radium-226									
Lucas Cell, Ra226, liq	uid "As Recei	ved"							
Radium-226		2.45	0.629	1.00	pCi/L	LX	P1 05/22/16	0950 1567603	4
The following Prep M	ethods were pe	erformed:							
Method	Description	1		Analyst	Date	Time	Prep Batcl	1	
EPA 200.2	ICP-MS 200.	2 PREP		JP1	05/16/16	1800	1567592		

The following Analytical Methods were performed:

GFPC, Ra228, Liquid "As Received"

The following A	Analytical Methods were performed.					
Method	Description		Analyst Co	omments		_
1	SW846 9056A		-			
2	EPA 200.8 SC_NPDES					
3	EPA 904.0/SW846 9320 Modified					
4	EPA 903.1 Modified					
Surrogate/Trace	er Recovery Test	Result	Nominal	Recovery%	Acceptable Limits	

Notes:

Barium-133 Tracer

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

Certificate of Analysis

Project:

Client ID:

Report Date: May 27, 2016

SCEG01716C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-04
Sample ID: 397457006
Matrix: Ground Water

Collect Date: 12-MAY-16 09:25
Receive Date: 14-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF Ana	lyst Date	Time Batch	Method
Ion Chromatography									
EPA300.0 Fluoride i	n Liquid "As Re	ceived"							
Fluoride	J	0.0644	0.033	0.100	mg/L	1 MA	R1 05/17/16	0119 1567543	1
Metals Analysis-ICP	-MS								
200.8/200.2 NPDES	Metals "As Rec	ceived"							
Lithium	U	ND	2.00	10.0	ug/L	1 BCI	01 05/19/16	1733 1567593	2
Rad Gas Flow Propo	rtional Counting	Ţ							
GFPC, Ra228, Liqui	d "As Received"	'							
Radium-228		3.79	1.40	3.00	pCi/L	AXI	M6 05/24/16	1459 1567555	3
Rad Radium-226									
Lucas Cell, Ra226, li	iquid "As Receiv	ved"							
Radium-226		1.93	0.707	1.00	pCi/L	LXF	05/22/16	0950 1567603	4
The following Prep I	Methods were pe	erformed:							
Method	Description	1		Analyst	Date	Time	Prep Batch	l	
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	05/16/16	1800	1567592		

The following Analytical Methods were performed:

The following A	Analytical Michigas were performed.								
Method	Description	Analyst Comments							
1	SW846 9056A		-						
2	EPA 200.8 SC_NPDES								
3	EPA 904.0/SW846 9320 Modified								
4	EPA 903.1 Modified								
Surrogate/Trace	er Recovery Test	Result	Nominal	Recovery%	Acceptable Limits				

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 82.4 (15%-125%)

Notes:

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

Certificate of Analysis

Project:

Client ID:

Report Date: May 27, 2016

SCEG01716C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Wateree CCR

Client Sample ID: FGD-05 Sample ID: 397457007 Matrix: Ground Water

Collect Date: 12-MAY-16 10:25
Receive Date: 14-MAY-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	DF Ar	alyst	Date	Time Batch	Method
Ion Chromatography	7									
EPA300.0 Fluoride	in Liquid "As Re	ceived"								
Fluoride	J	0.0852	0.033	0.100	mg/L	1 M.	AR1 05	/17/16	0150 1567543	1
Metals Analysis-ICF	P-MS									
200.8/200.2 NPDES	S Metals "As Rec	ceived"								
Lithium	J	2.26	2.00	10.0	ug/L	1 BC	CD1 05	/19/16	1737 1567593	2
Rad Gas Flow Propo	ortional Counting	Ţ,								
GFPC, Ra228, Liqui	id "As Received"	1								
Radium-228		1.71	1.51	3.00	pCi/L	A	KM6 05	/24/16	1459 1567555	3
Rad Radium-226										
Lucas Cell, Ra226, 1	iquid "As Receiv	ved"								
Radium-226	•	1.89	0.650	1.00	pCi/L	LX	XP1 05	/22/16	1020 1567603	4
The following Prep	Methods were pe	erformed:								
Method	Description	1		Analyst	Date	Time	Prep	Batch	1	
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	05/16/16	1800	15675	592		

The following Analytical	Methods were performed:
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The following Ana	Tytical Methods were performed.										
Method	Description	scription Analyst Comments									
1	SW846 9056A		-								
2	EPA 200.8 SC_NPDES										
3	EPA 904.0/SW846 9320 Modified										
4	EPA 903.1 Modified										
Surrogate/Tracer Re	ecovery Test	Result	Nominal	Recovery%	Acceptable Limits						
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			82.2	(15%-125%)						

Notes:

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

QC Summary

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 397457

Parmname			NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography Batch 1567	y 37543													
QC1203549409 Fluoride	397457010	DUP		U	ND	U	ND	mg/L	N/A			MAR1	05/17/1	16 05:02
QC1203549408 Fluoride	LCS		2.50				2.35	mg/L		93.9	(90%-110%)		05/16/1	16 22:07
QC1203549407 Fluoride	MB					U	ND	mg/L					05/16/1	16 21:35
QC1203549410 Fluoride	397457010	PS	2.50	U	ND		2.44	mg/L		96.3	(90%-110%)		05/17/1	16 05:34
Batch 1567	7544													
QC1203549413 Fluoride	397457011	DUP			0.329		0.336	mg/L	2.1 ^		(+/-0.100)	MAR1	05/17/1	16 10:29
QC1203549412 Fluoride	LCS		2.50				2.38	mg/L		95.3	(90%-110%)		05/17/1	16 09:25
QC1203549411 Fluoride	MB					U	ND	mg/L					05/17/1	16 08:53
QC1203549414 Fluoride	397457011	PS	2.50		0.329		2.70	mg/L		94.6	(90%-110%)	1	05/17/1	16 11:01
Metals Analysis - ICI Batch 156	PMS 7593													
QC1203549549 Lithium	397457003	DUP		U	ND	U	ND	ug/L	N/A			BCD1	05/19/1	16 17:05
QC1203549550 Lithium	397457016	DUP		U	ND	U	ND	ug/L	N/A				05/19/1	16 18:12
QC1203549548 Lithium	LCS		50.0				50.0	ug/L		100	(80%-120%)	í	05/19/1	16 16:58
QC1203549547 Lithium	MB					U	ND	ug/L					05/19/1	16 16:55
QC1203549551 Lithium	397457003	MS	50.0	U	ND		46.9	ug/L		92.5	(75%-125%)	ı	05/19/1	16 17:09
QC1203549552	397457016	MS					50.2				(75%-125%)	ı		

Page 1 of 4

Report Date: May 27, 2016

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

QC Summary

Workorder: 3	97457				_			_				Page 2 of 4
Parmname			NOM		Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - IC Batch 156	PMS 57593											
Lithium			50.0	U	ND			ug/L		97.5		05/19/16 18:15
QC1203549553 Lithium	397457003	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%) BCD1	05/19/16 17:12
QC1203549554 Lithium	397457016	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%)	05/19/16 18:19
Batch 156	7595											
QC1203549557 Lithium	397457001	DUP		U	ND	U	ND	ug/L	N/A		BCD1	05/19/16 14:46
QC1203549556 Lithium	LCS		50.0				52.8	ug/L		106	(80%-120%)	05/19/16 14:39
QC1203549555 Lithium	MB					U	ND	ug/L				05/19/16 14:35
QC1203549558 Lithium	397457001	MS	50.0	U	ND		52.4	ug/L		102	(75%-125%)	05/19/16 14:49
QC1203549559 Lithium	397457001	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%)	05/19/16 14:56
Rad Gas Flow Batch 156	57555											
QC1203549448 Radium-228	397457008	DUP			1.63		1.69	pCi/L	3.88		(0% - 100%) AXM6	05/24/16 15:05
QC1203549449 Radium-228	LCS		46.0				38.2	pCi/L		83	(75%-125%)	05/24/16 16:33
QC1203549447 Radium-228	MB					U	0.830	pCi/L				05/24/16 15:05
Rad Ra-226 Batch 156	57603											
QC1203549580 Radium-226	397457016	DUP			2.32		3.17	pCi/L	31.1		(0% - 100%) LXP1	05/22/16 10:50
QC1203549582 Radium-226	LCS		24.4				29.5	pCi/L		121	(75%-125%)	05/25/16 10:30
QC1203549579 Radium-226	MB					U	0.318	pCi/L				05/25/16 10:30
QC1203549581	397457016	MS										

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QC Summary

				•/_				
Workorder: 397457								Page 3 of 4
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Ra-226 Batch 1567603								
Radium-226	122	2.32	131	pCi/L		105	(75%-125%)	05/22/16 10:50
Batch 1568375 ——								
QC1203551527 397689003 DUP Radium-226		1.02	1.04	pCi/L	1.86		(0% - 100%) LXP1	05/23/16 09:10
QC1203551529 LCS Radium-226	24.4		26.1	pCi/L		107	(75%-125%)	05/23/16 09:10
QC1203551526 MB Radium-226		U	0.190	pCi/L				05/23/16 09:10
QC1203551528 397689003 MS Radium-226	122	1.02	110	pCi/L		89	(75%-125%)	05/23/16 09:10

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

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QC Summary

Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- 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

397457

Workorder:

- 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.
- A 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.



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22353

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled: May 11, 2016 11:25

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

Collected by: A.HILL Location Code: WAG01TDS

MW 1 Login Record File: 160513003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.64	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	4.82	0.00	S.U.	5/13/16 09:20	CDB
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	32	2.0	mg/L	5/13/16 11:45	CDB



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22356

Wateree Well FGD-02 (NPDES)

Date & Time Sampled: May 11, 2016 18:00
Date & Time Submitted: May 12, 2016 15:00

Collected by: A.HILL Location Code: WAFGD02TDS

FGD-02 Login Record File: 160513003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	14.7	1.0	mg/L	5/16/16 04:12	LS
pH by SM4500HB	6.12	0.00	S.U.	5/13/16 09:20	CDB
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	26.6	1.0	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	91	2.0	mg/L	5/13/16 11:45	CDB



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22357

Wateree Well FGD-03 (NPDES)

Date & Time Sampled: May 12, 2016 08:15

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

Collected by: A.HILL Location Code: WAFGD03TDS

FGD-03 Login Record File: 160513003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	18.7	1.0	mg/L	5/16/16 04:12	LS
pH by SM4500HB	6.09	0.00	S.U.	5/13/16 09:20	CDB
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	123	1.0	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	291	2.0	mg/L	5/13/16 11:45	CDB

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22358

Wateree Well FGD-04 (NPDES)

Date & Time Sampled: May 12, 2016 09:25
Date & Time Submitted: May 12, 2016 15:00

Collected by: A.HILL Location Code: WAFGD04TDS

FGD-04 Login Record File: 160513003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.96	1.0	mg/L	5/16/16 04:12	LS
pH by SM4500HB	5.05	0.00	S.U.	5/13/16 09:20	CDB
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	14.4	1.0	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	48	2.0	mg/L	5/13/16 11:45	CDB



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22359

Wateree Well FGD-05 (NPDES)

Date & Time Sampled: May 12, 2016 10:25

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

Collected by: A.HILL Location Code: WAFGD05TDS

FGD-05 Login Record File: 160513003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.4	1.0	mg/L	5/16/16 04:12	LS
pH by SM4500HB	4.90	0.00	S.U.	5/13/16 09:20	CDB
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	4.60	1.0	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	45	2.0	mg/L	5/13/16 11:45	CDB



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22365

Wateree Well FGD-01 (NPDES)

Date & Time Sampled: May 11, 2016 16:52

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

Collected by: A.HILL Location Code: WAFGD01TDS

FGD-01 Login Record File: 160513003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	3.54	0.50	mg/L	5/16/16 04:12	LS
pH by SM4500HB	5.35	0.00	S.U.	5/13/16 09:20	CDB
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	5/16/16 04:12	LS
Total Dissolved Solid-SM2540C	32	2.0	mg/L	5/13/16 11:45	CDB



REPORT TO:

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

Mike Moore C221

Sample ID: AB22373

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled: May 11, 2016 11:25

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

Collected by: A.HILL Location Code: WAG01TM

MW 1 Login Record File: 160513003

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 15:25	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Barium (CWA) 200.7	55.8	10.0	ppb	5/19/16 08:03	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 08:03	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 08:03	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Calcium EPA 200.7	781	100	ppb	5/19/16 08:03	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Lead by ICP-MS EPA 200.8	1.2	1.0	ppb	5/16/16 15:25	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/18/16 14:10	MC
Molybdenum - EPA 200.7	Less than	5.0	ppb	5/19/16 08:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 15:25	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC

Approved By	<i>I</i> '.
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Tel: (803)217-9384 Fax: (803) 217-9911

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22376

Wateree Well FGD-02 T Metals (NPDES)

Date & Time Sampled: May 11, 2016 18:00

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

Collected by: A.HILL Location Code: WAFGD02TM

FGD-02 Login Record File: 160513003

FGD-02	Login Record File. 100313003				
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 15:25	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Barium (CWA) 200.7	45.0	10.0	ppb	5/19/16 08:03	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 08:03	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 08:03	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Calcium EPA 200.7	6350	100	ppb	5/19/16 08:03	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Cobalt by ICP_MS EPA 200.8	1.0	1.0	ppb	5/16/16 15:25	MC
Lead by ICP-MS EPA 200.8	1.1	1.0	ppb	5/16/16 15:25	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/18/16 14:10	MC
Molybdenum - EPA 200.7	Less than	5.0	ppb	5/19/16 08:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 15:25	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC

Approved By:	



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_____ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22377

Wateree Well FGD-03 T Metals (NPDES)

Date & Time Sampled: May 12, 2016 08:15

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

Collected by: A.HILL Location Code: WAFGD03TM

FGD-03 Login Record File: 160513003

ГGD-03	Logiii Recold File. 1003 13003				
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 15:25	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Barium (CWA) 200.7	76.6	10.0	ppb	5/19/16 08:03	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 08:03	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 08:03	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Calcium EPA 200.7	50400	100	ppb	5/19/16 08:03	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Cobalt by ICP_MS EPA 200.8	2.5	1.0	ppb	5/16/16 15:25	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/18/16 14:10	MC
Molybdenum - EPA 200.7	Less than	5.0	ppb	5/19/16 08:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 15:25	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC

Approved By:	



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_____ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22378

Wateree Well FGD-04 T Metals (NPDES)

Date & Time Sampled: May 12, 2016 09:25

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

Collected by: A.HILL Location Code: WAFGD04TM

FGD-04 Login Record File: 160513003

FGD-04	Logiii Record File. 160513003				
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 15:25	МС
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	МС
Barium (CWA) 200.7	95.3	10.0	ppb	5/19/16 08:03	МС
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 08:03	MC
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 08:03	МС
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Calcium EPA 200.7	3120	100	ppb	5/19/16 08:03	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Lead by ICP-MS EPA 200.8	1.3	1.0	ppb	5/16/16 15:25	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/18/16 14:10	МС
Molybdenum - EPA 200.7	8.1	5.0	ppb	5/19/16 08:03	МС
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 15:25	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC

Approved By:	



REPORT TO:

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

Mike Moore C221

Sample ID: AB22379

Wateree Well FGD-05 T Metals (NPDES)

Date & Time Sampled: May 12, 2016 10:25

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

Collected by: A.HILL Location Code: WAFGD05TM

FGD-05 Login Record File: 160513003

FGD-05	Logiii Record File. 160513003				
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 15:25	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	МС
Barium (CWA) 200.7	101	10.0	ppb	5/19/16 08:03	MC
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 08:03	МС
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 08:03	МС
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	МС
Calcium EPA 200.7	2100	100	ppb	5/19/16 08:03	МС
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	MC
Cobalt by ICP_MS EPA 200.8	2.0	1.0	ppb	5/16/16 15:25	МС
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	МС
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/18/16 14:10	МС
Molybdenum - EPA 200.7	Less than	5.0	ppb	5/19/16 08:03	МС
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/16/16 15:25	МС
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/16/16 15:25	МС

Approved By	<i>l</i> '.
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Tel: (803)217-9384 Fax: (803) 217-9911

_____ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22385

Wateree Well FGD-01 T Metals (NPDES)

Date & Time Sampled: May 11, 2016 16:52

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

Collected by: A.HILL Location Code: WAFGD01TM

FGD-01 Login Record File: 160513003

FGD-01	Logiii Record File. 160513003				
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	5/17/16 10:59	МС
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	5/17/16 10:59	MC
Barium (CWA) 200.7	35.3	10.0	ppb	5/19/16 08:03	МС
Beryllium EPA 200.7	Less than	1.0	ppb	5/19/16 08:03	МС
Boron - EPA 200.7	Less than	1000	ppb	5/19/16 08:03	МС
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/17/16 10:59	МС
Calcium EPA 200.7	359	100	ppb	5/19/16 08:03	МС
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/17/16 10:59	МС
Cobalt by ICP_MS EPA 200.8	1.3	1.0	ppb	5/17/16 10:59	МС
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	5/17/16 10:59	МС
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/18/16 14:10	МС
Molybdenum - EPA 200.7	Less than	5.0	ppb	5/19/16 08:03	МС
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	5/17/16 10:59	МС
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	5/17/16 10:59	MC

Approved By:	

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station		Permit No.:		County: Richland
Date Sampled:	07/11/2016		_	Time Sampled:	12:00:00PM
	year-month-day (N	umerical)			
			I	STATION NUMBERS	
PARAMETI	E R NUMBER	MW-AP-01A	MW-FGD-01		
NAME	Lab. Certificate No.	32006	32006		
Field pH S.U.		4.630	4.690		
Field Sp. Conduct	civity micromhos/cm	55.000	49.000		
Field Turbidity N	ГU	0.94	0.71		
ORP mV		167.200	152.100		
Oxygen, dissolved	i mg/L	5.570	4.080		
Temp (Celcius) de	egrees C	24.410	25.360		
Water level elevat	ion ft	114.06	115.87		

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	Permit No.:	County: Richland
Date Sampled:	07/11/2016	Time Sampled:	12:00:00PM
	year-month-day (Numerical)		

STATION NUMBERS

PARAMETER	NUMBER	MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		4.190	6.480	3.750	4.250
Field Sp. Conductivity	micromhos/cm	79.500	226.700	51.700	60.800
Field Turbidity NTU		0.40	53.60	1.50	1.60
ORP mV		210.600	-38.000	252.500	205.000
Oxygen, dissolved mg/	L	2.300	0.600	0.510	0.250
Temp (Celcius) degrees	s C	20.600	24.400	21.300	23.600
Water level elevation f	t	103.38	104.99	107.48	108.32

Authorized Release By:	Date:	

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 401760 GEL Work Order: 401760

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.

	Jack N	Crosh			
Reviewed by	,				

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: July 29, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-1A Sample ID: 401760001

Matrix: Ground Water Collect Date: 11-JUL-16 11:00 15-JUL-16 Receive Date: Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in	n Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	07/22/16	2322	1582386	1
Metals Analysis-ICP	-MS											
SW846 3005A/6020	A Liquid "As Re	eceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	07/20/16	1931	1582806	2
Rad Gas Flow Propos	rtional Counting	2										
GFPC, Ra228, Liquio	d "As Received"	'										
Radium-228	U	ND	2.44	3.00	pCi/L			AXM6	07/27/16	1333	1582431	3
Rad Radium-226												
Lucas Cell, Ra226, li	quid "As Receiv	ved"										
Radium-226		0.915	0.322	1.00	pCi/L			LXP1	07/28/16	0830	1583314	4
The following Prep N	Methods were pe	erformed:										
Method	Description	1		Analyst	Date		Time	Pro	ep Batch			
SW846 3005A	ICP-MS 3005	SA PREP		JP1	07/18/16		1855	158	32805			

The following Analytical Methods were performed:

Method Description **Analyst Comments** EPA 300.0 2

SW846 3005A/6020A

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer 89.1 (15%-125%) GFPC, Ra228, Liquid "As Received"

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

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

Certificate of Analysis

Project:

Client ID:

Report Date: July 29, 2016

SCEG01716c

GEEL003

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-01

Sample ID:

401760009

Matrix: Collect Date: Ground Water

Receive Date:

11-JUL-16 16:35 15-JUL-16

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograph	ıy											
EPA300.0 Fluoride	in Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	07/23/16	0521	1582386	1
Metals Analysis-IC	CP-MS											
200.8/200.2 NPDE	ES Metals "As Rec	ceived"										
Lithium	J	2.23	2.00	10.0	ug/L	1.00	1	SKJ	07/20/16	1348	1582350	2
Rad Gas Flow Prop	ortional Counting	9										
GFPC, Ra228, Liqu	uid "As Received'											
Radium-228	U	ND	1.55	3.00	pCi/L			AXM6	07/27/16	1204	1582431	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Receiv	ved"										
Radium-226	•	1.20	0.341	1.00	pCi/L			LXP1	07/28/16	0900	1583314	4
The following Prep	Methods were pe	erformed:										
Method	Description	n		Analyst	Date		Time	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		JP1	07/15/16		1815	158	82349			
The following Ana	alvtical Methods v	vere performe	d:									

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

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 89.1 (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

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

Certificate of Analysis

Project:

Client ID:

Report Date: July 29, 2016

SCEG01716c

GEEL003

Company: Address:

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-05 Sample ID:

401760011 Ground Water

Matrix: Collect Date: 11-JUL-16 17:55 15-JUL-16 Receive Date: Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	ohy											
EPA300.0 Fluorid	le in Liquid "As Re	eceived"										
Fluoride	J	0.0485	0.033	0.100	mg/L		1	MAR1	07/23/16	0621	1582386	1
Metals Analysis-I	CP-MS											
200.8/200.2 NPD	ES Metals "As Rec	ceived"										
Lithium	J	2.13	2.00	10.0	ug/L	1.00	1	SKJ	07/20/16	1352	1582350	2
Rad Gas Flow Pro	portional Counting	7										
GFPC, Ra228, Lie	quid "As Received"	•										
Radium-228	•	4.72	2.11	3.00	pCi/L			AXM6	07/27/16	1204	1582431	3
Rad Radium-226												
Lucas Cell, Ra226	6, liquid "As Receiv	ved"										
Radium-226	_	1.82	0.341	1.00	pCi/L			LXP1	07/28/16	0935	1583314	4
The following Pre	ep Methods were pe	erformed:										
Method	Description	1		Analyst	Date		Time	Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	07/15/16		1815	158	32349			
FD1 C 11	1 13 6 .1 1	c	,									

The following Analytical Methods were performed:

Method Description **Analyst Comments** EPA 300.0 2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer (15%-125%) GFPC, Ra228, Liquid "As Received" 96.8

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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: July 29, 2016

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-02

Sample ID:

401760013

Matrix:

Ground Water

Collect Date:

12-JUL-16 08:35

Receive Date: Collector:

15-JUL-16 Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography	7											
EPA300.0 Fluoride i	in Liquid "As Re	eceived"										
Fluoride	J	0.051	0.033	0.100	mg/L		1	MAR1	07/23/16	0721	1582386	1
Metals Analysis-ICF	P-MS											
200.8/200.2 NPDES	Metals "As Red	ceived"										
Lithium	J	3.67	2.00	10.0	ug/L	1.00	1	SKJ	07/20/16	1358	1582350	2
Rad Gas Flow Propo	ortional Counting	5										
GFPC, Ra228, Liqui	id "As Received"	1										
Radium-228	U	ND	1.95	3.00	pCi/L			AXM6	07/27/16	1204	1582431	3
Rad Radium-226												
Lucas Cell, Ra226, 1	iquid "As Receiv	ved"										
Radium-226	•	1.44	0.381	1.00	pCi/L			LXP1	07/28/16	1010	1583315	4
The following Prep	Methods were pe	erformed:										
Method	Description	1		Analyst	Date		Time	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	07/15/16		1815	158	82349			
The fellowing Analy	ritical Mathada y	manfann	mad.									

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	•
2	EPA 200.8 SC NPDES	

EPA 904.0/SW846 9320 Modified

3

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			67.8	(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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: July 29, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-03
Sample ID: 401760016
Matrix: Ground Water
Collect Date: 12-JUL-16 10:55

Receive Date: 15-JUL-16 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography	y											
EPA300.0 Fluoride	in Liquid "As Re	eceived"										
Fluoride	-	0.142	0.033	0.100	mg/L		1	MAR1	07/23/16	0851	1582386	1
Metals Analysis-ICI	P-MS											
200.8/200.2 NPDE	S Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	07/20/16	0009	1582808	2
Rad Gas Flow Propo	ortional Counting	2										
GFPC, Ra228, Liqu	id "As Received"	'										
Radium-228	U	ND	1.07	3.00	pCi/L			AXM6	07/27/16	1207	1582431	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Receiv	ved"										
Radium-226	•	0.496	0.472	1.00	pCi/L			LXP1	07/28/16	1010	1583315	4
The following Prep	Methods were pe	erformed:										
Method	Description	1		Analyst	Date		Time	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	07/18/16		1945	15	82807			

The following Analytical Methods were performed:

Method Description Analyst Comments

EPA 300.0

EPA 300.0

2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

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

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: July 29, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-04
Sample ID: 401760018
Matrix: Ground Water
Collect Date: 12-JUL-16 13:00

Receive Date: 15-JUL-16 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography	7											
EPA300.0 Fluoride i	in Liquid "As Re	ceived"										
Fluoride	J	0.054	0.033	0.100	mg/L		1	MAR1	07/23/16	1050	1582386	1
Metals Analysis-ICP	P-MS											
200.8/200.2 NPDES	Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	07/20/16	0025	1582808	2
Rad Gas Flow Propo	ortional Counting	ŗ										
GFPC, Ra228, Liqui	d "As Received"	'										
Radium-228		1.90	1.70	3.00	pCi/L			AXM6	07/27/16	1207	1582431	3
Rad Radium-226												
Lucas Cell, Ra226, 1	iquid "As Receiv	ved"										
Radium-226	_	0.969	0.402	1.00	pCi/L			LXP1	07/28/16	1040	1583315	4
The following Prep I	Methods were pe	erformed:										
Method	Description	1		Analyst	Date		Time	Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	07/18/16		1945	158	32807			

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

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

101 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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QC Summary

Report Date: July 29, 2016

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 401760

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography										
Batch 1582386 —										
QC1203586449 401760001 DUP Fluoride	U	ND	U	ND	mg/L	N/A			MAR1	07/22/16 23:52
QC1203586450 401760020 DUP Fluoride	U	ND	U	ND	mg/L	N/A				07/23/16 12:20
QC1203586448 LCS Fluoride	2.50			2.53	mg/L		101	(90%-110%)	1	07/22/16 22:52
QC1203586447 MB Fluoride			U	ND	mg/L					07/22/16 22:23
QC1203586451 401760001 PS Fluoride	2.50 U	ND		2.53	mg/L		100	(90%-110%)	1	07/23/16 00:22
QC1203586452 401760020 PS Fluoride	2.50 U	ND		2.45	mg/L		96.9	(90%-110%)	ı	07/23/16 12:50
Metals Analysis - ICPMS Batch 1582350 ——										
QC1203586364 401760011 DUP Lithium	J	2.13	J	2.13	ug/L	0.282 ^		(+/-10.0)) SKJ	07/20/16 13:53
QC1203586362 LCS Lithium	50.0			51.1	ug/L		102	(80%-120%)	1	07/20/16 13:30
QC1203586361 MB Lithium			U	ND	ug/L					07/20/16 13:29
QC1203586367 401760011 MS Lithium	50.0 J	2.13		52.7	ug/L		101	(75%-125%)	ı	07/20/16 13:55
QC1203586370 401760011 SDILT Lithium	J	2.13	U	ND	ug/L	N/A		(0%-10%)	ı	07/20/16 13:56
Batch 1582806 —										
QC1203587432 401760010 DUP Lithium		12.1		12.1	ug/L	0.306 ^		(+/-10.0)) SKJ	07/20/16 19:47
QC1203587431 LCS Lithium	50.0			49.0	ug/L		98.1	(80%-120%)	1	07/20/16 19:27
QC1203587430 MB				ND						

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QC Summary

Workorder: 4	01760											Page 2 of 4
Parmname			NOM	[Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - IC Batch 158	PMS 2806											
Lithium						U		ug/L				07/20/16 19:23
QC1203587433 Lithium	401760010	MS	50.0		12.1		63.3	ug/L		102	(75%-125%) SKJ	07/20/16 19:51
QC1203587434 Lithium	401760010	SDILT			12.1	J	2.37	ug/L	1.95		(0%-10%)	07/20/16 19:59
Batch 158	2808											
QC1203587437 Lithium	401760016	DUP		U	ND	U	ND	ug/L	N/A		SKJ	07/20/16 00:13
QC1203587436 Lithium	LCS		50.0				47.6	ug/L		95.2	(80%-120%)	07/20/16 00:05
QC1203587435 Lithium	MB					U	ND	ug/L				07/20/16 00:02
QC1203587438 Lithium	401760016	MS	50.0	U	ND		49.1	ug/L		97.4	(75%-125%)	07/20/16 00:17
QC1203587439 Lithium	401760016	SDILT		U	ND	U	ND	ug/L	N/A		(0%-10%)	07/20/16 00:21
Rad Gas Flow Batch 158	2431											
QC1203586537 Radium-228	401760008	DUP		U	1.69	U	0.659	pCi/L	N/A		N/A AXM6	07/27/16 14:41
QC1203586538 Radium-228	LCS		45.0				41.5	pCi/L		92.1	(75%-125%)	07/27/16 12:07
QC1203586536 Radium-228	MB					U	1.27	pCi/L				07/27/16 12:06
Rad Ra-226 Batch 158	3314											
QC1203588585 Radium-226	401758001	DUP			1.21		1.53	pCi/L	23.5		(0% - 100%) LXP1	07/28/16 09:35
QC1203588587 Radium-226	LCS		24.4				28.0	pCi/L		115	(75%-125%)	07/28/16 09:35
QC1203588584 Radium-226	MB					U	0.0423	pCi/L				07/28/16 09:35
QC1203588586	401758001	MS										

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QC Summary

				<u></u>					
Workorder: 401760									Page 3 of 4
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Ra-226 Batch 1583314									
Radium-226	122	1.21	97.2	pCi/L		78.7	(75%-125%)		07/28/16 09:35
Batch 1583315 ———									
QC1203588589 401760020 DUP Radium-226		1.12	0.989	pCi/L	12.6		(0%-20%)	LXP1	07/28/16 11:15
QC1203588591 LCS Radium-226	24.4		20.3	pCi/L		83.2	(75%-125%)		07/28/16 11:45
QC1203588588 MB Radium-226		U	0.140	pCi/L					07/28/16 10:40
QC1203588590 401760020 MS Radium-226	122	1.12	117	pCi/L		95.3	(75%-125%)		07/28/16 11:15

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
- $M \qquad REMP \ Result > MDC/CL \ and < RDL$
- 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

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QC Summary

401760 Page 4 of 4 Sample Qual Parmname NOM OC Units RPD% REC% Range Anlst Date Time

- 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

Workorder:

- 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.
- 5-day BOD--The 2:1 depletion requirement was not met for this sample d
- 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 e reporting purposes
- Preparation or preservation holding time was exceeded 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.



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22909

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled: July 11, 2016 11:00

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAG01TDS

MW 1 Login Record File: 160712003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist				
Chlorides by IC EPA 300.0	5.4	0.50	ppm	7/18/16 12:05	LS				
pH by SM4500HB	5.93	0.00	S.U.	7/13/16 10:28	PRC				
Holding Time of 15 minutes has been e	Holding Time of 15 minutes has been exceeded.								
Sulfates by IC EPA 300.0	less than	0.50	ppm	7/18/16 12:05	LS				
Total Dissolved Solid-SM2540C	27	2.0	mg/L	7/14/16 10:28	PRC				



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January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22917

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled: July 11, 2016 16:35
Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD01TDS

FGD-01 Login Record File: 160712003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist			
Chlorides by IC EPA 300.0	6.0	0.50	ppm	7/18/16 14:28	LS			
pH by SM4500HB	6.12	0.00	S.U.	7/13/16 10:28	PRC			
Holding Time of 15 minutes has been exceeded.								
Sulfates by IC EPA 300.0	less than	0.50	ppm	7/18/16 14:28	LS			
Total Dissolved Solid-SM2540C	27	2.0	mg/L	7/14/16 10:28	PRC			



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January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22919

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled: July 11, 2016 17:55

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD05TDS

FGD-05 Login Record File: 160712003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist			
Chlorides by IC EPA 300.0	9.7	0.50	ppm	7/18/16 17:05	LS			
pH by SM4500HB	4.97	0.00	S.U.	7/13/16 10:28	PRC			
Holding Time of 15 minutes has been exceeded.								
Sulfates by IC EPA 300.0	0.56	0.50	ppm	7/18/16 17:05	LS			
Total Dissolved Solid-SM2540C	43	2.0	mg/L	7/14/16 10:28	PRC			



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_____ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22920

Wateree Well FGD-02 (NPDES/CCR)

Date & Time Sampled: July 12, 2016 08:35 Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD02TDS

FGD-02 Login Record File: 160712003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist			
Chlorides by IC EPA 300.0	17	0.50	ppm	7/18/16 17:20	LS			
pH by SM4500HB	5.59	0.00	S.U.	7/13/16 10:28	PRC			
Holding Time of 15 minutes has been exceeded.								
Sulfates by IC EPA 300.0	2.2	0.50	ppm	7/18/16 17:20	LS			
Total Dissolved Solid-SM2540C	66	2.0	mg/L	7/14/16 10:28	PRC			



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REPORT TO:

Mike Moore C221

Sample ID: AB22921

January 31, 2018

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled: July 12, 2016 10:55
Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD03TDS

FGD-03 Login Record File: 160712003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist			
Chlorides by IC EPA 300.0	8.4	2.5	ppm	7/18/16 17:34	LS			
pH by SM4500HB	6.60	0.00	S.U.	7/13/16 10:28	PRC			
Holding Time of 15 minutes has been exceeded.								
Sulfates by IC EPA 300.0	28	2.5	ppm	7/18/16 17:34	LS			
Total Dissolved Solid-SM2540C	144.5	2.0	mg/L	7/14/16 10:28	PRC			

Approved By:		



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

___ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22922

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled: July 12, 2016 13:00

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD04TDS

FGD-04 Login Record File: 160712003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist	
Chlorides by IC EPA 300.0	8.9	0.50	ppm	7/18/16 18:02	LS	
pH by SM4500HB	5.37	0.00	S.U.	7/13/16 10:28	PRC	
Holding Time of 15 minutes has been exceeded.						
Sulfates by IC EPA 300.0	6.2	0.50	ppm	7/18/16 18:02	LS	
Total Dissolved Solid-SM2540C	36	2.0	mg/L	7/14/16 10:28	PRC	

Approved By:		



REPORT TO:

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

_____ January 31, 2018

Mike Moore C221

Sample ID: AB22889

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled: July 11, 2016 11:00

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAG01TM

MW 1 Login Record File: 160712002

			-			
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A Date & T	-	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Barium (CWA) 200.7	56.5	10.0	ppb	7/18/16	10:21	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/18/16	10:21	MC
Boron - EPA 200.7	Less than	1000	ppb	7/18/16	10:21	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:39	MC
Calcium EPA 200.7	781	100	ppb	7/18/16	10:21	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:39	MC
Lead by ICP-MS EPA 200.8	1.4	1.0	ppb	7/18/16	11:39	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/18/16	08:10	MC
Molybdenum - EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:39	MC

Approved By	<i>I</i> '.
(pp.oroa b)	/ *



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January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22897

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled: July 11, 2016 16:35

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD01TM

FGD-01 Login Record File: 160712002

FGD-01	Logiii Recold File. 1007 12002					
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A	•	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Barium (CWA) 200.7	71.4	10.0	ppb	7/18/16	10:21	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/18/16	10:21	MC
Boron - EPA 200.7	Less than	1000	ppb	7/18/16	10:21	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:39	MC
Calcium EPA 200.7	753	100	ppb	7/18/16	10:21	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Cobalt by ICP_MS EPA 200.8	1.4	1.0	ppb	7/18/16	11:39	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:39	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/18/16	08:10	MC
Molybdenum - EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:39	MC

oved By:
oved By:



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_____ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22899

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled: July 11, 2016 17:55

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD05TM

FGD-05 Login Record File: 160712002

FGD-00	Logiii Record File. 1007 12002					
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A	•	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	МС
Barium (CWA) 200.7	117	10.0	ppb	7/18/16	10:21	МС
Beryllium EPA 200.7	Less than	1.0	ppb	7/18/16	10:21	МС
Boron - EPA 200.7	Less than	1000	ppb	7/18/16	10:21	МС
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	МС
Calcium EPA 200.7	652	100	ppb	7/18/16	10:21	МС
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	МС
Cobalt by ICP_MS EPA 200.8	1.6	1.0	ppb	7/18/16	11:59	МС
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	МС
Mercury (CWA) by EPA 245.2	0.20	0.2	ppb	7/18/16	08:10	МС
Molybdenum - EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	МС
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	МС
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:39	MC

Approved By:	



Mike Moore C221

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

REPORT TO:

Sample ID: AB22900

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled: July 12, 2016 08:35 Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD02TM

FGD-02 Login Record File: 160712002

FGD-02	Logiii Record File. 1607 12002					
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A	-	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	МС
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	МС
Barium (CWA) 200.7	124	10.0	ppb	7/18/16	10:21	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/18/16	10:21	MC
Boron - EPA 200.7	Less than	1000	ppb	7/18/16	10:21	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC
Calcium EPA 200.7	4510	100	ppb	7/18/16	10:21	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Cobalt by ICP_MS EPA 200.8	2.6	1.0	ppb	7/18/16	11:59	MC
Lead by ICP-MS EPA 200.8	1.8	1.0	ppb	7/18/16	11:59	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/18/16	08:10	MC
Molybdenum - EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC

Approved By	<i>l</i> '.
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REPORT TO:

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

Mike Moore C221

Sample ID: AB22901

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled: July 12, 2016 10:55

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD03TM

FGD-03 Login Record File: 160712002

rgp-03	Login Record File. 1007 12002					
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A	•	Chemist
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC
Arsenic by ICP_MS EPA 200.8	1.5	1.0	ppb	8/8/16	12:15	MC
Barium (CWA) 200.7	40.0	10.0	ppb	7/18/16	10:21	MC
Beryllium EPA 200.7	Less than	1.0	ppb	7/18/16	10:21	MC
Boron - EPA 200.7	Less than	1000	ppb	7/18/16	10:21	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC
Calcium EPA 200.7	31600	100	ppb	7/18/16	10:21	MC
Chromium by ICP_MS EPA 200.8	1.9	1.0	ppb	8/8/16	12:15	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/18/16	08:10	MC
Molybdenum - EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC

Approved By:	



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22902

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled: July 12, 2016 13:00

Date & Time Submitted: July 12, 2016 15:25

Collected by: A.HILL Location Code: WAFGD04TM

FGD-04 Login Record File: 160712002

FGD-04	Login Record File. 1607 12002							
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A	-	Chemist		
Antimony by ICP-MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	МС		
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	МС		
Barium (CWA) 200.7	91.2	10.0	ppb	7/18/16	10:21	МС		
Beryllium EPA 200.7	Less than	1.0	ppb	7/18/16	10:21	MC		
Boron - EPA 200.7	Less than	1000	ppb	7/18/16	10:21	МС		
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC		
Calcium EPA 200.7	2820	100	ppb	7/18/16	10:21	MC		
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/8/16	12:15	MC		
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC		
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC		
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	7/18/16	08:10	МС		
Molybdenum - EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC		
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	8/8/16	12:15	MC		
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	7/18/16	11:59	MC		

Approved By:	

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permi	t No.:	County: Richland
Date Sampled: 09/19/2016		_	Time Sampled:	12:00:00PM
year-month-day (N	umerical)			
			STATION NUMBERS	
PARAMETER NUMBER	MW-AP-01A	MW-FGD-01		
NAME Lab. Certificate No.	32006	32006		
Field pH S.U.	4.450	3.900		
Field Sp. Conductivity micromhos/cm	47.000	47.000		
Field Turbidity NTU	179.40	282.10		
ORP mV	5.210	2.920		
Oxygen, dissolved mg/L	1.000	2.140		
Temp (Celcius) degrees C	25.610	20.130		
Water level elevation ft	114.31	115.17		

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	Permit No.:	County: Richland
Date Sampled:	09/19/2016	Time Sampled:	12:00:00PM
	year-month-day (Numerical)		

STATION NUMBERS

PARAMETER	NUMBER	MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		4.830	5.890	4.330	4.570
Field Sp. Conductivity	micromhos/cm	74.000	130.000	54.000	74.000
Field Turbidity NTU		267.30	130.10	320.00	215.10
ORP mV		2.820	1.270	1.830	0.210
Oxygen, dissolved mg/	Ľ	0.700	8.900	0.700	0.800
Temp (Celcius) degree	s C	21.650	22.630	22.410	23.760
Water level elevation f	Ì	105.34	105.98	107.54	108.13

Authorized Release By:	Date:	

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 406540 GEL Work Order: 406540

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.

	Jack N	Crosh			
Reviewed by	,				

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 19, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-1A
Sample ID: 406540004
Matrix: Ground Water
Collect Date: 19-SEP-16 14:50

Receive Date: 22-SEP-16 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	hy											
SW846 9056A An	ions "As Received	."										
Fluoride	J	0.0597	0.033	0.100	mg/L		1	MXL2	09/23/16	1751	1601709	1
Metals Analysis-IO	CP-MS											
SW846 3005A/602	20A Liquid "As Re	eceived"										
Lithium	U	ND	3.00	10.0	ug/L	1.00	1	SKJ	09/26/16	2239	1601309	2
Rad Gas Flow Pro	portional Counting	7										
GFPC, Ra228, Liq	uid "As Received"	•										
Radium-228	U	ND	1.56	3.00	pCi/L			AXM6	10/19/16	1221	1603992	3
Rad Radium-226												
Lucas Cell, Ra226	, liquid "As Receiv	ved"										
Radium-226	•	0.536	0.257	1.00	pCi/L			LXP1	10/18/16	0845	1602211	4
The following Pre	p Methods were pe	erformed:										
Method	Description	1		Analyst	Date	ı	Time	e Pr	ep Batch			
SW846 3005A	ICP-MS 3005	A PREP		JP1	09/22/16		1730	160	01308			
The fellowing An	alvitical Mathada		ad.									

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1SW846 9056A

2 SW846 3005A/6020A 3 EPA 904.0/SW846 9320 Modified

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"

79.6 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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

Certificate of Analysis

Project:

Units

Result

Nominal

Recovery%

78.8

Client ID:

PF

SCEG01716c

GEEL003

DF Analyst Date

Report Date: October 19, 2016

Time Batch Method

Acceptable Limits

(15%-125%)

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FB-01 EPA

Sample ID:

406540005

Matrix:

Ground Water

Collect Date:

19-SEP-16 15:35

Receive Date:

22-SEP-16

Result

Collector:

Parameter

Client

Qualifier

Ion Chromatography											
EPA300.0 Fluoride in	Liquid "As Rece	ived"									
Fluoride	U	ND	0.033	0.100	mg/L	1	MXL2	09/23/16	1934	1601708	1
Metals Analysis-ICP-I	MS										
200.8/200.2 NPDES I	Metals "As Recei	ved"									
Lithium	U	ND	2.00	10.0	ug/L	1.00 1	SKJ	09/26/16	1734	1601317	2
Rad Gas Flow Proport	ional Counting										
GFPC, Ra228, Liquid	"As Received"										
Radium-228	U	ND	1.85	3.00	pCi/L		AXM6	10/19/16	1221	1603992	3
Rad Radium-226											
Lucas Cell, Ra226, liq	uid "As Received	l"									
Radium-226	U	ND	0.379	1.00	pCi/L		LXP1	10/18/16	0845	1602211	4
The following Prep M	ethods were perfo	ormed:									
Method	Description			Analyst	Date	Tin	ne Pr	ep Batch			_
EPA 200.2	ICP-MS 200.2 PI	REP		JP1	09/22/16	1905	5 16	01316			_
The following Analyt	ical Methods wer	e performed:									
Method	Description				A	nalyst Co	mment	s			
1	EPA 300.0										
2	EPA 200.8 SC_N	PDES									
3	EPA 904.0/SW84	6 9320 Modified									
4	EPA 903.1 Modif	ïed									

DL

RL

Notes:

Barium-133 Tracer

Column headers are defined as follows:

Surrogate/Tracer Recovery

DF: Dilution Factor Lc/LC: Critical Level DL: Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL**: Reporting Limit

Test

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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

Project:

Units

Client ID:

PF

SCEG01716c

GEEL003

DF Analyst Date

84.6

(15%-125%)

Certificate of Analysis

Report Date: October 19, 2016

Time Batch Method

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-01

Sample ID:

406540010

Matrix:

Ground Water

Collect Date:

19-SEP-16 18:50

Result

Receive Date:

22-SEP-16

Collector:

Parameter

Client

Qualifier

Ion Chromatography										
EPA300.0 Fluoride in	Liquid "As Rece									
Fluoride	U	ND	0.033	0.100	mg/L		MXL2	09/23/16	2234 1601708	1
Metals Analysis-ICP-N	MS									
200.8/200.2 NPDES N	Metals "As Rece	ived"								
Lithium	J	2.33	2.00	10.0	ug/L	1.00	l SKJ	09/26/16	1750 1601317	2
Rad Gas Flow Proport	ional Counting									
GFPC, Ra228, Liquid	"As Received"									
Radium-228		1.68	1.32	3.00	pCi/L		AXM	5 10/19/16	1222 1603992	3
Rad Radium-226										
Lucas Cell, Ra226, liq	uid "As Receive	d"								
Radium-226		1.36	0.427	1.00	pCi/L		LXP1	10/18/16	0845 1602211	4
The following Prep M	ethods were per	formed:								_
Method	Description			Analyst	Date	Ti	ne P	rep Batch	1	
EPA 200.2	ICP-MS 200.2 I	PREP		JP1	09/22/16	5 190)5 16	01316		_
The following Analyti	ical Methods we	ere performed:								
Method	Description					Analyst C	omment	S		
1	EPA 300.0					-				
2	EPA 200.8 SC_I	NPDES								
3		46 9320 Modified								
4	EPA 903.1 Mod	ified								
Surrogate/Tracer Reco	overy Test				Result	Nominal	Reco	very%	Acceptable Limit	S

DL

RL

Notes:

Barium-133 Tracer

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

GFPC, Ra228, Liquid "As Received"

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

Certificate of Analysis

Project:

Units

Result

Nominal

Recovery%

90.5

Acceptable Limits

(15%-125%)

Client ID:

PF

SCEG01716c

GEEL003

Report Date: October 19, 2016

DF Analyst Date Time Batch Method

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-99

Sample ID:

406540014

Matrix:

Ground Water

Collect Date: Receive Date: 20-SEP-16 10:05 22-SEP-16

Result

Collector:

Parameter

Client

Qualifier

Ion Chromatograph	y										
EPA300.0 Fluoride	in Liquid "As Received"										
Fluoride	U ND	0.033	0.100	mg/L		1	MXL2	09/24/16	0034	1601708	1
Metals Analysis-IC	P-MS										
200.8/200.2 NPDE	S Metals "As Received"										
Lithium	U ND	2.00	10.0	ug/L	1.00	1	SKJ	09/27/16	1201	1601317	2
Rad Gas Flow Prop	ortional Counting										
GFPC, Ra228, Liqu	uid "As Received"										
Radium-228	3.59	1.79	3.00	pCi/L			AXM6	10/19/16	1221	1603992	3
Rad Radium-226											
Lucas Cell, Ra226,	liquid "As Received"										
Radium-226	0.888	0.531	1.00	pCi/L			LXP1	10/18/16	0920	1602211	4
The following Prep	Methods were performed:										
Method	Description		Analyst	Date	Т	ime	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2 PREP		JP1	09/22/16	1	905	160	01316			
The following Ana	llytical Methods were performed:										
Method	Description	Analyst Comments									
1	EPA 300.0										
2	EPA 200.8 SC_NPDES										
3	EPA 904.0/SW846 9320 Modified										

DL

RL

Notes:

Barium-133 Tracer

Column headers are defined as follows:

Surrogate/Tracer Recovery

DF: Dilution Factor Lc/LC: Critical Level DL: Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL**: Reporting Limit

EPA 903.1 Modified

Test

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 19, 2016

Company:

GEL Engineering, LLC

2040 Savage Rd Address:

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-05

Sample ID:

406540011

Matrix: Collect Date: Ground Water

Receive Date:

19-SEP-16 19:10 22-SEP-16

Collector:

Client

Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
y											
in Liquid "As Re	ceived"										
U	ND	0.033	0.100	mg/L		1	MXL2	09/23/16	2304	1601708	1
P-MS											
S Metals "As Red	ceived"										
J	2.56	2.00	10.0	ug/L	1.00	1	SKJ	09/26/16	1754	1601317	2
ortional Counting	5										
id "As Received"	'										
U	ND	1.68	3.00	pCi/L			AXM6	10/19/16	1222	1603992	3
liquid "As Receiv	ved"										
	0.863	0.365	1.00	pCi/L			LXP1	10/18/16	0920	1602211	4
Methods were pe	erformed:										
Description	1		Analyst	Date		Tim	e Pr	ep Batch			
ICP-MS 200.2	2 PREP		JP1	09/22/16		1905	160	01316			
lytical Methods v	vere performed:										
Description				F	Analys	t Co	mments	S			
	y in Liquid "As Re U P-MS S Metals "As Rec J ortional Counting id "As Received" U liquid "As Received" Methods were per Description ICP-MS 200 lytical Methods v	y in Liquid "As Received" U ND P-MS S Metals "As Received" J 2.56 ortional Counting tid "As Received" U ND liquid "As Received"	y in Liquid "As Received" U ND 0.033 P-MS S Metals "As Received" J 2.56 2.00 ortional Counting iid "As Received" U ND 1.68 liquid "As Received" 0.863 0.365 Methods were performed: Description ICP-MS 200.2 PREP lytical Methods were performed:	y in Liquid "As Received" U ND 0.033 0.100 P-MS S Metals "As Received" J 2.56 2.00 10.0 ortional Counting iid "As Received" U ND 1.68 3.00 liquid "As Received" 0.863 0.365 1.00 Methods were performed: Description Analyst ICP-MS 200.2 PREP JP1 lytical Methods were performed:	y in Liquid "As Received" U ND 0.033 0.100 mg/L P-MS S Metals "As Received" J 2.56 2.00 10.0 ug/L ortional Counting iid "As Received" U ND 1.68 3.00 pCi/L liquid "As Received" 0.863 0.365 1.00 pCi/L Methods were performed: Description Analyst Date ICP-MS 200.2 PREP JP1 09/22/16 lytical Methods were performed:	y in Liquid "As Received" U ND 0.033 0.100 mg/L P-MS S Metals "As Received" J 2.56 2.00 10.0 ug/L 1.00 ortional Counting iid "As Received" U ND 1.68 3.00 pCi/L liquid "As Received" 0.863 0.365 1.00 pCi/L Methods were performed: Description Analyst Date ICP-MS 200.2 PREP JP1 09/22/16 lytical Methods were performed:	y in Liquid "As Received" U ND 0.033 0.100 mg/L 1 P-MS S Metals "As Received" J 2.56 2.00 10.0 ug/L 1.00 1 ortional Counting iid "As Received" U ND 1.68 3.00 pCi/L liquid "As Received" 0.863 0.365 1.00 pCi/L Methods were performed: Description Analyst Date Time ICP-MS 200.2 PREP JP1 09/22/16 1905 lytical Methods were performed:	y in Liquid "As Received" U ND 0.033 0.100 mg/L 1 MXL2 P-MS S Metals "As Received" J 2.56 2.00 10.0 ug/L 1.00 1 SKJ ortional Counting iid "As Received" U ND 1.68 3.00 pCi/L AXM6 liquid "As Received" 0.863 0.365 1.00 pCi/L LXP1 Methods were performed: Description Analyst Date Time Proceedings of the process of the	y in Liquid "As Received" U ND 0.033 0.100 mg/L 1 MXL2 09/23/16 P-MS S Metals "As Received" J 2.56 2.00 10.0 ug/L 1.00 1 SKJ 09/26/16 ortional Counting iid "As Received" U ND 1.68 3.00 pCi/L AXM6 10/19/16 liquid "As Received" 0.863 0.365 1.00 pCi/L LXP1 10/18/16 Methods were performed: Description Analyst Date Time Prep Batch ICP-MS 200.2 PREP JP1 09/22/16 1905 1601316 lytical Methods were performed:	y in Liquid "As Received" U ND 0.033 0.100 mg/L 1 MXL2 09/23/16 2304 P-MS S Metals "As Received" J 2.56 2.00 10.0 ug/L 1.00 1 SKJ 09/26/16 1754 ortional Counting id "As Received" U ND 1.68 3.00 pCi/L AXM6 10/19/16 1222 liquid "As Received" 0.863 0.365 1.00 pCi/L LXP1 10/18/16 0920 Methods were performed: Description Analyst Date Time Prep Batch ICP-MS 200.2 PREP JP1 09/22/16 1905 1601316 lytical Methods were performed:	y in Liquid "As Received" U ND 0.033 0.100 mg/L 1 MXL2 09/23/16 2304 1601708 P-MS S Metals "As Received" J 2.56 2.00 10.0 ug/L 1.00 1 SKJ 09/26/16 1754 1601317 ortional Counting id "As Received" U ND 1.68 3.00 pCi/L AXM6 10/19/16 1222 1603992 liquid "As Received" 0.863 0.365 1.00 pCi/L LXP1 10/18/16 0920 1602211 Methods were performed: Description Analyst Date Time Prep Batch ICP-MS 200.2 PREP JP1 09/22/16 1905 1601316

Method	Description
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"			86	(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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 19, 2016

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-03

Sample ID:

406540012

Matrix:

Ground Water

Collect Date:

20-SEP-16 08:35

Receive Date: Collector:

22-SEP-16 Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	hy											
EPA300.0 Fluorid	e in Liquid "As Re	ceived"										
Fluoride	J	0.070	0.033	0.100	mg/L		1	MXL2	09/23/16	2334	1601708	1
Metals Analysis-IO	CP-MS											
200.8/200.2 NPD	ES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	09/27/16	1147	1601317	2
Rad Gas Flow Pro	portional Counting	7										
GFPC, Ra228, Liq	quid "As Received"	'										
Radium-228	U	ND	1.50	3.00	pCi/L			AXM6	10/19/16	1222	1603992	3
Rad Radium-226												
Lucas Cell, Ra226	, liquid "As Receiv	ved"										
Radium-226	•	0.716	0.327	1.00	pCi/L			LXP1	10/18/16	0920	1602211	4
The following Pre	p Methods were pe	erformed:										
Method	Description	1		Analyst	Date	-	Гim	e Pro	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	09/22/16		1905	160	01316			
The fellowing An	alvitical Mathada v	manfama	and.									

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	•

EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			89.3	(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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 19, 2016

Company:

GEL Engineering, LLC

2040 Savage Rd Address:

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-02

Sample ID:

406540013

22-SEP-16

Matrix:

Ground Water

Collect Date: Receive Date: 20-SEP-16 09:15

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst Date	e Tin	ne Batch	Method
Ion Chromatograp	ohy										
EPA300.0 Fluorid	le in Liquid "As Re	eceived"									
Fluoride	U	ND	0.033	0.100	mg/L		1	MXL2 09/24/1	6 000	4 1601708	1
Metals Analysis-I	CP-MS										
200.8/200.2 NPD	ES Metals "As Red	ceived"									
Lithium	J	2.24	2.00	10.0	ug/L	1.00	1	SKJ 09/27/1	6 115	8 1601317	2
Rad Gas Flow Pro	portional Counting	7									
GFPC, Ra228, Lic	quid "As Received"	'									
Radium-228	U	ND	2.03	3.00	pCi/L			AXM6 10/19/1	6 122	1 1603992	3
Rad Radium-226											
Lucas Cell, Ra226	6, liquid "As Receiv	ved"									
Radium-226		0.480	0.328	1.00	pCi/L			LXP1 10/18/1	6 092	0 1602211	4
The following Pre	ep Methods were pe	erformed:									
Method	Description	1		Analyst	Date		Time	e Prep Bato	ch		
EPA 200.2	ICP-MS 200.	2 PREP		JP1	09/22/16		1905	1601316			
The following Ar	nalytical Methods v	vere performed:									
Method	Description				A	Analys	t Co	mments			

1	EPA 300.0
2	EPA 200.8 SC_NPDES
3	EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			74.3	(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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 19, 2016

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-04

Sample ID:

406540015

Matrix:

Ground Water

Collect Date:

20-SEP-16 10:15

Receive Date: Collector:

22-SEP-16 Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograph	ıy											
EPA300.0 Fluoride	in Liquid "As Re	ceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MXL2	09/24/16	0103	1601708	1
Metals Analysis-IC	P-MS											
200.8/200.2 NPDE	ES Metals "As Rec	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	09/27/16	1203	1601317	2
Rad Gas Flow Prop	ortional Counting	Ţ										
GFPC, Ra228, Liqu	uid "As Received"	'										
Radium-228	U	ND	1.91	3.00	pCi/L			AXM6	10/19/16	1222	1603992	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Receiv	ved"										
Radium-226	•	0.674	0.474	1.00	pCi/L			LXP1	10/18/16	0920	1602211	4
The following Prep	Methods were pe	erformed:										
Method	Description	1		Analyst	Date	-	Γim	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JP1	09/22/16	1	1905	160	01316			
The following And	lutical Mathada u	uara narfari	mad.									

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

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			79	(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

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

QC Summary

Report Date: October 19, 2016

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 406540

Parmname		NOM		Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 1601708											
QC1203634730 406540 Fluoride	0002 DUP			0.363		0.371	mg/L	2.34 ^	.	(+/-0.100) MXL	2 09/23/16 18:05
QC1203634731 406540 Fluoride	0015 DUP		U	ND	U	ND	mg/L	N/A			09/24/16 01:33
QC1203634729 LCS Fluoride	}	2.50				2.35	mg/L		94	(90%-110%)	09/23/16 17:05
QC1203634728 MB Fluoride					U	ND	mg/L				09/23/16 16:35
QC1203634732 406540 Fluoride	0002 PS	2.50		0.363		2.72	mg/L		94.4	(90%-110%)	09/23/16 18:35
QC1203634733 406540 Fluoride	0015 PS	2.50	U	ND		2.50	mg/L		99	(90%-110%)	09/24/16 02:03
Batch 1601709											
QC1203634736 406546 Fluoride	0021 DUP		J	0.0591	J	0.0775	mg/L	26.9 ^		(+/-0.100) MXL	2 09/23/16 23:06
QC1203634735 LCS Fluoride	1	2.50				2.57	mg/L		103	(90%-110%)	09/23/16 16:49
QC1203634734 MB Fluoride					U	ND	mg/L				09/23/16 16:18
QC1203634737 406540 Fluoride	0021 PS	2.50	J	0.0591		2.77	mg/L		109	(90%-110%)	09/23/16 23:37
Metals Analysis - ICPMS Batch 1601309											
QC1203633861 406540 Lithium	0001 DUP		J	3.09	J	3.02	ug/L	2.33 ^		(+/-10.0) SK	J 09/26/16 22:15
QC1203633860 LCS Lithium	1	50.0				51.9	ug/L		104	(80%-120%)	09/26/16 22:07
QC1203633859 MB Lithium					U	ND	ug/L				09/26/16 22:03
QC1203633862 406540	0001 MS					52.9				(75%-125%)	

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QC Summary

Workorder: 406540									Page 2 of 4
Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 1601309									
Lithium	50.0	J 3.09			ug/L		99.6		09/26/16 22:19
QC1203633863 406540001 SDILT Lithium		J 3.09	U	ND	ug/L	N/A		(0%-10%) SKJ	09/26/16 22:27
Batch 1601317 ———									
QC1203633871 406540002 DUP Lithium		U ND	U	ND	ug/L	N/A		SKJ	09/26/16 17:11
QC1203633872 406540012 DUP Lithium		U ND	U	ND	ug/L	N/A			09/27/16 11:49
QC1203633870 LCS Lithium	50.0			48.0	ug/L		95.9	(80%-120%)	09/26/16 17:03
QC1203633869 MB Lithium			U	ND	ug/L				09/26/16 16:59
QC1203633873 406540002 MS Lithium	50.0	U ND		48.4	ug/L		96.4	(75%-125%)	09/26/16 17:15
QC1203633874 406540012 MS Lithium	50.0	U ND		51.1	ug/L		102	(75%-125%)	09/27/16 11:52
QC1203633875 406540002 SDILT Lithium		U ND	U	ND	ug/L	N/A		(0%-10%)	09/26/16 17:19
QC1203633876 406540012 SDILT Lithium		U ND	U	ND	ug/L	N/A		(0%-10%)	09/27/16 11:55
Rad Gas Flow Batch 1603992									
QC1203640324 406540008 DUP Radium-228		U 1.64	U	0.940	pCi/L	N/A		N/AAXM6	10/19/16 13:38
QC1203640325 LCS Radium-228	21.9			21.0	pCi/L		95.9	(75%-125%)	10/19/16 12:21
QC1203640323 MB Radium-228			U	0.252	pCi/L				10/19/16 12:21
Rad Ra-226 Batch 1602211									
QC1203636173 406540001 DUP Radium-226		0.804		1.10	pCi/L	31.1		(0% - 100%) LXP1	10/18/16 10:30
QC1203636175 LCS									

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QC Summary

Workorder: 406540				_					Page 3	of 4
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range A	nlst	Date Ti	ime
Rad Ra-226 Batch 1602211										
Radium-226	24.4		26.8	pCi/L		110	(75%-125%)		10/18/16	10:30
QC1203636172 MB Radium-226		U	0.0609	pCi/L]	LXP1	10/18/16	10:30
QC1203636174 406540001 MS Radium-226	122	0.804	129	pCi/L		105	(75%-125%)		10/18/16	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
- $M \qquad REMP \ Result > MDC/CL \ and < RDL$
- 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
- 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

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QC Summary

Workorder: 406540

Parmname

NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- 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.



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

____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23723

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled: September 19, 2016 14:50
Date & Time Submitted: September 20, 2016 15:40

Collected by: A.HILL Location Code: WAG01TDS

MW 1 Login Record File: 160920003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.35	0.5	mg/L	10/4/16 03:41	LS
pH by SM4500HB	5.8	0.00	S.U.	9/21/16 11:01	PRC
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	LESS THAN	0.5	mg/L	10/4/16 03:41	LS
Total Dissolved Solid-SM2540C	37	2.0	mg/L	9/22/16 10:40	PRC

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23728

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled:

September 19, 2016 18:50 September 20, 2016 15:40

Date & Time Submitted: Collected by: A.HILL

Location Code: WAFGD01TDS

FGD-01 Login Record File: 160920003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.00	0.5	mg/L	10/4/16 03:41	LS
pH by SM4500HB	5.72	0.00	S.U.	9/21/16 16:01	PRC
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	LESS THAN	0.5	mg/L	10/4/16 03:41	LS
Total Dissolved Solid-SM2540C	33	2.0	mg/L	9/22/16 10:40	PRC



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

19:10

15:40

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23729

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled: September 19, 2016

Date & Time Submitted: September 20, 2016

Collected by: A.HILL Location Code: WAFGD05TDS

FGD-05 Login Record File: 160920003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	10.4	0.5	mg/L	10/4/16 03:41	LS
pH by SM4500HB	5.25	0.00	S.U.	9/21/16 16:01	PRC
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	LESS THAN	0.5	mg/L	10/4/16 03:41	LS
Total Dissolved Solid-SM2540C	45	2.0	mg/L	9/22/16 13:25	PRC

Approved By:		



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January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23730

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled: September 20, 2016 Date & Time Submitted:

08:35 September 20, 2016 15:40

Collected by: A.HILL Location Code: WAFGD03TDS

FGD-03 Login Record File: 160920003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.63	0.5	mg/L	10/4/16 03:41	LS
pH by SM4500HB	6.46	0.00	S.U.	9/21/16 16:01	PRC
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	11.2	0.5	mg/L	10/4/16 03:41	LS
Total Dissolved Solid-SM2540C	82	2.0	mg/L	9/22/16 10:40	PRC

Approved By:		



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23731

Wateree Well FGD-02 (NPDES/CCR)

Date & Time Sampled:
Date & Time Submitted:

September 20, 2016 09:15

Date & Time Submitted: September 20, 2016 15:40
Collected by: A.HILL Location Code: WAFGD02TDS

FGD-02 Login Record File: 160920003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.36	0.5	mg/L	10/4/16 03:41	LS
pH by SM4500HB	5.55	0.00	S.U.	9/21/16 16:01	PRC
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	5.85	0.5	mg/L	10/4/16 03:41	LS
Total Dissolved Solid-SM2540C	55	2.0	mg/L	9/23/16 09:31	PRC

Approved By:		
AUDIOVED DV.		



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

10:15

15:40

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23733

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled: September 20, 2016

Date & Time Submitted: September 20, 2016

Collected by: A.HILL Location Code: WAFGD04TDS

FGD-04 Login Record File: 160920003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.13	0.5	mg/L	10/4/16 03:41	LS
pH by SM4500HB	5.14	0.00	S.U.	9/21/16 16:01	PRC
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	5.41	0.5	mg/L	10/4/16 03:41	LS
Total Dissolved Solid-SM2540C	25	2.0	mg/L	9/23/16 09:31	PRC

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23743

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled: September 19, 2016 14:50
Date & Time Submitted: September 20, 2016 15:40

Collected by: A.HILL Location Code: WAG01TM

MW 1 Login Record File: 160921001

IVIVV			Logiii Nec	Join File. 100921001	
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	9/27/16 10:48	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Barium (CWA) 200.7	53.7	10.0	ppb	9/22/16 15:09	MC
Beryllium EPA 200.7	Less than	2.0	ppb	9/22/16 15:09	MC
Boron - EPA 200.7	Less than	1000	ppb	9/22/16 15:09	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Calcium EPA 200.7	721	100	ppb	9/22/16 15:09	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Lead by ICP-MS EPA 200.8	1.5	1.0	ppb	9/27/16 10:48	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/22/16 15:37	СВ
Molybdenum - EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC

Approved By	r
Approved by	/-



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

____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23748

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled: State & Time Submitted: State & T

September 19, 2016 18:50 September 20, 2016 15:40

Location Code: WAFGD01TM

FGD-01 Login Record File: 160921001

Collected by: A.HILL

ГGD-01			Login Nec	Join File. 100921001	
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	9/27/16 10:48	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Barium (CWA) 200.7	79.0	10.0	ppb	9/22/16 15:09	MC
Beryllium EPA 200.7	Less than	2.0	ppb	9/22/16 15:09	MC
Boron - EPA 200.7	Less than	1000	ppb	9/22/16 15:09	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Calcium EPA 200.7	803	100	ppb	9/22/16 15:09	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Cobalt by ICP_MS EPA 200.8	1.5	1.0	ppb	9/27/16 10:48	MC
Lead by ICP-MS EPA 200.8	1.0	1.0	ppb	9/27/16 10:48	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/22/16 15:37	СВ
Molybdenum - EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC

Approved By:	



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23749

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted: September 19, 2016 19:10

September 20, 2016 15:40

Collected by: A.HILL Location Code: WAFGD05TM

FGD-05 Login Record File: 160921001

FGD-05 Logiii Record File. 160921001					
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	9/27/16 10:48	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	МС
Barium (CWA) 200.7	115	10.0	ppb	9/22/16 15:09	МС
Beryllium EPA 200.7	Less than	2.0	ppb	9/22/16 15:09	MC
Boron - EPA 200.7	Less than	1000	ppb	9/22/16 15:09	МС
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Calcium EPA 200.7	686	100	ppb	9/22/16 15:09	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Cobalt by ICP_MS EPA 200.8	1.4	1.0	ppb	9/27/16 10:48	MC
Lead by ICP-MS EPA 200.8	1.9	1.0	ppb	9/27/16 10:48	MC
Mercury (CWA) by EPA 245.2	0.21	0.2	ppb	9/22/16 15:37	СВ
Molybdenum - EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC

Approved By	<i>l</i> '.
	·



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23750

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted:

September 20, 2016 08:35 September 20, 2016 15:40

Date & Time Submitted: September 20, 2016 15:40
Collected by: A.HILL Location Code: WAFGD03TM

FGD-03 Login Record File: 160921001

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	9/27/16 10:48	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Barium (CWA) 200.7	29.4	10.0	ppb	9/22/16 15:09	MC
Beryllium EPA 200.7	Less than	2.0	ppb	9/22/16 15:09	MC
Boron - EPA 200.7	Less than	1000	ppb	9/22/16 15:09	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Calcium EPA 200.7	16200	100	ppb	9/22/16 15:09	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/22/16 15:37	СВ
Molybdenum - EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC

Approved By	<i>l</i> '.
	·



REPORT TO:

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

Mike Moore

Sample ID: AB23751

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted: September 20, 2016 09:15 September 20, 2016

15:40

Collected by: A.HILL Location Code: WAFGD02TM

FGD-02 Login Record File: 160921001

FGD-02 Logiti Record File. 160921001					
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	9/27/16 10:48	МС
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	МС
Barium (CWA) 200.7	57.1	10.0	ppb	9/22/16 15:09	МС
Beryllium EPA 200.7	Less than	2.0	ppb	9/22/16 15:09	МС
Boron - EPA 200.7	Less than	1000	ppb	9/22/16 15:09	МС
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Calcium EPA 200.7	3600	100	ppb	9/22/16 15:09	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Cobalt by ICP_MS EPA 200.8	1.2	1.0	ppb	9/27/16 10:48	МС
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/22/16 15:37	СВ
Molybdenum - EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	МС
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC

Approved By:	



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

____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB23753

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled:
Date & Time Submitted:

September 20, 2016 10:15 September 20, 2016 15:40

Collected by: A.HILL Location Code: WAFGD04TM

FGD-04 Login Record File: 160921001

			-		
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	9/27/16 10:48	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Barium (CWA) 200.7	70.4	10.0	ppb	9/22/16 15:09	MC
Beryllium EPA 200.7	Less than	2.0	ppb	9/22/16 15:09	MC
Boron - EPA 200.7	Less than	1000	ppb	9/22/16 15:09	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Calcium EPA 200.7	2160	100	ppb	9/22/16 15:09	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	9/22/16 15:37	СВ
Molybdenum - EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	9/27/16 10:48	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	9/27/16 10:48	MC

Approved By	<i>I</i> '.
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SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	y: Wateree Station		Permit No.:		County: Richland
Date Sampled:	11/15/2016		_	Time Sampled:	12:00:00PM
	year-month-day (N	umerical)			
				STATION NUMBERS	
PARAMETI	E R NUMBER	MW-AP-01A	MW-FGD-01		
NAME	Lab. Certificate No.	32006	32006		
Field pH S.U.		4.810	4.570		
Field Sp. Conduct	civity micromhos/cm	58.000	62.000		
Field Turbidity N	ΓU	1.30	5.80		
ORP mV		293.000	260.000		
Oxygen, dissolved	d mg/L	3.970	3.070		
Гетр (Celcius) do	egrees C	20.170	14.590		
Water level elevat	tion ft	113.69	115.02		

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permit No.:	County: Richland		
Date Sampled:	11/15/2016	Time Sampled:	12:00:00PM		
	year-month-day (Numerical)				

STATION NUMBERS

PARAMETER	NUMBER	MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		5.340	6.350	4.870	5.100
Field Sp. Conductivity	micromhos/cm	83.000	136.000	63.000	104.000
Field Turbidity NTU		0.90	9.50	1.10	1.40
ORP mV		146.000	98.000	210.000	209.000
Oxygen, dissolved mg/	L L	2.550	0.630	2.860	0.430
Temp (Celcius) degree	s C	19.940	18.390	20.030	24.940
Water level elevation f	Ì	105.14	105.77	107.28	107.81

Authorized Release By:	Date:	

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 411026 GEL Work Order: 411026

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.

	Jethere Cates	
Reviewed by		

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

Project:

Client ID:

SCEG01716c

GEEL003

Certificate of Analysis

Report Date: December 14, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Wateree CCR

Client Sample ID: FGD-1 Sample ID: 411026001 Matrix: Ground Water

Collect Date: 15-NOV-16 08:05
Receive Date: 18-NOV-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograph	ıy											
EPA300.0 Fluoride	in Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	12/07/16	1649	1618153	1
Metals Analysis-IC	P-MS											
200.8/200.2 NPDE	ES Metals "As Re	ceived"										
Lithium	J	2.33	2.00	10.0	ug/L	1.00	1	BAJ	11/28/16	2320	1617950	2
Rad Gas Flow Prop	ortional Counting	g										
GFPC, Ra228, Liqu	uid "As Received	"										
Radium-228		2.26	1.08	3.00	pCi/L			AXM6	12/13/16	1124	1619875	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Recei	ved"										
Radium-226		1.98	0.373	1.00	pCi/L			LXP1	12/14/16	0815	1620874	4
The following Prep Methods were performed:												
Method	Description	n		Analyst	Date	,	Tim	e Pro	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		CXW4	11/21/16		1620	161	17949			
The following Ana	alytical Methods v	were performed	l:									

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		
4	El A 903.1 Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GEPC Ra228 Liquid "As Received"			97.4	(15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: December 14, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-1A Sample ID: 411026002 Matrix: Ground Water

Collect Date: 15-NOV-16 09:05 18-NOV-16 Receive Date: Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in	Liquid "As Re	eceived"										
Fluoride	J	0.0396	0.033	0.100	mg/L		1	MAR1	12/07/16	1718	1618153	1
Metals Analysis-ICP-N	ЛS											
200.8/200.2 NPDES N	Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	11/28/16	2331	1617950	2
Rad Gas Flow Proport	ional Counting	3										
GFPC, Ra228, Liquid	"As Received"	•										
Radium-228		3.42	2.09	3.00	pCi/L			AXM6	12/13/16	1124	1619875	3
Rad Radium-226												
Lucas Cell, Ra226, liq	uid "As Recei	ved"										
Radium-226		0.755	0.362	1.00	pCi/L			LXP1	12/14/16	0815	1620874	4
The following Prep Me	ethods were pe	erformed:										
Method	Description	n		Analyst	Date]	Γime	e Pro	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		CXW4	11/21/16	1	620	161	17949			

The following Analytical Methods were performed:

Method Description **Analyst Comments** EPA 300.0 2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer 92.9 (15%-125%) GFPC, Ra228, Liquid "As Received"

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

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

Certificate of Analysis

Project:

SCEG01716c

Report Date: December 14, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-02 Sample ID: 411026011 Matrix: Ground Water Collect Date: 16-NOV-16 09:25

Receive Date: 18-NOV-16 Collector: Client

Sample ID: 411026011 Client ID: GEEL003

RL Qualifier DL Units PF DF Analyst Date Parameter Result Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" 0.033 Fluoride 0.100 mg/L MAR1 12/08/16 0325 1618154 1 Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium 10.0 11/30/16 1921 1620155 2.26 2.00 ug/L 1.00 1 BAJ Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.05 AXM6 12/13/16 1127 1619875 1.18 3.00 pCi/L Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 0.754 0.348 1.00 pCi/L LXP1 12/14/16 0850 1620874 The following Prep Methods were performed: Method Date Prep Batch Description Analyst Time EPA 200.2 ICP-MS 200.2 PREP SXW1 11/30/16 0731 1620154

The following Analytical Methods were performed:

Method Description Analyst Comments

EPA 300.0

EPA 300.0

2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

96 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: December 14, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-03
Sample ID: 411026012
Matrix: Ground Water

Collect Date: 16-NOV-16 10:25
Receive Date: 18-NOV-16
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	ohy											
EPA300.0 Fluorio	le in Liquid "As Re	eceived"										
Fluoride	-	0.130	0.033	0.100	mg/L		1	MAR1	12/08/16	0354	1618154	1
Metals Analysis-I	CP-MS											
200.8/200.2 NPD	ES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1923	1620155	2
Rad Gas Flow Pro	oportional Counting	3										
GFPC, Ra228, Lie	quid "As Received"											
Radium-228		2.51	1.41	3.00	pCi/L			AXM6	12/13/16	1127	1619875	3
Rad Radium-226												
Lucas Cell, Ra226	6, liquid "As Receiv	ved"										
Radium-226	-	0.811	0.437	1.00	pCi/L			LXP1	12/14/16	0850	1620874	4
The following Pre	ep Methods were pe	erformed:										
Method	Description	n		Analyst	Date	-	Γim	e Pro	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		SXW1	11/30/16	(0731	162	20154			
The fellowing Ar	antition Mathaday		and.									

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

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

99.1 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: December 14, 2016

GEL Engineering, LLC Company: Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-04 Sample ID: 411026013 Matrix: Ground Water

Collect Date: 16-NOV-16 11:05 18-NOV-16 Receive Date: Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in	n Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	12/08/16	0423	1618154	1
Metals Analysis-ICP	-MS											
200.8/200.2 NPDES	Metals "As Re	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1926	1620155	2
Rad Gas Flow Propo	rtional Counting	g										
GFPC, Ra228, Liquio	d "As Received	"										
Radium-228	U	ND	1.29	3.00	pCi/L			AXM6	12/13/16	1127	1619875	3
Rad Radium-226												
Lucas Cell, Ra226, li	quid "As Recei	ved"										
Radium-226		0.476	0.244	1.00	pCi/L			LXP1	12/14/16	0850	1620874	4
The following Prep N	Methods were p	erformed:										
Method	Descriptio	n		Analyst	Date	Т	ime	Pre	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		SXW1	11/30/16	0	731	162	20154			
The following Analy	tical Methods v	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	

Acceptable Limits Result Surrogate/Tracer Recovery Test Nominal Recovery% Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 96.5 (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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: December 14, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-05
Sample ID: 411026014
Matrix: Ground Water
Collect Date: 16-NOV-16 12:30

Receive Date: 18-NOV-16 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograph	ıy											
EPA300.0 Fluoride	in Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	12/08/16	0549	1618154	1
Metals Analysis-IC	P-MS											
200.8/200.2 NPDE	ES Metals "As Red	ceived"										
Lithium	J	2.33	2.00	10.0	ug/L	1.00	1	BAJ	11/30/16	1929	1620155	2
Rad Gas Flow Prop	ortional Counting	<u> </u>										
GFPC, Ra228, Liqu	uid "As Received"	•										
Radium-228		2.95	1.50	3.00	pCi/L			AXM6	12/13/16	1128	1619875	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Receiv	ved"										
Radium-226	•	1.66	0.414	1.00	pCi/L			LXP1	12/14/16	0850	1620874	4
The following Prep	Methods were pe	erformed:										
Method	Description	1		Analyst	Date	-	Гim	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		SXW1	11/30/16	(0731	162	20154			

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"

95.9 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

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

QC Summary

Report Date: December 14, 2016

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd Charleston, South Carolina

Robert Gardner

Workorder: 411026

Contact:

Parmname		NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography												
Batch 1618153												
QC1203674927 411027002 Fluoride	DUP		U	ND	U	ND	mg/L	N/A			MAR1	12/07/16 22:0
QC1203674926 LCS Fluoride		2.50				2.53	mg/L		101	(90%-110%)		12/07/16 16:2
QC1203674925 MB Fluoride					U	ND	mg/L					12/07/16 15:5
QC1203674928 411027002 Fluoride	PS	2.50	U	ND		2.54	mg/L		102	(90%-110%)		12/07/16 22:3
Batch 1618154												
QC1203674931 411026008 Fluoride	DUP		U	ND	U	ND	mg/L	N/A			MAR1	12/08/16 01:2
QC1203674932 411027007 Fluoride	DUP		U	ND	U	ND	mg/L	N/A				12/08/16 08:4
QC1203674930 LCS Fluoride		2.50				2.56	mg/L		103	(90%-110%)		12/08/16 00:3
QC1203674929 MB Fluoride					U	ND	mg/L					12/08/16 00:0
QC1203674933 411026008 Fluoride	PS	2.50	U	ND		2.45	mg/L		97.9	(90%-110%)		12/08/16 01:5
QC1203674934 411027007 Fluoride	PS	2.50	U	ND		2.55	mg/L		102	(90%-110%)		12/08/16 09:1
Metals Analysis - ICPMS Batch 1617950												
QC1203674269 411026001 Lithium	DUP		J	2.33	J	2.25	ug/L	3.58	\	(+/-10.0) BAJ	11/28/16 23:2
QC1203674268 LCS Lithium		50.0				50.4	ug/L		101	(80%-120%)		11/28/16 23:1
QC1203674267 MB Lithium					U	ND	ug/L					11/28/16 23:1
QC1203674271 411026001	MS					55.2				(75%-125%)		

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

QC Summary

Workorder: 411026										Page 2 of 4
Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 1617950										
Lithium	50.0	J	2.33			ug/L		106		11/28/16 23:25
QC1203674273 411026001 SDILT Lithium	•	J	2.33	U	ND	ug/L	N/A		(0%-10%) BAJ	11/28/16 23:28
Batch 1620155 —										
QC1203680215 410911011 DUP Lithium		U	ND	J	2.10	ug/L	200		BAJ	11/30/16 19:13
QC1203680214 LCS Lithium	50.0				50.1	ug/L		100	(80%-120%)	11/30/16 19:07
QC1203680213 MB Lithium				U	ND	ug/L				11/30/16 19:05
QC1203680216 410911011 MS Lithium	50.0	U	ND		47.2	ug/L		90.4	(75%-125%)	11/30/16 19:15
QC1203680217 410911011 SDILT Lithium	,	U	ND	U	ND	ug/L	N/A		(0%-10%)	11/30/16 19:18
Rad Gas Flow Batch 1619875 ——										
QC1203679413 411026008 DUP Radium-228		U	1.52	U	1.30	pCi/L	N/A		N/A AXM6	12/13/16 11:28
QC1203679414 LCS Radium-228	21.5				24.0	pCi/L		111	(75%-125%)	12/13/16 11:30
QC1203679412 MB Radium-228				U	0.751	pCi/L				12/13/16 11:28
Rad Ra-226 Batch 1620874 ——										
QC1203682147 411026001 DUP Radium-226			1.98		1.32	pCi/L	40.5*		(0%-20%) LXP1	12/14/16 09:20
QC1203682149 LCS Radium-226	24.4				20.4	pCi/L		83.8	(75%-125%)	12/14/16 09:20
QC1203682146 MB Radium-226					0.327	pCi/L				12/14/16 09:20
QC1203682148 411026001 MS Radium-226	122		1.98		122	pCi/L		98.2	(75%-125%)	12/14/16 09:20

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QC Summary

Page 3 of 4 Parmname \mathbf{OC} Units

Sample Qual **NOM** RPD% REC% Range Anlst Date Time

Notes:

Workorder:

The Qualifiers in this report are defined as follows:

Analyte is a Tracer compound

411026

- < Result is less than value reported
- > Result is greater than value reported
- В The target analyte was detected in the associated blank.
- Results are either below the MDC or tracer recovery is low BD
- Е % difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- Е General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Failed analysis. FA
- Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed FΒ invalid for reporting to regulatory agencies
- Η 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
- One or more quality control criteria have not been met. Refer to the applicable narrative or DER. Q
- 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.
- Λ 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

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QC Summary

Workorder: 411026

Page 4 of 4

Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- 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
 - h Preparation or preservation holding time was exceeded

reporting purposes

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. $^{\circ}$ 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.



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

08:05

08:10

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24618

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled: November 15, 2016

Date & Time Submitted: November 17, 2016

Collected by: A.HILL Location Code: WAFGD01TDS

FGD-01 Login Record File: 161117004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.21	0.5	mg/L	11/23/16 23:50	LS
pH by SM4500HB	5.07	0.00	S.U.	11/17/16 12:30	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	LESS THAN	0.5	mg/L	11/23/16 23:50	LS
Total Dissolved Solid-SM2540C	49	2.0	mg/L	11/18/16 13:00	BF

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24619

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled: November 15, 2016 09:05
Date & Time Submitted: November 17, 2016 08:10

Collected by: A.HILL Location Code: WAG01TDS

MW 1 Login Record File: 161117004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.41	0.5	mg/L	11/23/16 23:50	LS
pH by SM4500HB	4.66	0.00	S.U.	11/17/16 12:30	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	LESS THAN	0.5	mg/L	11/23/16 23:50	LS
Total Dissolved Solid-SM2540C	36	2.0	mg/L	11/18/16 13:00	BF

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24628

Collected by: A.HILL

Wateree Well FGD-02 (NPDES/CCR)

November 16, 2016 09:25 November 17, 2016 08:10

Location Code: WAFGD02TDS

FGD-02 Login Record File: 161117004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	9.32	0.5	mg/L	11/23/16 23:50	LS
pH by SM4500HB	5.30	0.00	S.U.	11/17/16 12:30	BF
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	5.55	0.5	mg/L	11/23/16 23:50	LS
Total Dissolved Solid-SM2540C	60	2.0	mg/L	11/18/16 13:00	BF



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24629

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled: November 16, 2016 10:25
Date & Time Submitted: November 17, 2016 08:10

Collected by: A.HILL Location Code: WAFGD03TDS

FGD-03 Login Record File: 161117004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.03	0.5	mg/L	11/23/16 23:50	LS
pH by SM4500HB	6.25	0.00	S.U.	11/17/16 12:30	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	6.27	0.5	mg/L	11/23/16 23:50	LS
Total Dissolved Solid-SM2540C	75	2.0	mg/L	11/18/16 13:00	BF



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24630

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled: November 16, 2016 Date & Time Submitted:

11:05 November 17, 2016 08:10

Collected by: A.HILL Location Code: WAFGD04TDS

FGD-04 Login Record File: 161117004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.55	0.5	mg/L	11/23/16 23:50	LS
pH by SM4500HB	4.66	0.00	S.U.	11/17/16 12:30	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	3.72	0.5	mg/L	11/23/16 23:50	LS
Total Dissolved Solid-SM2540C	33	2.0	mg/L	11/18/16 13:00	BF



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

12:30

08:10

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24631

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled: November 16, 2016

Date & Time Submitted: November 17, 2016

Collected by: A.HILL Location Code: WAFGD05TDS

FGD-05 Login Record File: 161117004

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	12.0	0.5	mg/L	11/23/16 23:50	LS
pH by SM4500HB	4.97	0.00	S.U.	11/17/16 12:30	BF
Holding Time of 15 minutes has been ea	xceeded.				
Sulfates by IC EPA 300.0	0.977	0.5	mg/L	11/23/16 23:50	LS
Total Dissolved Solid-SM2540C	51	2.0	mg/L	11/18/16 13:00	BF

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24596

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted: November 15, 2016 08:05

November 17, 2016 08:10

Collected by: A.HILL Location Code: WAFGD01TM

FGD-01 Login Record File: 161117002

1 0 5 0 1					
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	11/17/16 16:03	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Barium (CWA) 200.7	78.9	10.0	ppb	11/17/16 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	11/17/16 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	11/17/16 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Calcium EPA 200.7	821	100	ppb	11/17/16 14:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Cobalt by ICP_MS EPA 200.8	1.3	1.0	ppb	11/17/16 16:03	MC
Lead by ICP-MS EPA 200.8	1.0	1.0	ppb	11/17/16 16:03	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	11/17/16 14:57	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	11/18/16 13:52	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	11/17/16 16:03	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC

pproved By	y:		
pproved By	y:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24597

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled:
Date & Time Submitted:

November 15, 2016 09:05 November 17, 2016 08:10

Collected by: A.HILL Location Code: WAG01TM

MW 1 Login Record File: 161117002

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	11/17/16 16:03	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Barium (CWA) 200.7	55.5	10.0	ppb	11/17/16 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	11/17/16 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	11/17/16 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Calcium EPA 200.7	732	100	ppb	11/17/16 14:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Lead by ICP-MS EPA 200.8	1.6	1.0	ppb	11/17/16 16:03	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	11/17/16 14:57	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	11/18/16 13:52	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	11/17/16 16:03	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24606

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted:

Collected by: A.HILL

November 16, 2016 09:25 November 17, 2016 08:10

Location Code: WAFGD02TM

FGD-02 Login Record File: 161117002

. 05 02					
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	11/17/16 16:03	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Barium (CWA) 200.7	68.3	10.0	ppb	11/17/16 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	11/17/16 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	11/17/16 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Calcium EPA 200.7	3460	100	ppb	11/17/16 14:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Cobalt by ICP_MS EPA 200.8	1.1	1.0	ppb	11/17/16 16:03	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	11/17/16 14:57	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	11/18/16 13:52	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	11/17/16 16:03	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC

Approved By:	



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24607

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted:

Collected by: A.HILL

November 16, 2016 10:25 November 17, 2016 08:10

Location Code: WAFGD03TM

FGD-03 Login Record File: 161117002

1 05 00			_09	0.00. 101111002	
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	11/17/16 16:03	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Barium (CWA) 200.7	26.0	10.0	ppb	11/17/16 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	11/17/16 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	11/17/16 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Calcium EPA 200.7	14600	100	ppb	11/17/16 14:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	11/17/16 14:57	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	11/18/16 13:52	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	11/17/16 16:03	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC

Approved By:	



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January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24608

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted: November 16, 2016 11:05 November 17, 2016 08:10

Location Code: WAFGD04TM

Collected by: A.HILL

FGD-04 Login Record File: 161117002

1 05 01			_09	0.00. 101111002	
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	11/17/16 16:03	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Barium (CWA) 200.7	62.1	10.0	ppb	11/17/16 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	11/17/16 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	11/17/16 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Calcium EPA 200.7	1730	100	ppb	11/17/16 14:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Cobalt by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	11/17/16 14:57	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	11/18/16 13:52	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	11/17/16 16:03	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC

Approved By	<i>l</i> :		



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB24609

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled:

November 16, 2016 12:30 November 17, 2016 08:10

Date & Time Submitted: November 17, 2016
Collected by: A.HILL Location (

Location Code: WAFGD05TM

FGD-05 Login Record File: 161117002

FGD-03	_		Login ixec	0101116. 101117002	
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	11/17/16 16:03	MC
Arsenic by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Barium (CWA) 200.7	106	10.0	ppb	11/17/16 14:46	MC
Beryllium EPA 200.7	Less than	2.0	ppb	11/17/16 14:46	MC
Boron - EPA 200.7	Less than	1000	ppb	11/17/16 14:46	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Calcium EPA 200.7	2610	100	ppb	11/17/16 14:46	MC
Chromium by ICP_MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Cobalt by ICP_MS EPA 200.8	1.4	1.0	ppb	11/17/16 16:03	MC
Lead by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Lithium (CWA) 200.7	Less than	10.0	ppb	11/17/16 14:57	MC
Mercury (CWA) by EPA 245.2	0.26	0.2	ppb	11/18/16 13:52	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC
Selenium by ICP-MS EPA 200.8	Less than	5.0	ppb	11/17/16 16:03	MC
Thallium by ICP-MS EPA 200.8	Less than	1.0	ppb	11/17/16 16:03	MC

Approved By: _	

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	ee Station		t No.:	County: Richland
Date Sampled:	01/17/2017		_	Time Sampled:	12:00:00PM
	year-month-day (N	umerical)			
				STATION NUMBERS	
PARAMETE	E R NUMBER	MW-AP-01A	MW-FGD-01		
NAME	Lab. Certificate No.	32006	32006		
Field pH S.U.		4.630	4.680		
Field Sp. Conduct	ivity micromhos/cm	42.000	53.000		
Field Turbidity N	ГU	2.18	2.23		
ORP mV		172.700	166.200		
Oxygen, dissolved	l mg/L	4.110	2.290		
Temp (Celcius) de	egrees C	19.270	19.910		
Water level elevat	ion ft	115.48	116.26		
				j	

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	Permit No.:	County: Richland
Date Sampled:	01/17/2017 year-month-day (Numerical)	Time Sampled:	12:00:00PM
	year month day (Evanierical)		

STATION NUMBERS

PARAMETER	NUMBER	MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		5.670	5.730	4.820	4.920
Field Sp. Conductivity	micromhos/cm	270.000	138.000	59.000	86.000
Field Turbidity NTU		2.50	8.60	2.40	5.20
ORP mV		165.800	161.000	254.000	193.000
Oxygen, dissolved mg/	L	3.730	2.660	1.820	0.530
Temp (Celcius) degrees	s C	20.850	22.610	20.090	20.360
Water level elevation fi	t	105.08	105.77	107.51	108.34

Authorized Release By:	Date:	
rumonzed release by.	Date.	

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 414773 GEL Work Order: 414773

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.

	Jethere Cates	
Reviewed by		

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Certificate of Analysis

Project:

Units

Result

Nominal

Recovery%

88.2

Acceptable Limits

(15%-125%)

Client ID:

PF

SCEG01716c

GEEL003

Report Date: February 16, 2017

DF Analyst Date Time Batch Method

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-01

Sample ID:

414773008

Matrix: Collect Date: Ground Water

Receive Date:

17-JAN-17 15:20 20-JAN-17

Result

Collector:

Parameter

Client

Qualifier

Ion Chromatography												
EPA300.0 Fluoride in I	iquid "As Recei	ived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	01/25/17	0941	1633301	1
Metals Analysis-ICP-M	S											
200.8/200.2 NPDES M	letals "As Receiv	ved"										
Lithium	J	2.53	2.00	10.0	ug/L	1.00	1	BAJ	01/25/17	2004	1633222	2
Rad Gas Flow Proportion	onal Counting											
GFPC, Ra228, Liquid "	As Received"											
Radium-228		1.95	1.49	3.00	pCi/L			AXM6	02/10/17	1239	1635132	3
Rad Radium-226												
Lucas Cell, Ra226, liqu	id "As Received	!"										
Radium-226		1.50	0.374	1.00	pCi/L			LXP1	02/09/17	0930	1633271	4
The following Prep Me	thods were perfe	ormed:										
Method	Description			Analyst	Date	Τ	Γime	e Pr	ep Batch			_
EPA 200.2	ICP-MS 200.2 PI	REP		SXW1	01/23/17	0)839	16	33221			
The following Analytic	cal Methods wer	e performed:										
Method	Description				A	nalyst	Coı	nment	s			
1	SW846 9056A					•						
2	EPA 200.8 SC_N	PDES										
3	EPA 904.0/SW84	6 9320 Modified										
2 3												

DL

RL

Notes:

Barium-133 Tracer

Column headers are defined as follows:

Surrogate/Tracer Recovery

DF: Dilution Factor Lc/LC: Critical Level DL: Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL**: Reporting Limit

EPA 903.1 Modified

Test

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: February 16, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-01A
Sample ID: 414773014
Matrix: Ground Water
Collect Date: 17-JAN-17 17:00

Receive Date: 20-JAN-17 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	phy											
EPA300.0 Fluorio	de in Liquid "As Re	eceived"										
Fluoride	J	0.0492	0.033	0.100	mg/L		1	MAR1	01/25/17	1234	1633301	1
Metals Analysis-l	ICP-MS											
200.8/200.2 NPD	DES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	01/25/17	2040	1633222	2
Rad Gas Flow Pro	oportional Counting	9										
GFPC, Ra228, Li	quid "As Received"	"										
Radium-228	•	2.51	2.04	3.00	pCi/L			AXM6	02/10/17	1243	1635132	3
Rad Radium-226												
Lucas Cell, Ra22	6, liquid "As Receiv	ved"										
Radium-226		0.859	0.311	1.00	pCi/L			LXP1	02/09/17	1005	1633271	4
The following Pro	ep Methods were pe	erformed:										
Method	Description	n		Analyst	Date	ı	Time	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		SXW1	01/23/17		0839	16	33221			

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1SW846 9056A

2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

89.3 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Project:

Client ID:

SCEG01716c

GEEL003

Certificate of Analysis

Report Date: February 16, 2017

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-05

Sample ID:

414773017

Matrix:

Ground Water

Collect Date:

18-JAN-17 16:17

Receive Date:

20-JAN-17

Client

Collector:

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst Date	Time	Batch	Method
Ion Chromatography											
EPA300.0 Fluoride in	n Liquid "As Re	ceived"									
Fluoride	J	0.0359	0.033	0.100	mg/L		1	MAR1 01/25/1	1459	1633301	1
Metals Analysis-ICP	-MS										
200.8/200.2 NPDES	Metals "As Rec	ceived"									
Lithium	J	2.21	2.00	10.0	ug/L	1.00	1	BAJ 01/25/1	2054	1633222	2
Rad Gas Flow Propos	rtional Counting	<u> </u>									
GFPC, Ra228, Liquio	d "As Received"	'									
Radium-228		3.91	1.96	3.00	pCi/L			AXM6 02/09/1	7 1041	1635133	3
Rad Radium-226											
Lucas Cell, Ra226, li	iquid "As Receiv	ved"									
Radium-226	_	1.66	0.479	1.00	pCi/L			LXP1 02/09/1	1005	1633271	4
The following Prep N	Methods were pe	erformed:									
Method	Description	1		Analyst	Date	-	Гimе	e Prep Batc	n		
EPA 200.2	ICP-MS 200.2	2 PREP		SXW1	01/23/17	(0839	1633221			

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	•
2	EPA 200 8 SC. NPDES	

3 EPA 904.0/SW846 9320 Modified EPA 903.1 Modified

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

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

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: February 16, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-04
Sample ID: 414773018
Matrix: Ground Water
Collect Date: 18-JAN-17 15:04

Receive Date: 20-JAN-17 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	hy											
EPA300.0 Fluorid	e in Liquid "As Re	eceived"										
Fluoride	J	0.0479	0.033	0.100	mg/L		1	MAR1	01/25/17	1528	1633301	1
Metals Analysis-IO	CP-MS											
200.8/200.2 NPD	ES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	01/25/17	2056	1633222	2
Rad Gas Flow Pro	portional Counting	g										
GFPC, Ra228, Lic	quid "As Received"	"										
Radium-228	-	1.72	1.63	3.00	pCi/L			AXM6	02/09/17	1041	1635133	3
Rad Radium-226												
Lucas Cell, Ra226	, liquid "As Receiv	ved"										
Radium-226		0.350	0.210	1.00	pCi/L			LXP1	02/09/17	1005	1633271	4
The following Pre	p Methods were pe	erformed:										
Method	Description	n		Analyst	Date	,	Time	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		SXW1	01/23/17	(0839	16	33221			
TD1 - C-11 - 1 - A -	.1 .C1 M . d 1.											

 Method
 Description
 Analyst Comments

 1
 SW846 9056A

 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"

84.6 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Project:

Client ID:

SCEG01716c

GEEL003

Certificate of Analysis

Report Date: February 16, 2017

Company:

GEL Engineering, LLC 2040 Savage Rd

Address:

Charleston, South Carolina 29417

Contact:

Robert Gardner

Project:

Wateree CCR

Sample ID:

Client Sample ID: FGD-03 414773019

Matrix:

Ground Water

Collect Date:

18-JAN-17 13:03

Receive Date: Collector:

20-JAN-17 Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography	у											
EPA300.0 Fluoride	in Liquid "As Re	ceived"										
Fluoride	J	0.0662	0.033	0.100	mg/L		1	MAR1	01/25/17	1556	1633301	1
Metals Analysis-ICI	P-MS											
200.8/200.2 NPDES	S Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	01/25/17	2059	1633222	2
Rad Gas Flow Propo	ortional Counting	7										
GFPC, Ra228, Liqui	id "As Received'	'										
Radium-228		4.55	2.64	3.00	pCi/L			AXM6	02/09/17	1434	1635133	3
Rad Radium-226												
Lucas Cell, Ra226, 1	liquid "As Receiv	ved"										
Radium-226	•	0.746	0.408	1.00	pCi/L			LXP1	02/09/17	1005	1633271	4
The following Prep	Methods were pe	erformed:										
Method	Description	ı		Analyst	Date	-	Γim	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		SXW1	01/23/17	()839	16	33221			
The fellowing Anal	ritical Mathada i		ad.									

The following Analytical Methods were performed:

Method Description **Analyst Comments** SW846 9056A 2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer (15%-125%) GFPC, Ra228, Liquid "As Received" 89.6

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

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

Certificate of Analysis

Project:

Units

Result

Nominal

Recovery%

84.2

Acceptable Limits

(15%-125%)

Client ID:

PF

SCEG01716c

GEEL003

Report Date: February 16, 2017

DF Analyst Date Time Batch Method

Company: Address:

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-02

Sample ID:

414773020

20-JAN-17

Matrix: Collect Date: Ground Water

Receive Date:

18-JAN-17 13:47

Result

Collector:

Parameter

Client

Qualifier

Ion Chromatography											
EPA300.0 Fluoride in I	iquid "As Rece	ived"									
Fluoride	U U	ND	0.033	0.100	mg/L	1	MAR1	01/25/17	1625	1633301	1
Metals Analysis-ICP-M	IS				Č						
200.8/200.2 NPDES M		ved"									
Lithium	U	ND	2.00	10.0	ug/L	1.00 1	BAJ	01/25/17	2102	1633222	2
Rad Gas Flow Proportion	onal Counting										
GFPC, Ra228, Liquid "	'As Received"										
Radium-228	U	ND	1.96	3.00	pCi/L		AXM6	5 02/13/17	1113	1635133	3
Rad Radium-226											
Lucas Cell, Ra226, liqu	id "As Received	1 "									
Radium-226		0.627	0.440	1.00	pCi/L		LXP1	02/09/17	1037	1633271	4
The following Prep Me	thods were perf	ormed:									
Method	Description			Analyst	Date	Tim	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2 P	REP		SXW1	01/23/17	0839	16	33221			
The following Analytic	cal Methods wer	e performed:									
Method	Description				A	nalyst Co	mment	S			
1	SW846 9056A										
2	EPA 200.8 SC_N	PDES									
3	EPA 904.0/SW84	46 9320 Modified									
4	EPA 903.1 Modi	fied									

DL

RL

Notes:

Barium-133 Tracer

Column headers are defined as follows:

Surrogate/Tracer Recovery

DF: Dilution Factor Lc/LC: Critical Level DL: Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL**: Reporting Limit

Test

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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QC Summary

Report Date: February 16, 2017

Page 1 of 6

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina Robert Gardner

Workorder: 414773

Contact:

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 1633027 ———									
QC1203712222 414666010 DUP Fluoride		0.723		0.727	mg/L	0.551		(0%-20%) MAR1	01/24/17 22:36
QC1203714085 414775003 DUP Fluoride		0.288		0.290	mg/L	0.865 ^		(+/-0.100)	01/25/17 01:30
QC1203712221 LCS Fluoride	2.50			2.53	mg/L		101	(90%-110%)	01/24/17 16:21
QC1203712220 MB Fluoride			U	ND	mg/L				01/24/17 15:52
QC1203712223 414666010 PS Fluoride	2.50	0.723		3.20	mg/L		99.1	(90%-110%)	01/24/17 23:05
QC1203714086 414775003 PS Fluoride	2.50	0.288		2.75	mg/L		98.3	(90%-110%)	01/25/17 01:59
Batch 1633301 ———									
QC1203712955 414773001 DUP Fluoride	U	ND	U	ND	mg/L	N/A		MAR1	01/25/17 04:52
QC1203712956 414773020 DUP Fluoride	U	ND	U	ND	mg/L	N/A			01/25/17 16:54
QC1203712954 LCS Fluoride	2.50			2.55	mg/L		102	(90%-110%)	01/25/17 03:54
QC1203712953 MB Fluoride			U	ND	mg/L				01/25/17 03:25

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

QC Summary

		<u>QC bi</u>	amma	<u>.y</u>				
Workorder: 414773								Page 2 of 6
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anls	t Date Time
Ion Chromatography Batch 1633301								
QC1203712957 414773001 PS Fluoride	2.50 U	ND	2.51	mg/L		99.6	(90%-110%) MA	R1 01/25/17 05:21
QC1203712958 414773020 PS Fluoride	2.50 U	ND	2.50	mg/L		99	(90%-110%)	01/25/17 17:23
Metals Analysis - ICPMS Batch 1633220 ———								
QC1203712682 414773001 DUP Lithium	U	ND U	ND	ug/L	N/A		S	SKJ 01/30/17 11:43
QC1203712681 LCS Lithium	50.0		56.3	ug/L		113	(80%-120%)	01/30/17 11:40
QC1203712680 MB Lithium		U	ND	ug/L				01/30/17 11:39
QC1203712683 414773001 MS Lithium	50.0 U	ND	56.8	ug/L		112	(75%-125%)	01/30/17 11:45
QC1203712684 414773001 SDILT Lithium	U	ND U	ND	ug/L	N/A		(0%-10%)	01/30/17 11:47
Batch 1633222 ———								
QC1203712687 414773008 DUP Lithium	J	2.53 J	2.51	ug/L	0.555 ^		(+/-10.0) E	AJ 01/25/17 20:06
QC1203712688 414773009 DUP Lithium	U	ND U	ND	ug/L	N/A			01/25/17 20:17
QC1203712686 LCS Lithium	50.0		48.5	ug/L		96.9	(80%-120%)	01/25/17 20:01

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QC Summary

Workorder: 414773 Page 3 of 6 Sample Qual **Parmname** NOM \mathbf{QC} Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 1633222 Batch QC1203712685 MB U ND BAJ 01/25/17 19:58 Lithium ug/L QC1203712689 414773008 MS Lithium 50.0 J 2.53 51.6 98.1 ug/L (75%-125%)01/25/17 20:09 QC1203712690 414773009 MS ND 45.2 ug/L 50.0 U 89.9 01/25/17 20:19 Lithium (75%-125%) QC1203712691 414773008 SDILT Lithium J 2.53 U ND ug/L N/A (0%-10%)01/25/17 20:11 QC1203712692 414773009 SDILT U Lithium ND U ND ug/L N/A (0%-10%)01/25/17 20:22 Rad Gas Flow 1635132 Batch QC1203717739 414773008 DUP 1.95 1.23 Radium-228 pCi/L 45.1 (0% - 100%) AXM6 02/10/17 12:43 QC1203717740 LCS 19.4 pCi/L Radium-228 21.1 92.1 (75%-125%) 02/10/17 12:43 QC1203717738 MB U 02/10/17 12:43 Radium-228 0.931 pCi/L Batch 1635133 QC1203717742 414773020 DUP U 0.393 3.34 Radium-228 pCi/L 158* (0% - 100%) AXM6 02/09/17 14:30 QC1203717743 LCS Radium-228 21.1 23.2 pCi/L 110 (75%-125%) 02/09/17 10:49

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QC Summary

		<u>QC 50</u>	umman	<u>.y</u>					
Workorder: 414773									Page 4 of 6
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow Batch 1635133 QC1203717741 MB Radium-228		U	0.738	pCi/L				AXM6	02/09/17 10:49
Rad Ra-226 Batch 1633270									
QC1203712844 414666001 DU Radium-226	UP U	0.198	0.345	pCi/L	54.2		(0% - 100%)	LXP1	02/13/17 11:10
QC1203712846 LCS Radium-226	26.0		24.3	pCi/L		93.7	(75%-125%)		02/13/17 11:40
QC1203712843 MB Radium-226			0.314	pCi/L					02/13/17 11:10
QC1203712845 414666001 Ms Radium-226	130 U	0.198	133	pCi/L		102	(75%-125%)		02/13/17 11:10
Batch 1633271 -									
QC1203712848 414773001 DU Radium-226	UP	0.783	0.966	pCi/L	20.9		(0% - 100%)	LXP1	02/09/17 10:37
QC1203712850 LCS Radium-226	26.0		20.3	pCi/L		78.1	(75%-125%)		02/09/17 10:37
QC1203712847 MB Radium-226		U	-0.0465	pCi/L					02/09/17 10:37
QC1203712849 414773001 M: Radium-226	rs 130	0.783	136	pCi/L		104	(75%-125%)		02/09/17 10:37

Notes:

The Qualifiers in this report are defined as follows:

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

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

QC Summary

Workorder: 414773 Page 5 of 6 Sample Qual Parmname NOM \mathbf{OC} Units RPD% REC% Range Anlst Date Time Result is greater than value reported В The target analyte was detected in the associated blank. BDResults are either below the MDC or tracer recovery is low Е % difference of sample and SD is >10%. Sample concentration must meet flagging criteria Е 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 Η 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 REMP Result > MDC/CL and < RDL M 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 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.
- 5-day BOD--The 2:1 depletion requirement was not met for this sample d
- 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 e reporting purposes
- Preparation or preservation holding time was exceeded h

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

QC Summary

Page 6 of 6

-Parmname NOM Sample Qual \mathbf{QC} Units RPD% REC% Range Anlst Date Time

Workorder:

414773

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.

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.



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25317

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled: January 17, 2017 17:00

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAG01TDS

MW 1 Login Record File: 170119002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.93	0.50	mg/L	1/25/17 00:56	EB
pH by SM4500HB	4.72	0.00	S.U.	1/23/17 10:47	BF
Holding Time of 15 minutes has been ex	xceeded.				
Sulfates by IC EPA 300.0	0.83	0.50	mg/L	1/25/17 00:56	EB
Total Dissolved Solid-SM2540C	36	2.0	mg/L	1/23/17 13:53	CDB

Approved By:		
AUDIOVED DV.		



REPORT TO:

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

Mike Moore

Sample ID: AB25318

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled: January 17, 2017 15:20

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD01TDS

FGD-01 Login Record File: 170119002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.76	0.50	mg/L	1/25/17 00:56	EB
pH by SM4500HB	4.66	0.00	S.U.	1/23/17 10:47	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	1/25/17 00:56	EB
Total Dissolved Solid-SM2540C	29	2.0	mg/L	1/23/17 13:53	CDB

Approved By:		



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

REPORT TO:

Mike Moore

Sample ID: AB25326

January 31, 2018

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled: January 18, 2017 16:17

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD05TDS

FGD-05 Login Record File: 170119002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	12.99	0.50	mg/L	1/25/17 00:56	EB
pH by SM4500HB	4.99	0.00	S.U.	1/23/17 10:47	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	1.48	0.50	mg/L	1/25/17 00:56	EB
Total Dissolved Solid-SM2540C	45	2.0	mg/L	1/24/17 13:30	BF



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25327

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled: January 18, 2017 15:04

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD04TDS

FGD-04 Login Record File: 170119002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.08	0.50	mg/L	1/25/17 00:56	EB
pH by SM4500HB	4.65	0.00	S.U.	1/23/17 10:47	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	4.70	0.50	mg/L	1/25/17 00:56	EB
Total Dissolved Solid-SM2540C	28	2.0	mg/L	1/24/17 13:30	BF



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25328

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled: January 18, 2017 13:03

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD03TDS

FGD-03 Login Record File: 170119002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.76	0.50	mg/L	1/25/17 00:56	EB
pH by SM4500HB	6.09	0.00	S.U.	1/23/17 10:47	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	8.91	0.50	mg/L	1/25/17 00:56	EB
Total Dissolved Solid-SM2540C	68	2.0	mg/L	1/24/17 13:30	BF



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25329

Wateree Well FGD-02 (NPDES/CCR)

Date & Time Sampled: January 18, 2017 13:47
Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD02TDS

FGD-02 Login Record File: 170119002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	12.22	0.5	mg/L	1/25/17 00:39	EB
pH by SM4500HB	5.90	0.00	S.U.	1/23/17 10:47	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	49.25	0.5	mg/L	1/25/17 00:39	EB
Total Dissolved Solid-SM2540C	119	2.0	mg/L	1/24/17 13:30	BF



REPORT TO:

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

Mike Moore

Sample ID: AB25338

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled: January 17, 2017 17:00

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAG01TM

MW 1 Login Record File: 170119003

Result	Reporting Limit(MRL)	Units	Completed Analysis	Chemist
	, , ,		Date & Time	Cilennist
Less than	1.0	ppb	1/23/17 13:28	MC
1.2	1.0	ppb	1/23/17 13:28	MC
54.1	10.0	ppb	1/23/17 08:38	MC
Less than	2.0	ppb	1/23/17 08:38	MC
Less than	1000	ppb	1/23/17 08:38	MC
Less than	1.0	ppb	1/23/17 13:28	MC
678	100	ppb	1/23/17 08:38	MC
Less than	1.0	ppb	1/23/17 13:28	MC
Less than	1.0	ppb	1/23/17 13:28	MC
1.3	1.0	ppb	1/23/17 13:28	MC
Less than	2.0	ppb	1/23/17 08:38	MC
Less than	0.2	ppb	1/24/17 15:58	PRC
Less than	1.0	ppb	1/23/17 13:28	MC
Less than	5.0	ppb	1/23/17 13:28	MC
Less than	1.0	ppb	1/23/17 13:28	MC
	1.2 54.1 Less than Less than 678 Less than Less than 1.3 Less than Less than Less than Less than Less than	1.2 1.0 54.1 10.0 Less than 2.0 Less than 1000 Less than 1.0 678 100 Less than 1.0 Less than 1.0 Less than 2.0 Less than 0.2 Less than 1.0 Less than 5.0	1.2 1.0 ppb 54.1 10.0 ppb Less than 2.0 ppb Less than 1000 ppb Less than 1.0 ppb Less than 1.0 ppb Less than 1.0 ppb Less than 2.0 ppb Less than 0.2 ppb Less than 1.0 ppb Less than 5.0 ppb Less than 5.0 ppb	1.2 1.0 ppb 1/23/17 13:28 54.1 10.0 ppb 1/23/17 08:38 Less than 2.0 ppb 1/23/17 08:38 Less than 1000 ppb 1/23/17 08:38 Less than 1.0 ppb 1/23/17 13:28 678 100 ppb 1/23/17 08:38 Less than 1.0 ppb 1/23/17 13:28 Less than 1.0 ppb 1/23/17 13:28 Less than 1.0 ppb 1/23/17 13:28 Less than 2.0 ppb 1/23/17 13:28 Less than 2.0 ppb 1/23/17 08:38 Less than 2.0 ppb 1/23/17 13:28 Less than 0.2 ppb 1/23/17 15:58 Less than 0.2 ppb 1/23/17 13:28 Less than 5.0 ppb 1/23/17 13:28

Approved By:	·



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25339

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled: January 17, 2017 15:20

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD01TM

FGD-01 Login Record File: 170119003

1 05 01					
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	1/23/17 13:28	MC
Arsenic by ICP_MS 200.8	1.2	1.0	ppb	1/23/17 13:28	MC
Barium by ICP-OES 200.7	99.5	10.0	ppb	1/23/17 08:38	MC
Beryllium EPA 200.7	Less than	2.0	ppb	1/23/17 08:38	MC
Boron - EPA 200.7	Less than	1000	ppb	1/23/17 08:38	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	1/23/17 13:28	MC
Calcium EPA 200.7	962	100	ppb	1/23/17 08:38	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 13:28	MC
Cobalt by ICP_MS 200.8	1.4	1.0	ppb	1/23/17 13:28	MC
Lead by ICP-MS 200.8	1.2	1.0	ppb	1/23/17 13:28	MC
Lithium (CWA) 200.7	2.7	2.0	ppb	1/23/17 08:38	MC
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/24/17 15:58	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	1/23/17 13:28	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	1/23/17 13:28	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	1/23/17 13:28	MC

Approved By	:			
Approved By	:			



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

REPORT TO:

Sample ID: AB25347

January 31, 2018

Mike Moore

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled: January 18, 2017 16:17

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD05TM

FGD-05 Login Record File: 170119003

. 05 00						
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	1/23/17 13:28	MC	
Arsenic by ICP_MS 200.8	1.1	1.0	ppb	1/23/17 13:28	MC	
Barium by ICP-OES 200.7	127	10.0	ppb	1/23/17 08:38	MC	
Beryllium EPA 200.7	Less than	2.0	ppb	1/23/17 08:38	MC	
Boron - EPA 200.7	Less than	1000	ppb	1/23/17 08:38	MC	
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	1/23/17 13:28	MC	
Calcium EPA 200.7	1460	100	ppb	1/23/17 08:38	MC	
Chromium by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 13:28	MC	
Cobalt by ICP_MS 200.8	1.6	1.0	ppb	1/23/17 13:28	MC	
Lead by ICP-MS 200.8	1.5	1.0	ppb	1/23/17 13:28	MC	
Lithium (CWA) 200.7	2.3	2.0	ppb	1/23/17 08:38	MC	
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/24/17 15:58	PRC	
Molybdenum - EPA 200.8	Less than	1.0	ppb	1/23/17 13:28	MC	
Selenium by ICP-MS 200.8	Less than	5.0	ppb	1/23/17 13:28	MC	
Thallium by ICP-MS 200.8	Less than	1.0	ppb	1/23/17 13:28	MC	



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25348

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled: January 18, 2017 15:04

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD04TM

FGD-04 Login Record File: 170119003

. 05 01			_09		
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	1/23/17 15:10	MC
Arsenic by ICP_MS 200.8	1.3	1.0	ppb	1/23/17 15:10	MC
Barium by ICP-OES 200.7	74.6	10.0	ppb	1/23/17 08:38	МС
Beryllium EPA 200.7	Less than	2.0	ppb	1/23/17 08:38	MC
Boron - EPA 200.7	Less than	1000	ppb	1/23/17 08:38	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	1/23/17 15:10	MC
Calcium EPA 200.7	2540	100	ppb	1/23/17 08:38	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 15:10	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 15:10	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	1/23/17 15:10	МС
Lithium (CWA) 200.7	Less than	2.0	ppb	1/23/17 08:38	МС
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/24/17 15:58	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	1/23/17 15:10	МС
Selenium by ICP-MS 200.8	Less than	5.0	ppb	1/23/17 15:10	МС
Thallium by ICP-MS 200.8	Less than	1.0	ppb	1/23/17 15:10	MC



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25349

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled: January 18, 2017 13:03

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD03TM

FGD-03 Login Record File: 170119003

. 35 33			_05		
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	1/23/17 15:10	MC
Arsenic by ICP_MS 200.8	1.4	1.0	ppb	1/23/17 15:10	MC
Barium by ICP-OES 200.7	26.4	10.0	ppb	1/23/17 08:38	MC
Beryllium EPA 200.7	Less than	2.0	ppb	1/23/17 08:38	MC
Boron - EPA 200.7	Less than	1000	ppb	1/23/17 08:38	МС
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	1/23/17 15:10	MC
Calcium EPA 200.7	12800	100	ppb	1/23/17 08:38	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 15:10	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 15:10	MC
Lead by ICP-MS 200.8	Less than	1.0	ppb	1/23/17 15:10	МС
Lithium (CWA) 200.7	Less than	2.0	ppb	1/23/17 08:38	МС
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/24/17 15:58	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	1/23/17 15:10	МС
Selenium by ICP-MS 200.8	Less than	5.0	ppb	1/23/17 15:10	МС
Thallium by ICP-MS 200.8	Less than	1.0	ppb	1/23/17 15:10	МС



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB25350

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled: January 18, 2017 13:47

Date & Time Submitted: January 19, 2017 10:30

Collected by: S.SANSBURY Location Code: WAFGD02TM

FGD-02 Login Record File: 170119003

. 05 02				110000			
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	1/23/17 15:10	MC		
Arsenic by ICP_MS 200.8	1.3	1.0	ppb	1/23/17 15:10	MC		
Barium by ICP-OES 200.7	54.4	10.0	ppb	1/23/17 08:38	МС		
Beryllium EPA 200.7	Less than	2.0	ppb	1/23/17 08:38	МС		
Boron - EPA 200.7	Less than	1000	ppb	1/23/17 08:38	МС		
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	1/23/17 15:10	МС		
Calcium EPA 200.7	27000	100	ppb	1/23/17 08:38	MC		
Chromium by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 15:10	MC		
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	1/23/17 15:10	MC		
Lead by ICP-MS 200.8	1.4	1.0	ppb	1/23/17 15:10	МС		
Lithium (CWA) 200.7	Less than	2.0	ppb	1/23/17 08:38	МС		
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	1/24/17 15:58	PRC		
Molybdenum - EPA 200.8	Less than	1.0	ppb	1/23/17 15:10	МС		
Selenium by ICP-MS 200.8	18.3	5.0	ppb	1/23/17 15:10	МС		
Thallium by ICP-MS 200.8	Less than	1.0	ppb	1/23/17 15:10	МС		

Approved By	v :		

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permi	t No.:	County: Richland
Date Sampled: 03/20/2017		_	Time Sampled:	12:00:00PM
year-month-day (No	umerical)			
			STATION NUMBERS	
PARAMETER NUMBER	MW-AP-01A	MW-FGD-01		
NAME Lab. Certificate No.	32006	32006		
Field pH S.U.	4.450	4.350		
Field Sp. Conductivity micromhos/cm	40.000	47.000		
Field Turbidity NTU	9.50	2.60		
ORP mV	174.200	288.700		
Oxygen, dissolved mg/L	4.600	3.070		
Temp (Celcius) degrees C	18.680	18.110		
Water level elevation ft	114.51	115.85		

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	Permit No.:	County: Richland
Date Sampled:	03/20/2017	Time Sampled:	12:00:00PM
	year-month-day (Numerical)		

STATION NUMBERS

PARAMETER	NUMBER	MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		4.800	5.770	4.200	6.090
Field Sp. Conductivity	micromhos/cm	66.000	168.000	51.000	428.000
Field Turbidity NTU		4.70	9.00	2.90	7.20
ORP mV		218.100	182.100	296.900	-66.400
Oxygen, dissolved mg/	L L	3.100	2.620	1.390	1.030
Temp (Celcius) degree	s C	19.070	22.880	19.160	18.400
Water level elevation f	Ì	104.92	105.65	107.36	108.00

Authorized Release By:	Date:	
rumonzed release by.	Date.	

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 419050 GEL Work Order: 419050

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.

	Jack N	Crosh			
Reviewed by	,				

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: April 16, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-01 Sample ID: 419050001 Matrix: Ground Water

Matrix: Ground Water
Collect Date: 20-MAR-17 13:35
Receive Date: 22-MAR-17
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography												
EPA300.0 Fluoride in	Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MXL2	03/23/17	0825	1649928	1
Metals Analysis-ICP-N	AS											
200.8/200.2 NPDES N	Metals "As Red	ceived"										
Lithium	J	2.40	2.00	10.0	ug/L	1.00	1	BAJ	03/28/17	1539	1649909	2
Rad Gas Flow Proporti	ional Counting	3										
GFPC, Ra228, Liquid	"As Received"	1										
Radium-228		1.32	0.835	3.00	pCi/L			AXM6	04/12/17	1041	1651322	3
Rad Radium-226												
Lucas Cell, Ra226, liqu	uid "As Recei	ved"										
Radium-226		1.42	0.224	1.00	pCi/L			MXH8	04/14/17	0955	1651334	4
The following Prep Me	ethods were pe	erformed:										
Method	Description	n		Analyst	Date	Т	ime	Pre	p Batch			
EPA 200.2	ICP-MS 200.	2 PREP		CXW4	03/22/17	1	839	164	9906			

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

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

84.7 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: April 16, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-1A
Sample ID: 419050002
Matrix: Ground Water
Collect Date: 20-MAR-17 14:35

Receive Date: 20-MAR-17 14
Receive Date: 22-MAR-17
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst Date	Time	e Batch	Method
Ion Chromatograp	ohy										
EPA300.0 Fluorio	de in Liquid "As Re	eceived"									
Fluoride	U	ND	0.033	0.100	mg/L		1	MXL2 03/23/17	0852	1649928	1
Metals Analysis-I	CP-MS										
200.8/200.2 NPD	DES Metals "As Red	ceived"									
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ 03/28/17	1551	1649909	2
Rad Gas Flow Pro	oportional Counting	g									
GFPC, Ra228, Li	quid "As Received'	"									
Radium-228	-	0.979	0.782	3.00	pCi/L			AXM6 04/12/17	1041	1651322	3
Rad Radium-226											
Lucas Cell, Ra22	6, liquid "As Recei	ved"									
Radium-226	•	0.664	0.319	1.00	pCi/L			MXH8 04/14/17	0955	1651334	4
The following Pre	ep Methods were pe	erformed:									
Method	Description	n		Analyst	Date	7	Гіт	e Prep Batch	1		
EPA 200.2	ICP-MS 200.	2 PREP		CXW4	03/22/17	1	839	1649906			

The following Analytical Methods were performed:

Method Description Analyst Comments

1 EPA 300.0

EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

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

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Result

Nominal

Recovery%

94.8

Acceptable Limits

(15%-125%)

Client ID:

SCEG01716c

GEEL003

Report Date: April 16, 2017

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-03

Sample ID:

419050008

Matrix:

Ground Water

Collect Date:

21-MAR-17 12:05 22-MAR-17

Receive Date: Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	phy											
EPA300.0 Fluorio	de in Liquid "As Re	eceived"										
Fluoride	J	0.0711	0.033	0.100	mg/L		1	MXL2	03/24/17	0222	1649958	1
Metals Analysis-l	ICP-MS											
200.8/200.2 NPI	DES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	03/28/17	1629	1649909	2
Rad Gas Flow Pro	oportional Counting	3										
GFPC, Ra228, Li	quid "As Received"	•										
Radium-228	U	ND	0.457	3.00	pCi/L			AXM6	04/12/17	1157	1651322	3
Rad Radium-226												
Lucas Cell, Ra22	6, liquid "As Receiv	ved"										
Radium-226		0.371	0.177	1.00	pCi/L			MXH8	04/14/17	1025	1651334	4
The following Pro	ep Methods were pe	erformed:										
Method	Description	n		Analyst	Date	-	Гітє	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		CXW4	03/22/17	1	1839	164	49906			
The following A	nalytical Methods v	vere perfori	ned:									
Method	Description	Į.			A	analyst	Cor	nments	3			
1	EPA 300.0											
2	EPA 200.8 SC	C_NPDES										

Notes:

Barium-133 Tracer

3

Column headers are defined as follows:

Surrogate/Tracer Recovery

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

EPA 904.0/SW846 9320 Modified

GFPC, Ra228, Liquid "As Received"

EPA 903.1 Modified

Test

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Certificate of Analysis

Project:

Client ID:

Report Date: April 16, 2017

1

SCEG01716c

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-04 Sample ID: 419050009 Matrix: Ground Water Collect Date: 21-MAR-17 12:45

22-MAR-17 Receive Date: Client Collector:

RL Qualifier DL Units PF DF Analyst Date Parameter Result Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" 0.033 Fluoride 0.073 0.100 mg/L MXL2 03/24/17 0252 1649958

Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium ND 10.0 1632 1649909 2.00 ug/L 1.00 1 BAJ 03/28/17

Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.02 0.568 3.00 pCi/L AXM6 04/12/17 1044 1651322

Lucas Cell, Ra226, liquid "As Received"

Radium-226 0.661 0.328 1.00 pCi/L MXH8 04/14/17 1025 1651334

The following Prep Methods were performed:

Method Description Date Prep Batch Analyst Time EPA 200.2 ICP-MS 200.2 PREP CXW4 03/22/17 1839 1649906

The following Analytical Methods were performed:

Method Description Analyst Comments

EPA 300.0 2

EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Recovery% Surrogate/Tracer Recovery Test Result Nominal Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 87 (15%-125%)

Notes:

Rad Radium-226

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level PF: Prep Factor DL: Detection Limit MDA: Minimum Detectable Activity **RL**: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: April 16, 2017

Company: GEL Engineering, LLC Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-05 Sample ID: 419050012 Matrix: Ground Water

Collect Date: 21-MAR-17 13:50 Receive Date: 22-MAR-17 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst Date	Time Batch	Method
Ion Chromatograp	hy									
EPA300.0 Fluorid	e in Liquid "As Re	eceived"								
Fluoride	J	0.036	0.033	0.100	mg/L		1	MXL2 03/24/17	0519 164995	8 1
Metals Analysis-IO	CP-MS									
200.8/200.2 NPD	ES Metals "As Red	ceived"								
Lithium	J	2.09	2.00	10.0	ug/L	1.00	1	BAJ 03/28/17	1641 164990	9 2
Rad Gas Flow Pro	portional Counting	g								
GFPC, Ra228, Lic	quid "As Received'	"								
Radium-228	_	2.95	0.527	3.00	pCi/L			AXM6 04/12/17	1044 165132	2 3
Rad Radium-226										
Lucas Cell, Ra226	, liquid "As Recei	ved"								
Radium-226	_	1.15	0.344	1.00	pCi/L			MXH8 04/14/17	1025 165133	4 4
The following Pre	p Methods were pe	erformed:								
Method	Description	n		Analyst	Date	-	Γime	e Prep Batch	l	
EPA 200.2	ICP-MS 200.	2 PREP		CXW4	03/22/17	1	1839	1649906		
FD1 C 11	1 . 13 6 . 1	c								

The following Analytical Methods were performed:

Method Description **Analyst Comments** EPA 300.0 2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified EPA 903.1 Modified

Surrogate/Tracer Recovery Test

Result Nominal Recovery% Acceptable Limits Barium-133 Tracer (15%-125%) GFPC, Ra228, Liquid "As Received" 86.9

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

Project:

Units

Result

Nominal

Recovery%

95

Acceptable Limits

(15%-125%)

Client ID:

PF

SCEG01716c

GEEL003

Report Date: April 16, 2017

DF Analyst Date Time Batch Method

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-02

Sample ID:

419050014

Matrix: Collect Date: Ground Water

Receive Date:

21-MAR-17 10:50 22-MAR-17

Result

Collector:

Parameter

Client

Qualifier

Ion Chromatograph	ıy											
EPA300.0 Fluoride	e in Liquid "As Rece	eived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MXL2	03/24/17	0618	1649958	1
Metals Analysis-IC	CP-MS											
200.8/200.2 NPDE	ES Metals "As Rece	ived"										
Lithium	J	2.19	2.00	10.0	ug/L	1.00	1	BAJ	03/28/17	1646	1649909	2
Rad Gas Flow Prop	ortional Counting											
GFPC, Ra228, Liqu	uid "As Received"											
Radium-228	U	ND	0.598	3.00	pCi/L			AXM6	04/12/17	1044	1651322	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Receive	d"										
Radium-226	U	ND	0.384	1.00	pCi/L			MXH8	04/14/17	1100	1651334	4
The following Prep	Methods were perf	Formed:										
Method	Description			Analyst	Date	T	ime	Pre	ep Batch			
EPA 200.2	ICP-MS 200.2 F	PREP		CXW4	03/22/17	18	339	164	19906			
The following Ana	alytical Methods we	re performed:										
Method	Description				A	nalyst (Con	nments				
1	EPA 300.0					•						
2	EPA 200.8 SC_N	NPDES										
3	EPA 904.0/SW8	46 9320 Modified										
4	EPA 903.1 Modi	fied										

DL

RL

Notes:

Barium-133 Tracer

Column headers are defined as follows:

Surrogate/Tracer Recovery

DF: Dilution Factor Lc/LC: Critical Level DL: Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL**: Reporting Limit

Test

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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QC Summary

Report Date: April 16, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 419050

Parmname			NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography														
Batch 1649928 QC1203753083 41904 Fluoride	3001 D	OUP		U	ND	U	ND	mg/L	N/A			MXL2	03/23/1	7 03:56
QC1203753082 LC3 Fluoride	S		2.50				2.40	mg/L		96	(90%-110%)		03/23/1	7 03:02
QC1203753081 MB Fluoride						U	ND	mg/L					03/23/1	7 02:35
QC1203753084 41904 Fluoride	3001 P	S	2.50	U	ND		2.51	mg/L		99.8	(90%-110%)		03/23/1	7 04:23
Batch 1649958														
QC1203753188 41905 Fluoride	0004 D	UP			0.311		0.310	mg/L	0.483 ^		(+/-0.100)	MXL2	03/23/1	7 23:55
QC1203753189 41905 Fluoride	0014 D	UP		U	ND	U	ND	mg/L	N/A				03/24/1	7 06:47
QC1203753187 LC3 Fluoride	S		2.50				2.51	mg/L		101	(90%-110%)		03/23/1	7 22:57
QC1203753186 MB Fluoride						U	ND	mg/L					03/23/1	7 22:27
QC1203753190 41905 Fluoride	0004 P	S	2.50		0.311		2.71	mg/L		96.1	(90%-110%)		03/24/1	7 00:25
QC1203753191 41905 Fluoride	0014 P	S	2.50	U	ND		2.55	mg/L		101	(90%-110%)		03/24/1	7 07:17

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QC Summary

419050 Workorder: Page 2 of 4 Sample Qual **Parmname NOM** \mathbf{QC} Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 1649909 Batch QC1203753023 419050001 DUP 2.40 Lithium J 2.41 ug/L 0.583 ^ (+/-10.0)BAJ 03/28/17 15:42 QC1203753024 419050004 DUP Lithium 11.8 0.767 ^ (+/-10.0)03/28/17 16:06 11.7 ug/L QC1203753022 LCS 51.9 ug/L 50.0 104 (80%-120%) 03/28/17 15:37 Lithium QC1203753021 ND Lithium U ug/L 03/28/17 15:34 QC1203753025 419050001 MS Lithium 50.0 2.40 56.9 ug/L 109 (75% - 125%)03/28/17 15:45 QC1203753026 419050004 MS Lithium 50.0 11.8 62.0 ug/L 100 (75% - 125%)03/28/17 16:09 QC1203753027 419050001 SDILT Lithium 2.40 U ND (0%-10%)03/28/17 15:48 ug/L N/A QC1203753028 419050004 SDILT Lithium 11.8 J 2.30 ug/L (0%-10%)03/28/17 16:11 2.37 **Rad Gas Flow** 1651322 Batch QC1203756438 419050008 DUP Radium-228 U 0.183 U 0.533 pCi/L N/A N/AAXM6 04/12/17 11:57 QC1203756439 LCS Radium-228 6.89 7.20 pCi/L 104 (75%-125%) 04/12/17 10:46 QC1203756437 Radium-228 U 0.0782 04/12/17 10:45 pCi/L

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QC Summary

717030								Page 3 of 4
Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Ra-226 Batch 1651334								
QC1203756467 419050012 DUP Radium-226		1.15	0.937	pCi/L	20.4		(0% - 100%) MXH8	04/14/17 11:00
QC1203756469 LCS Radium-226	26.0		21.7	pCi/L		83.4	(75%-125%)	04/14/17 11:00
QC1203756466 MB Radium-226		U	0.00	pCi/L				04/14/17 11:00
QC1203756468 419050012 MS Radium-226	130	1.15	129	pCi/L		98.3	(75%-125%)	04/14/17 11:00

Notes:

Workorder:

419050

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

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QC Summary

Parmname NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time

- 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

419050

Workorder:

- 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.



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26297

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled: March 20, 2017 13:35

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD01TDS

FGD-01 Login Record File: 170322002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.83	0.50	mg/L	3/24/17 06:18	EB
pH by SM4500HB(2011)	5.26	0.00	S.U.	3/23/17 14:53	BF
Holding Time of 15 minutes has bee	n exceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	3/24/17 06:18	EB
Total Dissolved Solid-SM2540C	31	2.0	mg/L	3/24/17 15:00	BF

Approved By:		
AUDIOVED DV.		



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26298

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled: March 20, 2017 14:35

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAG01TDS

MW 1 Login Record File: 170322002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.77	0.50	mg/L	3/24/17 06:18	EB
pH by SM4500HB(2011)	5.50	0.00	S.U.	3/23/17 14:53	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	3/24/17 06:18	EB
Total Dissolved Solid-SM2540C	26	2.0	mg/L	3/24/17 15:00	BF

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26303

Wateree Well FGD-02 (NPDES/CCR)

Date & Time Sampled: March 21, 2017 10:50
Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD02TDS

FGD-02 Login Record File: 170322002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.6	0.50	mg/L	3/24/17 06:18	EB
pH by SM4500HB(2011)	5.71	0.00	S.U.	3/23/17 14:53	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	5.08	0.50	mg/L	3/24/17 06:18	EB
Total Dissolved Solid-SM2540C	57	2.0	mg/L	3/24/17 15:00	BF

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26305

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled: March 21, 2017 12:05

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD03TDS

FGD-03 Login Record File: 170322002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.73	0.50	mg/L	3/24/17 06:18	EB
pH by SM4500HB(2011)	5.58	0.00	S.U.	3/23/17 14:53	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	35.3	0.50	mg/L	3/24/17 06:18	EB
Total Dissolved Solid-SM2540C	111	2.0	mg/L	3/24/17 15:00	BF

Approved By:		



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

___ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26306

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled: March 21, 2017 12:45

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD04TDS

FGD-04 Login Record File: 170322002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.35	0.50	mg/L	3/24/17 06:18	EB
pH by SM4500HB(2011)	5.55	0.00	S.U.	3/23/17 14:53	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	3.65	0.50	mg/L	3/24/17 06:18	EB
Total Dissolved Solid-SM2540C	39	2.0	mg/L	3/24/17 15:00	BF

Approved By:		
AUDIOVED DV.		



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

___ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26309

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled: March 21, 2017 13:50

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD05TDS

FGD-05 Login Record File: 170322002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	13.3	0.50	mg/L	3/24/17 06:18	EB
pH by SM4500HB(2011)	5.68	0.00	S.U.	3/23/17 14:53	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	3/24/17 06:18	EB
Total Dissolved Solid-SM2540C	48	2.0	mg/L	3/24/17 15:00	BF

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26324

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled: March 20, 2017 Date & Time Submitted:

13:35 March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD01TM

FGD-01 Login Record File: 170323001

1 0 5 0 1	20gm (1000 to 1100 1700 2000 t						
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	3/28/17 14:19	MC		
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Barium by ICP-OES 200.7	82.3	10.0	ppb	3/24/17 12:00	MC		
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 12:00	MC		
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 12:00	MC		
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Calcium EPA 200.7	832	100	ppb	3/24/17 12:00	MC		
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Cobalt by ICP_MS 200.8	1.2	1.0	ppb	3/28/17 14:19	MC		
Lead by ICP-MS 200.8	1.1	1.0	ppb	3/28/17 14:19	MC		
Lithium (CWA) 200.7	2.2	2.0	ppb	3/24/17 12:00	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	3/28/17 14:19	MC		
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/28/17 14:19	MC		
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		

Approved By: _	



Mike Moore C221

Central Laboratory (P-08) 2102 North Lake Drive Columbia, SC 29212

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

January 31, 2018

REPORT TO:

Sample ID: AB26325

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled: March 20, 2017 14:35

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAG01TM

MW 1 Login Record File: 170323001

MWV 1					
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	3/28/17 14:19	MC
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC
Barium by ICP-OES 200.7	56.0	10.0	ppb	3/24/17 12:00	MC
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 12:00	MC
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 12:00	MC
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/28/17 14:19	MC
Calcium EPA 200.7	1510	100	ppb	3/24/17 12:00	MC
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC
Lead by ICP-MS 200.8	1.6	1.0	ppb	3/28/17 14:19	MC
Lithium (CWA) 200.7	Less than	2.0	ppb	3/24/17 12:00	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	3/28/17 14:19	MC
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/28/17 14:19	MC
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC



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

10:50

13:30

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26330

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled: March 21, 2017
Date & Time Submitted: March 22, 2017

Collected by: A.HILL Location Code: WAFGD02TM

FGD-02 Login Record File: 170323001

. 05 02	209.111000141110. 170020001						
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	3/28/17 14:19	MC		
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Barium by ICP-OES 200.7	80.2	10.0	ppb	3/24/17 12:00	MC		
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 12:00	MC		
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 12:00	MC		
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Calcium EPA 200.7	5320	100	ppb	3/24/17 12:00	MC		
Chromium by ICP_MS 200.8	1.3	1.0	ppb	3/28/17 14:19	MC		
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Lithium (CWA) 200.7	2.3	2.0	ppb	3/24/17 12:00	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	3/28/17 14:19	MC		
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/28/17 14:19	MC		
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		

Approved By:	



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

12:05

13:30

January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26332

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled: March 21, 2017
Date & Time Submitted: March 22, 2017

Collected by: A.HILL Location Code: WAFGD03TM

FGD-03 Login Record File: 170323001

1 05 00	2091111000101110. 170020001						
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	3/28/17 14:19	MC		
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Barium by ICP-OES 200.7	44.5	10.0	ppb	3/24/17 12:00	MC		
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 12:00	MC		
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 12:00	MC		
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Calcium EPA 200.7	16400	100	ppb	3/24/17 12:00	MC		
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Lithium (CWA) 200.7	Less than	2.0	ppb	3/24/17 12:00	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	3/28/17 14:19	МС		
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/28/17 14:19	MC		
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		

Approved By	v :		



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

_____ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26333

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled: March 21, 2017 12:45

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD04TM

FGD-04 Login Record File: 170323001

1 05 01	20911110001411101 170020001						
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	3/28/17 14:19	MC		
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Barium by ICP-OES 200.7	79.6	10.0	ppb	3/24/17 12:00	MC		
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 12:00	MC		
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 12:00	MC		
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Calcium EPA 200.7	2830	100	ppb	3/24/17 12:00	MC		
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Lead by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		
Lithium (CWA) 200.7	Less than	2.0	ppb	3/24/17 12:00	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	3/28/17 14:19	MC		
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/28/17 14:19	MC		
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC		

Approved By	v :		



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

_____ January 31, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26336

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled: March 21, 2017 13:50

Date & Time Submitted: March 22, 2017 13:30

Collected by: A.HILL Location Code: WAFGD05TM

FGD-05 Login Record File: 170323001

1 05 00						
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	3/28/17 14:19	MC	
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC	
Barium by ICP-OES 200.7	101	10.0	ppb	3/24/17 12:29	MC	
Beryllium EPA 200.7	Less than	2.0	ppb	3/24/17 12:29	MC	
Boron - EPA 200.7	Less than	1000	ppb	3/24/17 12:29	MC	
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	3/28/17 14:19	MC	
Calcium EPA 200.7	822	100	ppb	3/24/17 12:29	MC	
Chromium by ICP_MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC	
Cobalt by ICP_MS 200.8	1.3	1.0	ppb	3/28/17 14:19	MC	
Lead by ICP-MS 200.8	1.6	1.0	ppb	3/28/17 14:19	MC	
Lithium (CWA) 200.7	Less than	2.0	ppb	3/24/17 12:29	MC	
Mercury (CWA) by EPA 245.2	0.20	0.2	ppb	3/24/17 14:55	PRC	
Molybdenum - EPA 200.8	Less than	1.0	ppb	3/28/17 14:19	MC	
Selenium by ICP-MS 200.8	Less than	5.0	ppb	3/28/17 14:19	MC	
Thallium by ICP-MS 200.8	Less than	1.0	ppb	3/28/17 14:19	MC	

Approved By:	

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permi	t No.:	County: Richland				
Date Sampled: 05/22/2017		Time Sampled: 12:00:00PM						
year-month-day (N	umerical)							
			STATION NUMBERS					
PARAMETER NUMBER	MW-AP-01A	MW-FGD-01						
NAME Lab. Certificate No.	32006	32006						
Field pH S.U.	4.980	4.330						
Field Sp. Conductivity micromhos/em	68.000	54.000						
Field Turbidity NTU	2.70	3.60						
ORP mV	198.800	289.100						
Oxygen, dissolved mg/L	4.950	2.890						
Temp (Celcius) degrees C	22.100	18.610						
Water level elevation ft	114.91	116.15						

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	Permit No.:	County: Richland
Date Sampled:	05/23/2017	Time Sampled	: 12:00:00PM
	year-month-day (Numerical)		

STATION NUMBERS

PARAMETER	NUMBER	MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		4.860	5.540	4.040	4.500
Field Sp. Conductivity	micromhos/cm	80.000	190.000	61.000	86.000
Field Turbidity NTU		3.10	82.30	1.80	1.70
ORP mV		170.200	121.600	229.800	224.700
Oxygen, dissolved mg/	L	2.330	2.810	1.240	1.180
Temp (Celcius) degrees	s C	18.720	19.770	18.440	18.040
Water level elevation f	t	105.13	105.87	107.68	108.44

Authorized Release By:	Date:	

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 424119 GEL Work Order: 424119

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.

	Jack N	Crosh			
Reviewed by	,				

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

Certificate of Analysis

Project:

Units

Client ID:

PF

SCEG01716c

GEEL003

Report Date: June 21, 2017

DF Analyst Date Time Batch Method

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-01

Sample ID:

424119001

Matrix: Collect Date: Ground Water

Receive Date:

22-MAY-17 12:30 25-MAY-17

Result

Collector:

Parameter

Client

Qualifier

	•						-			
Ion Chromatography										
EPA300.0 Fluoride in l	Liquid "As Rece	eived"								
Fluoride	U	ND	0.033	0.100	mg/L	. 1	MAR1	06/05/17	1622 1669569	1
Metals Analysis-ICP-N	1S									
200.8/200.2 NPDES M	Ietals "As Rece	ived"								
Lithium	U	ND	2.00	10.0	ug/L	1.00 1	BAJ	05/27/17	1802 1668713	2
Rad Gas Flow Proporti	onal Counting									
GFPC, Ra228, Liquid '	'As Received"									
Radium-228	U	ND	1.32	3.00	pCi/L	,	BXF1	06/21/17	1113 1668805	3
Rad Radium-226										
Lucas Cell, Ra226, liqu	uid "As Receive	d"								
Radium-226		0.572	0.284	1.00	pCi/L	,	MXH8	06/20/17	0925 1668820	4
The following Prep Me	ethods were perf	formed:								
Method	Description			Analyst	Date	Tim	e Pr	ep Batch	1	
EPA 200.2	ICP-MS 200.2 I	PREP		SXW1	05/26/1	7 0852	16	68711		-
The following Analytic	cal Methods we	re performed:								
Method	Description					Analyst Co	mments	S		
1	EPA 300.0									
2	EPA 200.8 SC_I	NPDES								
3	EPA 904.0/SW8	46 9320 Modified								
4	EPA 903.1 Mod	ified								
Surrogate/Tracer Recovery Test					Result	Nominal	Recov	very%	Acceptable Limits	
Barium-133 Tracer	GFPC, Ra	228, Liquid "As Received"						86.3	(15%-125%)	-

DL

RL

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

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

Certificate of Analysis

Project:

Units

Client ID:

PF

SCEG01716c

89.6

(15%-125%)

GEEL003

Report Date: June 21, 2017

DF Analyst Date Time Batch Method

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: MW-1A

Sample ID:

424119002

25-MAY-17

Matrix:

Parameter

Ground Water

Collect Date:

22-MAY-17 13:00

Result

Receive Date: Collector:

Client

Qualifier

Ion Chromatography	y										
EPA300.0 Fluoride	in Liquid "As Rece	ived"									
Fluoride	U	ND	0.033	0.100	mg/L		1 M.	AR1 06/05/17	7 1748	1669569	1
Metals Analysis-ICF	P-MS										
200.8/200.2 NPDES	S Metals "As Recei	ved"									
Lithium	U	ND	2.00	10.0	ug/L	1.00	1 BA	AJ 05/27/17	7 1805	1668713	2
Rad Gas Flow Propo	ortional Counting										
GFPC, Ra228, Liqui	id "As Received"										
Radium-228	U	ND	1.54	3.00	pCi/L		ВΣ	KF1 06/21/17	7 1113	1668805	3
Rad Radium-226											
Lucas Cell, Ra226, l	liquid "As Received	l"									
Radium-226	U	ND	0.314	1.00	pCi/L		M	XH8 06/20/17	7 0925	1668820	4
The following Prep	Methods were perfo	ormed:									
Method	Description			Analyst	Date	Ti	me	Prep Batc	h		
EPA 200.2	ICP-MS 200.2 PI	REP		SXW1	05/26/17	08	52	1668711			
The following Anal	ytical Methods wer	e performed:									
Method	Description					Analyst (Comm	ents			
1	EPA 300.0					-					
2	EPA 200.8 SC_N	PDES									
3	EPA 904.0/SW84										
4	EPA 903.1 Modif	ied									
Surrogate/Tracer Re	covery Test			R	Result	Nominal	Re	ecovery%	Acce	ptable Lim	nits

DL

RL

Notes:

Barium-133 Tracer

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

GFPC, Ra228, Liquid "As Received"

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: June 21, 2017

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-03

FGD-03

Sample ID:

424119008

Matrix:

Ground Water

Collect Date:

23-MAY-17 09:45 25-MAY-17

Receive Date: Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograph	ıy											
EPA300.0 Fluoride	in Liquid "As Re	eceived"										
Fluoride	J	0.0622	0.033	0.100	mg/L		1	MAR1	06/05/17	2139	1669569	1
Metals Analysis-IC	P-MS											
200.8/200.2 NPDE	ES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	05/27/17	1831	1668713	2
Rad Gas Flow Prop	ortional Counting	3										
GFPC, Ra228, Liqu	uid "As Received"	"										
Radium-228	U	ND	1.25	3.00	pCi/L			BXF1	06/21/17	1114	1668805	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Receiv	ved"										
Radium-226	U	ND	0.299	1.00	pCi/L			MXH8	06/20/17	0955	1668820	4
The following Prep	Methods were pe	erformed:										
Method	Description	n		Analyst	Date	-	Гim	e Pro	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		SXW1	05/26/17	(0852	166	58711			
The following Ana	alytical Methods v	vere perfor	med:									
Method	Description		<u> </u>		A	Analyst	Con	nments	3			
1	EPA 300.0					-						

Result

Nominal

Recovery%

85.3

Acceptable Limits

(15%-125%)

Surrogate/Tracer Recovery Barium-133 Tracer

Notes:

2

3

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

EPA 200.8 SC_NPDES

EPA 903.1 Modified

Test

EPA 904.0/SW846 9320 Modified

GFPC, Ra228, Liquid "As Received"

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: June 21, 2017

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-02

Sample ID:

424119009

Matrix:

Ground Water

Collect Date:

23-MAY-17 10:30

Receive Date: Collector:

25-MAY-17 Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograpl	hy											
EPA300.0 Fluoride	e in Liquid "As Re	ceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MAR1	06/05/17	2208	1669569	1
Metals Analysis-IC	CP-MS											
200.8/200.2 NPDI	ES Metals "As Rec	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	05/27/17	1834	1668713	2
Rad Gas Flow Prop	portional Counting	5										
GFPC, Ra228, Liq	uid "As Received"	'										
Radium-228	U	ND	1.59	3.00	pCi/L			BXF1	06/21/17	1118	1668805	3
Rad Radium-226												
Lucas Cell, Ra226	, liquid "As Receiv	ved"										
Radium-226	U	ND	0.351	1.00	pCi/L			MXH8	06/20/17	0955	1668820	4
The following Prep	p Methods were pe	erformed:										
Method	Description	1		Analyst	Date	-	Гіте	Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		SXW1	05/26/17	(0852	16	68711			
TP1 C-11 A	.1 .41 1 1		4.									

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	-

EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 88.3 (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

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

Certificate of Analysis

Project:

Result

Nominal

Recovery%

75.7

Acceptable Limits

(15%-125%)

Client ID:

SCEG01716c

GEEL003

Report Date: June 21, 2017

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-04

Sample ID:

424119010

Matrix:

Ground Water

Collect Date:

23-MAY-17 11:40

Receive Date:

25-MAY-17

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograph	ıy											
EPA300.0 Fluoride	in Liquid "As Re	eceived"										
Fluoride	J	0.0363	0.033	0.100	mg/L		1	MAR1	06/05/17	2237	1669569	1
Metals Analysis-IC	P-MS											
200.8/200.2 NPDES Metals "As Received"												
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	05/27/17	1837	1668713	2
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liqu	iid "As Received"	1										
Radium-228		2.02	1.88	3.00	pCi/L			BXF1	06/21/17	1118	1668805	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Recei	ved"										
Radium-226		0.398	0.339	1.00	pCi/L			MXH8	06/20/17	0955	1668820	4
The following Prep	Methods were pe	erformed:										
Method	Description	n		Analyst	Date	-	Гіте	Pro	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		SXW1	05/26/17		0852	166	58711			
The following Analytical Methods were performed:												
Method	Description	ļ			A	Analyst	Cor	nments	3			
1	EPA 300.0											
2	EPA 200.8 SC	_										
3	EPA 904.0/SV	V846 9320 Modifi	ed									

Notes:

Barium-133 Tracer

Column headers are defined as follows:

Surrogate/Tracer Recovery

DF: Dilution Factor Lc/LC: Critical Level DL: Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL**: Reporting Limit

EPA 903.1 Modified

Test

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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

Certificate of Analysis

Project:

Units

Result

Nominal

Recovery%

89.9

Acceptable Limits

(15%-125%)

Client ID:

PF

SCEG01716c

GEEL003

Report Date: June 21, 2017

DF Analyst Date Time Batch Method

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner

Client Sample ID: FGD-05

Wateree CCR

Sample ID:

424119011

Matrix:

Parameter

Ground Water

Collect Date:

22 MAY 17 12

Pagaiya Data

23-MAY-17 12:50 25-MAY-17

Result

Receive Date: Collector:

Client

Qualifier

iquid "As Paca	ived"											
_		0.033	0.100	mg/I		1 N	JAR1	06/05/17	2306	1660560	1	
	ND	0.033	0.100	mg/L		1 1	VIAINI	00/03/17	2300	1009309	1	
	111											
letais "As Recei				_								
U	ND	2.00	10.0	ug/L	1.00	1 E	3AJ	05/27/17	1840	1668713	2	
onal Counting												
'As Received"												
	1.94	1.16	3.00	pCi/L		F	3XF1	06/21/17	1118	1668805	3	
iid "As Received	1"											
	0.744	0.249	1.00	pCi/L		N	MXH8	06/20/17	0955	1668820	4	
thods were perfe	ormed:											
Description			Analyst	Date	Time Pr		Pre	ep Batch				
ICP-MS 200.2 P	REP		SXW1	05/26/17	08	52	166	58711				
cal Methods wer	e performed:											
Description			Analyst Comments									
EPA 300.0												
EPA 200.8 SC_N	PDES											
EPA 904.0/SW84	46 9320 Modified											
EPA 903.1 Modif	fied											
	U IS Idetals "As Recei U onal Counting 'As Received" Identify the second of the secon	Metals "As Received" U ND Onal Counting "As Received" 1.94 Id "As Received" 0.744 Othods were performed: Description ICP-MS 200.2 PREP cal Methods were performed: Description	U ND 0.033 IS Ietals "As Received"	U ND 0.033 0.100 IS Ietals "As Received" U ND 2.00 10.0 onal Counting "As Received" 1.94 1.16 3.00 Ithods were performed: Description ICP-MS 200.2 PREP Cal Methods were performed: Description EPA 300.0 EPA 200.8 SC_NPDES EPA 904.0/SW846 9320 Modified	U ND 0.033 0.100 mg/L IS Ietals "As Received" U ND 2.00 10.0 ug/L onal Counting "As Received" 1.94 1.16 3.00 pCi/L tid "As Received" 0.744 0.249 1.00 pCi/L thods were performed: Description Analyst Date ICP-MS 200.2 PREP SXW1 05/26/17 cal Methods were performed: Description A PA 200.8 SC_NPDES EPA 904.0/SW846 9320 Modified	U ND 0.033 0.100 mg/L IS Ietals "As Received" U ND 2.00 10.0 ug/L 1.00 onal Counting "As Received" 1.94 1.16 3.00 pCi/L tid "As Received" 0.744 0.249 1.00 pCi/L thods were performed: Description Analyst Date Ti ICP-MS 200.2 PREP SXW1 05/26/17 08 cal Methods were performed: Description Analyst Of EPA 300.0 EPA 200.8 SC_NPDES EPA 904.0/SW846 9320 Modified	U ND 0.033 0.100 mg/L 1 M IS Ifetals "As Received" U ND 2.00 10.0 ug/L 1.00 1 M onal Counting "As Received" 1.94 1.16 3.00 pCi/L M othods were performed: Description Analyst Date Time ICP-MS 200.2 PREP SXW1 05/26/17 0852 cal Methods were performed: Description Analyst Company SXW1 Company Com	U ND 0.033 0.100 mg/L 1 MAR1 IS Ietals "As Received" U ND 2.00 10.0 ug/L 1.00 1 BAJ onal Counting 'As Received" 1.94 1.16 3.00 pCi/L BXF1 tid "As Received" 0.744 0.249 1.00 pCi/L MXH8 thods were performed: Description Analyst Date Time Proceed Methods were performed: Cal Methods were performed: Description SXW1 05/26/17 0852 1660 cal Methods were performed: Description Analyst Comments EPA 300.0 EPA 200.8 SC_NPDES EPA 904.0/SW846 9320 Modified	U ND 0.033 0.100 mg/L 1 MAR1 06/05/17	U ND 0.033 0.100 mg/L 1 MAR1 06/05/17 2306 Is Iterals "As Received" U ND 2.00 10.0 ug/L 1.00 1 BAJ 05/27/17 1840 onal Counting "As Received" 1.94 1.16 3.00 pCi/L BXF1 06/21/17 1118 Ind "As Received" 0.744 0.249 1.00 pCi/L MXH8 06/20/17 0955 Is thods were performed: Description Analyst Date Time Prep Batch ICP-MS 200.2 PREP SXW1 05/26/17 0852 1668711 Cal Methods were performed:	U ND 0.033 0.100 mg/L 1 MAR1 06/05/17 2306 1669569 IS Metals "As Received" U ND 2.00 10.0 ug/L 1.00 1 BAJ 05/27/17 1840 1668713 Onal Counting "As Received" 1.94 1.16 3.00 pCi/L BXF1 06/21/17 1118 1668805 Ind "As Received" 0.744 0.249 1.00 pCi/L MXH8 06/20/17 0955 1668820 Chooks were performed: Description Analyst Date Time Prep Batch ICP-MS 200.2 PREP SXW1 05/26/17 0852 1668711 Cal Methods were performed: Description Analyst Date Time Prep Batch Cal Methods were performed: Description Analyst Date Time Prep Batch CANALYST DESCRIPTION ON SYM1 05/26/17 0852 1668711 CANALYST DESCRIPTION ON SYM1 05/26/17 0852 1668711 CANALYST DESCRIPTION ON SYM1 05/26/17 0852 1668711	

DL

RL

Notes:

Barium-133 Tracer

Column headers are defined as follows:

Surrogate/Tracer Recovery

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

Test

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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QC Summary

Report Date: June 21, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 424119

Parmname			NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography Batch 1669569	o.													
QC1203800278 424 Fluoride		DUP		U	ND	U	ND	mg/L	N/A			MAR1	06/05/1	7 16:51
QC1203800279 424 Fluoride	1119011	DUP		U	ND	U	ND	mg/L	N/A				06/05/1	7 23:35
QC1203800277 L Fluoride	LCS		2.50				2.66	mg/L		106	(90%-110%)		06/05/1	7 15:53
QC1203800276 M Fluoride	МВ					U	ND	mg/L					06/05/1	7 15:24
QC1203800280 424 Fluoride	1119001	PS	2.50	U	ND		2.63	mg/L		105	(90%-110%)		06/05/1	7 17:19
QC1203800281 424 Fluoride	1119011	PS	2.50	U	ND		2.71	mg/L		107	(90%-110%)		06/06/1	7 00:04
Metals Analysis - ICPMS Batch 1668713														
QC1203798168 424 Lithium		DUP			12.4		12.2	ug/L	0.919 ^		(+/-10.0)	BAJ	05/27/1	7 17:12
QC1203798169 424 Lithium	1115002	DUP		J	8.90	J	9.32	ug/L	4.65 ^		(+/-10.0)		05/27/1	7 17:31
QC1203798167 L	LCS		50.0				52.4	ug/L		105	(80%-120%)		05/27/1	7 17:05
QC1203798166 M Lithium	МВ					U	ND	ug/L					05/27/1	7 17:02

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QC Summary

						<u> 20 k</u>	Jummai	<u>.y</u>					
	24119												Page 2 of 4
Parmname			NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Metals Analysis - ICl Batch 166	PMS 8713												
QC1203798170 Lithium	424115001	MS	50.0		12.4		61.0	ug/L		97.3	(75%-125%)	BAJ	05/27/17 17:15
QC1203798171 Lithium	424115002	MS	50.0	J	8.90		59.6	ug/L		101	(75%-125%)		05/27/17 17:34
QC1203798172 Lithium	424115001	SDILT			12.4	J	2.45	ug/L	.777		(0%-10%)		05/27/17 17:18
QC1203798173 Lithium	424115002	SDILT		J	8.90	U	ND	ug/L	N/A		(0%-10%)		05/27/17 17:37
Rad Gas Flow Batch 1666	8805												
QC1203798412 Radium-228	424119008	DUP		U	0.638	U	0.561	pCi/L	N/A		N/A	A BXF1	06/21/17 11:18
QC1203798413 Radium-228	LCS		20.2				18.8	pCi/L		93.1	(75%-125%)		06/21/17 11:18
QC1203798411 Radium-228	MB					U	-0.0329	pCi/L					06/21/17 11:18
Rad Ra-226 Batch 1666	8820												
QC1203798460 Radium-226	424119006	DUP		U	0.227	U	0.347	pCi/L	N/A		N/A	AMXH8	06/20/17 10:26
QC1203798462 Radium-226	LCS		26.0				23.2	pCi/L		89.5	(75%-125%)		06/20/17 10:26
QC1203798459 Radium-226	MB					U	-0.0475	pCi/L					06/20/17 09:55

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QC Summary

Workorder: 424119 Page 3 of 4 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Rad Ra-226 1668820 Batch OC1203798461 424119006 MS 130 110 Radium-226 U 0.227 pCi/L 84.5 (75%-125%) MXH8 06/20/17 10:26

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 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
- 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

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QC Summary

Workorder: 424119 Page 4 of 4 Pa

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

- 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.
- ٨ 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
- 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 e reporting purposes
- Preparation or preservation holding time was exceeded 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.



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

May 25, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27171

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled:

May 22, 2017

12:30

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD01TDS

FGD-01

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.77	0.50	mg/L	5/25/17 16:23	BB
pH by SM4500HB(2011)	4.87	0.00	S.U.	5/24/17 09:30	BF
Holding Time of 15 minutes has beer	exceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	5/25/17 16:23	BB
Total Dissolved Solid-SM2540C	35	2.0	mg/L	5/25/17 14:00	BF

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



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

May 25, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27172

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled:

May 22, 2017

13:00

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAG01TDS

MW 1

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.60	0.50	mg/L	5/25/17 16:23	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has beer	4.65 exceeded.	0.00	S.U.	5/24/17 09:30	BF
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	5/25/17 16:23	ВВ
Total Dissolved Solid-SM2540C	32	2.0	mg/L	5/25/17 14:00	BF

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



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

May 25, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27178

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

09:45

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD03TDS

FGD-03

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.9	0.50	mg/L	5/25/17 16:23	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been	6.22	0.00	S.U.	5/24/17 09:30	BF
Sulfates by IC EPA 300.0	22.0	0.50	mg/L	5/25/17 16:23	ВВ
Total Dissolved Solid-SM2540C	95	2.0	mg/L	5/25/17 14:00	BF

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



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

May 25, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27179

Wateree Well FGD-02 (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

10:30

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD02TDS

FGD-02

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.3	0.50	mg/L	5/25/17 16:23	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been	5.33 exceeded.	0.00	S.U.	5/24/17 09:30	BF
Sulfates by IC EPA 300.0	5.8	0.50	mg/L	5/25/17 16:23	BB
Total Dissolved Solid-SM2540C	56	2.0	mg/L	5/25/17 14:00	BF

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



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

May 25, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27180

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

11:40

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD04TDS

FGD-04

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.7	0.50	mg/L	5/25/17 16:23	BB
pH by SM4500HB(2011)	4.55	0.00	S.U.	5/24/17 09:30	BF
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	4.2	0.50	mg/L	5/25/17 16:23	BB
Total Dissolved Solid-SM2540C	42	2.0	mg/L	5/25/17 14:00	BF

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



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

May 25, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27181

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

12:50

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD05TDS

FGD-05

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	12.0	0.50	mg/L	5/25/17 16:23	BB
pH by SM4500HB(2011)	5.09	0.00	S.U.	5/24/17 09:30	BF
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	1.97	0.50	mg/L	5/25/17 16:23	ВВ
Total Dissolved Solid-SM2540C	52	2.0	mg/L	5/25/17 14:00	BF
, otal Bibbon and and and					

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



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

June 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27182

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled:

May 22, 2017

12:30

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD01TM

FGD-01

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A		Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Barium by ICP-OES 200.7	66.0	10.0	ppb	5/25/17	11:45	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17	11:45	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17	11:45	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Calcium EPA 200.7	669	100	ppb	5/25/17	11:45	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Lead by ICP-MS 200.8	1.64	1.0	ppb	5/25/17	17:00	CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	5/25/17	11:45	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/30/17	15:56	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/30/17	14:33	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17	17:00	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB

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



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

June 02, 2017

REPORT TO:

Mike Moore C221

MW₁

Sample ID: AB27183

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled:

May 22, 2017

13:00

Date & Time Submitted: May 23, 2017

15:55 Location Code: WAG01TM

Collected by: A.HILL

Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Ana Date & Tim	
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17	7:00 CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17	7:00 CDB
Barium by ICP-OES 200.7	53.2	10.0	ppb	5/25/17 10):39 CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 10):39 CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 10):39 CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 17	7:00 CDB
Calcium EPA 200.7	677	100	ppb	5/25/17 10):39 CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17	7:00 CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17	7:00 CDB
Lead by ICP-MS 200.8	1.11	1.0	ppb	5/25/17 17	7:00 CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	5/25/17 10):39 CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/30/17 15	5:56 PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/30/17 14	1:33 CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 17	7:00 CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17	7:00 CDB

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



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

June 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27189

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

09:45

Date & Time Submitted: May 23, 2017 Collected by: A.HILL Loca

2017 15:55 Location Code: WAFGD03TM

FGD-03 Login Record File: 170524001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Date &		Chemist
Antimony by ICP-MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Barium by ICP-OES 200.7	34.9	10.0	ppb	5/30/17	08:56	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/30/17	08:56	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/30/17	08:56	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Calcium EPA 200.7	14300	1000	ppb	5/30/17	08:56	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	5/30/17	08:56	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/30/17	15:56	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/30/17	14:33	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17	17:00	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17	17:00	CDB

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



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

June 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27190

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

10:30

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD02TM

FGD-02

Login Record File: 170524001

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 17:00	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Barium by ICP-OES 200.7	36.9	10.0	ppb	5/30/17 08:56	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/30/17 08:56	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/30/17 08:56	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Calcium EPA 200.7	5503	100	ppb	5/30/17 08:56	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	5/30/17 08:56	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/30/17 15:56	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/30/17 14:33	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 17:00	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB

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



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

June 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: **AB27191**

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

11:40

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD04TM

FGD-04

Login Record File: 170524001

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 17:00	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Barium by ICP-OES 200.7	83.3	10.0	ppb	5/25/17 12:19	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 12:19	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 12:19	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Calcium EPA 200.7	2400	1000	ppb	5/25/17 12:19	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	5/25/17 12:19	CDB
Mercury (CWA) by EPA 245.2	Less than	0.2	ppb	5/30/17 15:56	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/30/17 14:33	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 17:00	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB

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



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

June 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB27192

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled:

May 23, 2017

12:50

Date & Time Submitted: May 23, 2017

15:55

Collected by: A.HILL

Location Code: WAFGD05TM

FGD-05

Login Record File: 170524001

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 17:00	CDB
Arsenic by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Barium by ICP-OES 200.7	89.4	10.0	ppb	5/25/17 12:19	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	5/25/17 12:19	CDB
Boron - EPA 200.7	Less than	1000	ppb	5/25/17 12:19	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Calcium EPA 200.7	4016	1000	ppb	5/25/17 12:19	CDB
Chromium by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Cobalt by ICP_MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Lead by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	5/25/17 12:19	CDB
Mercury (CWA) by EPA 245.2	0.51	0.2	ppb	5/30/17 15:56	PRC
Molybdenum - EPA 200.8	Less than	1.0	ppb	5/30/17 14:33	CDB
Selenium by ICP-MS 200.8	Less than	5.0	ppb	5/25/17 17:00	CDB
Thallium by ICP-MS 200.8	Less than	1.0	ppb	5/25/17 17:00	CDB

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

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permit No.:	County: Richland		
Date Sampled: 07/10/2017		Time Sampled:	12:00:00PM		
year-month-day (N	umerical)				
		STATION NUMBERS			
PARAMETER NUMBER	MW-AP-01A				
NAME Lab. Certificate No.	32006				
Field pH S.U.	4.320				
Field Sp. Conductivity micromhos/cm	53.000				
Field Turbidity NTU	1.50				
ORP mV	225.400				
Oxygen, dissolved mg/L	3.640				
Temp (Celcius) degrees C	21.610				
Water level elevation ft	114.44				
Authorized Release By:		Date:			

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permi	t No.:	County: Richland
Date Sampled: 07/24/2017		_	Time Sampled:	12:00:00PM
year-month-day (N	umerical)			
			STATION NUMBERS	
PARAMETER NUMBER	MW-AP-01A	MW-FGD-01		
NAME Lab. Certificate No.	32006	32006		
Field pH S.U.		4.470		
Field Sp. Conductivity micromhos/cm		66.000		
Field Turbidity NTU		4.70		
ORP mV		316.600		
Oxygen, dissolved mg/L		3.480		
Temp (Celcius) degrees C		17.320		
Water level elevation ft	114.87	116.15		
		•	•	

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station	Permit No.:	County: Richland
Date Sampled:	07/26/2017	Time Sampled:	12:00:00PM
	year-month-day (Numerical)		

STATION NUMBERS

PARAMETER NUMBER		MW-FGD-02	MW-FGD-03	MW-FGD-04	MW-FGD-05
NAME	Lab. Certificate No.	32006	32006	32006	32006
Field pH S.U.		4.500	5.270	4.180	5.480
Field Sp. Conductivity	micromhos/cm	70.000	110.000	63.000	180.000
Field Turbidity NTU		2.10	91.40	2.10	3.10
ORP mV		236.800	201.800	253.700	90.900
Oxygen, dissolved mg/L		2.540	2.820	1.420	1.110
Temp (Celcius) degrees C		18.930	19.380	19.010	19.860
Water level elevation fi	t	105.12	105.81	107.51	108.21

Authorized Release By:	Date:	
rumonzed release by.	Date.	

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 427697 GEL Work Order: 427697

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.

)	Sthewe Cottes
Reviewed by	

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

Certificate of Analysis

Project:

Client ID:

Report Date: July 26, 2017

SCEG01716c

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-01A
Sample ID: 427697001
Matrix: Ground Water
Collect Date: 10-JUL-17 09:15

Receive Date: 12-JUL-17 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	phy											
EPA300.0 Fluorio	de in Liquid "As Re	eceived"										
Fluoride	J	0.0398	0.033	0.100	mg/L		1	MXL2	07/17/17	1757	1682878	1
Metals Analysis-l	ICP-MS											
200.8/200.2 NPI	DES Metals "As Rec	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	BAJ	07/14/17	1834	1681837	2
Rad Gas Flow Pro	oportional Counting	g										
GFPC, Ra228, Li	quid "As Received"	"										
Radium-228	•	1.85	1.27	3.00	pCi/L			JXC9	07/19/17	1301	1682124	3
Rad Radium-226												
Lucas Cell, Ra22	6, liquid "As Recei	ved"										
Radium-226	•	1.63	0.274	1.00	pCi/L			MXH8	07/19/17	0830	1682145	4
The following Pro	ep Methods were pe	erformed:										
Method	Description	n		Analyst	Date	ı	Time	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		SXW1	07/13/17		0714	168	81836			

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1EPA 300.02EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

104 (15%-125%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

QC Summary

Report Date: July 26, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 427697

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography									
Batch 1682878									
QC1203832289 427697001 Dt Fluoride	UP J	0.0398	J	0.0386	mg/L	3.06 ^		(+/-0.100) MXL2	07/17/17 18:25
QC1203832288 LCS Fluoride	2.50			2.36	mg/L		94.2	(90%-110%)	07/17/17 17:28
QC1203832287 MB Fluoride			U	ND	mg/L				07/17/17 16:59
QC1203832290 427697001 PS Fluoride	S 2.50 J	0.0398		2.40	mg/L		94.4	(90%-110%)	07/17/17 18:54
Metals Analysis - ICPMS Batch 1681837									
QC1203829734 427697001 DI Lithium	UP U	ND	U	ND	ug/L	N/A		BAJ	07/14/17 18:38
QC1203829735 427697002 DI Lithium	UP U	ND	U	ND	ug/L	N/A			07/14/17 18:57
QC1203829733 LCS Lithium	50.0			51.0	ug/L		102	(80%-120%)	07/14/17 18:31
QC1203829732 MB Lithium			U	ND	ug/L				07/14/17 18:28
QC1203829736 427697001 M Lithium	50.0 U	ND		52.1	ug/L		101	(75%-125%)	07/14/17 18:41
QC1203829737 427697002 M Lithium	50.0 U	ND		46.7	ug/L		93.1	(75%-125%)	07/14/17 19:00

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

QC Summary

				2c	umma	<u>. y</u>				
Workorder: 427697										Page 2 of 4
Parmname	NO	M	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Metals Analysis - ICPMS Batch 1681837										
QC1203829738 427697001 S Lithium	SDILT	U	ND	U	ND	ug/L	N/A		(0%-10%) BAJ	07/14/17 18:44
QC1203829739 427697002 S Lithium	SDILT	U	ND	U	ND	ug/L	N/A		(0%-10%)	07/14/17 19:03
Rad Gas Flow Batch 1682124										
QC1203830399 427818004 I Radium-228	DUP	U	0.486	U	0.715	pCi/L	N/A		N/A JXC9	07/19/17 13:07
QC1203830402 LCS Radium-228	20.0				18.9	pCi/L		94.4	(75%-125%)	07/19/17 13:07
QC1203830398 MB Radium-228				U	-0.157	pCi/L				07/19/17 13:07
QC1203830400 427818004 I Radium-228	MS 60.0	U	0.486		52.6	pCi/L		87.7	(75%-125%)	07/19/17 13:07
QC1203830401 427818004 I Radium-228	MSD 60.0	U	0.486		59.9	pCi/L	12.9	99.7	(0%-20%)	07/19/17 13:07
Rad Ra-226 Batch 1682145										
QC1203830453 427818006 1 Radium-226	DUP		0.837		0.585	pCi/L	35.5		(0% - 100%) MXH8	07/19/17 09:35
QC1203830456 LCS Radium-226	26.0				23.3	pCi/L		89.6	(75%-125%)	07/19/17 09:35
QC1203830452 MB Radium-226				U	0.104	pCi/L				07/19/17 09:35

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

QC Summary

Workorder: 427697 Page 3 of 4 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Rad Ra-226 1682145 Batch OC1203830454 427818006 MS 0.837 119 90.8 Radium-226 130 pCi/L (75%-125%) MXH8 07/19/17 09:35 QC1203830455 427818006 MSD 130 0.837 105 pCi/L 80.6 07/20/17 04:15 Radium-226 11.9 (0%-20%)

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
- 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

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

QC Summary

427697 Page 4 of 4 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time

UJ Gamma Spectroscopy--Uncertain identification

Workorder:

- 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.
- ٨ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- 5-day BOD--The 2:1 depletion requirement was not met for this sample d
- 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 e 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.

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 428960 GEL Work Order: 428960

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.

	Johnson Cotos	
Reviewed by	-	

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

Certificate of Analysis

Project:

Units

Client ID:

PF

Report Date: August 22, 2017

DF Analyst Date Time Batch Method

SCEG01716c

91.5

(15%-125%)

GEEL003

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-01

Sample ID:

428960001

Matrix: Collect Date: Ground Water

Receive Date:

24-JUL-17 14:10 27-JUL-17

Result

Collector:

Parameter

Client

Qualifier

Ion Chromatography								
EPA300.0 Fluoride in	Liquid "As Received"							
Fluoride	J 0.0358	0.033	0.100	mg/L	1	MXL2 07/29/17	7 0505 1686433	1
Metals Analysis-ICP-	MS							
200.8/200.2 NPDES	Metals "As Received"							
Lithium	J 2.13	2.00	10.0	ug/L	1.00 1	SKJ 08/15/17	7 1910 1686139	2
Rad Gas Flow Propor	tional Counting							
GFPC, Ra228, Liquid	l "As Received"							
Radium-228	U ND	1.88	3.00	pCi/L		JXC9 08/21/17	7 1207 1692834	3
Rad Radium-226								
Lucas Cell, Ra226, lie	quid "As Received"							
Radium-226	1.36	0.255	1.00	pCi/L		MXH8 08/15/17	7 0745 1686420	4
The following Prep M	lethods were performed:							
Method	Description		Analyst	Date	Time	e Prep Batc	h	
EPA 200.2	ICP-MS 200.2 PREP		JXM8	07/27/17	7 1702	1686136		
The following Analy	tical Methods were performed:							
Method	Description				Analyst Cor	nments		
1	EPA 300.0							
2	EPA 200.8 SC_NPDES							
3	EPA 904.0/SW846 9320 Modified							
4	EPA 903.1 Modified							
Surrogate/Tracer Rec	overy Test			Result	Nominal	Recovery%	Acceptable Lim	its

DL

RL

Notes:

Barium-133 Tracer

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

GFPC, Ra228, Liquid "As Received"

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: August 22, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-AS-1
Sample ID: 428960002
Matrix: Ground Water

Collect Date: 25-JUL-17 18:50
Receive Date: 27-JUL-17
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograph	ıy											
EPA300.0 Fluoride	in Liquid "As Re	ceived"										
Fluoride	J	0.0485	0.033	0.100	mg/L		1	MXL2	07/29/17	0534	1686433	1
Metals Analysis-IC	P-MS											
200.8/200.2 NPDE	ES Metals "As Rec	ceived"										
Lithium	J	3.43	2.00	10.0	ug/L	1.00	1	SKJ	08/15/17	1934	1686139	2
Rad Gas Flow Prop	ortional Counting	5										
GFPC, Ra228, Liqu	uid "As Received"	'										
Radium-228	U	ND	2.08	3.00	pCi/L			JXC9	08/21/17	1207	1692834	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Receiv	ved"										
Radium-226	•	1.23	0.215	1.00	pCi/L			MXH8	08/15/17	0745	1686420	4
The following Prep	Methods were pe	erformed:										
Method	Description	1		Analyst	Date	-	Γim	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JXM8	07/27/17	1	1702	16	86136			
The following And	lutical Mathoda u	ioro porform	and:									

The following Analytical Methods were performed:

 Method
 Description
 Analyst Comments

 1
 EPA 300.0

 2
 EPA 200.8 SC_NPDES

EPA 200.8 SC_NPDES EPA 904.0/SW846 9320 Modified

EPA 904.0/SW846 9320 Modified
 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:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: August 22, 2017

SCEG01716c

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417 Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-03

Sample ID: 428960005 Matrix: Ground Water Collect Date: 26-JUL-17 08:15 Receive Date: 27-JUL-17

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography	y											
EPA300.0 Fluoride	in Liquid "As Re	eceived"										
Fluoride	J	0.0499	0.033	0.100	mg/L		1	MXL2	07/29/17	0759	1686433	1
Metals Analysis-ICI	P-MS											
200.8/200.2 NPDE	S Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	08/15/17	1946	1686139	2
Rad Gas Flow Propo	ortional Counting	g										
GFPC, Ra228, Liqu	id "As Received"	"										
Radium-228		4.65	1.98	3.00	pCi/L			JXC9	08/21/17	1209	1692834	3
Rad Radium-226												
Lucas Cell, Ra226,	liquid "As Recei	ved"										
Radium-226	U	ND	0.348	1.00	pCi/L			MXH8	08/15/17	0815	1686420	4
The following Prep	Methods were pe	erformed:										
Method	Description	n		Analyst	Date	,	Time	Pr	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		JXM8	07/27/17		1702	16	86136			
The following Anal	lytical Methods v	were perform	ned:									

Method Description **Analyst Comments** EPA 300.0

EPA 200.8 SC_NPDES 3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer 97.8 (15%-125%) GFPC, Ra228, Liquid "As Received"

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

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: August 22, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-02 Sample ID: 428960006 Matrix: Ground Water Collect Date: 26-JUL-17 08:55

27-JUL-17 Receive Date: Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	ohy											
EPA300.0 Fluorio	de in Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	MXL2	07/29/17	0828	1686433	1
Metals Analysis-I	CP-MS											
200.8/200.2 NPD	DES Metals "As Rec	ceived"										
Lithium	J	2.49	2.00	10.0	ug/L	1.00	1	SKJ	08/15/17	1950	1686139	2
Rad Gas Flow Pro	oportional Counting	7										
GFPC, Ra228, Lie	quid "As Received'	•										
Radium-228	•	4.49	2.53	3.00	pCi/L			JXC9	08/21/17	1210	1692834	3
Rad Radium-226												
Lucas Cell, Ra220	6, liquid "As Receiv	ved"										
Radium-226	-	0.946	0.259	1.00	pCi/L			MXH8	08/15/17	0815	1686420	4
The following Pre	ep Methods were pe	erformed:										
Method	Description	1		Analyst	Date	ŗ	Гim	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.2	2 PREP		JXM8	07/27/17		1702	16	86136			
FD1 C 11 ' A	1 2 136 1 1	c	1									

The following Analytical Methods were performed:

Method Description **Analyst Comments** EPA 300.0 2 EPA 200.8 SC_NPDES 3 EPA 904.0/SW846 9320 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits (15%-125%)

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 96

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

EPA 903.1 Modified

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: August 22, 2017

SCEG01716c

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-04
Sample ID: 428960007
Matrix: Ground Water
Collect Date: 26-JUL-17 10:05

Receive Date: 27-JUL-17 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	phy											
EPA300.0 Fluorio	de in Liquid "As Re	eceived"										
Fluoride	J	0.0421	0.033	0.100	mg/L		1	MXL2	07/29/17	0857	1686433	1
Metals Analysis-I	ICP-MS											
200.8/200.2 NPD	DES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	08/15/17	1954	1686139	2
Rad Gas Flow Pro	oportional Counting	g										
GFPC, Ra228, Lie	quid "As Received'	"										
Radium-228	U	ND	1.86	3.00	pCi/L			JXC9	08/21/17	1329	1692834	3
Rad Radium-226												
Lucas Cell, Ra220	6, liquid "As Recei	ved"										
Radium-226	•	0.609	0.233	1.00	pCi/L			MXH8	08/15/17	0815	1686420	4
The following Pre	ep Methods were pe	erformed:										
Method	Description	n		Analyst	Date		Time	Pr	ep Batch			
EPA 200.2	ICP-MS 200.			JXM8	07/27/17		1702		86136			

The	following	Analytical	Methods	were performed:
1116	HOHOWIHE	Allaivuca	HVIELHOUS	were benonned.

Method Description Analyst Comments

EPA 300.0

2 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

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:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: August 22, 2017

SCEG01716c

GEEL003

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-05

Sample ID:

428960008

Matrix:

Ground Water

Collect Date:

26-JUL-17 11:00

Receive Date: Collector:

27-JUL-17 Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	ohy											
EPA300.0 Fluorio	le in Liquid "As Re	eceived"										
Fluoride	J	0.0406	0.033	0.100	mg/L		1	MXL2	07/29/17	0925	1686433	1
Metals Analysis-I	CP-MS											
200.8/200.2 NPD	ES Metals "As Red	ceived"										
Lithium	U	ND	2.00	10.0	ug/L	1.00	1	SKJ	08/15/17	1958	1686139	2
Rad Gas Flow Pro	oportional Counting	3										
GFPC, Ra228, Lie	quid "As Received"	"										
Radium-228	U	ND	2.12	3.00	pCi/L			JXC9	08/21/17	1210	1692834	3
Rad Radium-226												
Lucas Cell, Ra226	6, liquid "As Recei	ved"										
Radium-226	_	0.460	0.251	1.00	pCi/L			MXH8	08/15/17	0815	1686420	4
The following Pre	ep Methods were pe	erformed:										
Method	Description	n		Analyst	Date	,	Гimе	e Pr	ep Batch			
EPA 200.2	ICP-MS 200.	2 PREP		JXM8	07/27/17		1702	16	86136			
The following Ar	nalytical Methods v	vere perforn	ned:									

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 300.0	·

EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer 95.9 (15%-125%) GFPC, Ra228, Liquid "As Received"

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

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

QC Summary

Report Date: August 22, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 428960

Parmname		NOM		Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 1686433											
QC1203840942 428957001 Fluoride	DUP		J	0.038	J	0.038	mg/L	0 /	Λ.	(+/-0.100) MXL2	07/28/17 21:52
QC1203840943 428960008 Fluoride	DUP		J	0.0406	J	0.041	mg/L	0.98 ′		(+/-0.100)	07/29/17 09:54
QC1203840941 LCS Fluoride		2.50				2.35	mg/L		93.9	(90%-110%)	07/28/17 20:54
QC1203840940 MB Fluoride					U	ND	mg/L				07/28/17 20:25
QC1203840944 428957001 Fluoride	PS	2.50	J	0.038		2.33	mg/L		91.6	(90%-110%)	07/28/17 22:20
QC1203840945 428960008 Fluoride	PS	2.50	J	0.0406		2.34	mg/L		92.1	(90%-110%)	07/29/17 10:23
Metals Analysis - ICPMS Batch 1686139											
QC1203840299 428960001 Lithium	DUP		J	2.13	J	2.13	ug/L	0.235	Λ.	(+/-10.0) SKJ	08/15/17 19:14
QC1203840298 LCS Lithium		50.0				51.1	ug/L		102	(80%-120%)	08/15/17 19:06
QC1203840297 MB Lithium					U	ND	ug/L				08/15/17 19:03
QC1203840300 428960001 Lithium	MS	50.0	J	2.13		53.0	ug/L		102	(75%-125%)	08/15/17 19:18

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QC Summary

Workorder: 428960 Page 2 of 4 QC **Parmname** NOM Sample Qual Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 1686139 Batch QC1203840301 428960001 SDILT 2.13 U ND Lithium ug/L N/A (0%-10%)SKJ 08/15/17 19:22 Rad Gas Flow 1692834 Batch QC1203856709 428957008 DUP 4.94 U 1.31 Radium-228 pCi/L 116* (0% - 100%) JXC9 08/21/17 12:08 QC1203856710 LCS Radium-228 19.8 21.6 pCi/L 109 (75% - 125%)08/21/17 12:08 QC1203856708 MB Radium-228 U 1.31 pCi/L 08/21/17 12:08 Rad Ra-226 1686420 Batch QC1203840913 428957008 DUP 1.31 0.412 Radium-226 1.32 pCi/L (0% - 100%) MXH8 08/15/17 08:15 QC1203840915 LCS Radium-226 26.0 95.7 24.8 pCi/L (75%-125%) 08/15/17 08:45 QC1203840912 MB U 0.0314 08/15/17 08:15 Radium-226 pCi/L QC1203840914 428957008 MS Radium-226 130 1.31 124 pCi/L 94.3 (75% - 125%)08/15/17 08:15

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.

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QC Summary

Workorder: 428960 Page 3 of 4 Parmname NOM Sample Qual \mathbf{OC} Units RPD% REC% Range Anlst Date Time BD Results are either below the MDC or tracer recovery is low Е % difference of sample and SD is >10%. Sample concentration must meet flagging criteria Е General Chemistry--Concentration of the target analyte exceeds the instrument calibration range FA Failed analysis. FΒ 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 Η Analytical holding time was exceeded T 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 if above MDC and less than LLD M 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 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

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QC Summary

Page 4 of 4 -Parmname NOM Sample Qual \mathbf{QC} Units RPD% REC% Range Anlst Date Time

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.

Workorder:

428960

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.

[^] 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.



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

____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27797

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled: July 10, 2017 09:15
Date & Time Submitted: July 11, 2017 09:54

Collected by: S.SANSBURY Location Code: WAG01TDS

MW 1 Login Record File: 170711003

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.37	0.50	mg/L	7/12/17 16:17	ВВ
pH by SM4500HB(2011)	4.73	0.00	S.U.	7/11/17 10:33	BF
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	7/12/17 16:17	ВВ
Total Dissolved Solid-SM2540C	33	2.0	mg/L	7/12/17 16:10	BF

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

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27945

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled: July 24, 2017 14:10

Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGD01TDS

FGD-01 Login Record File: 170726002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.84	0.50	mg/L	7/27/17 13:37	ВВ
pH by SM4500HB(2011)	4.86	0.00	S.U.	7/31/17 11:53	PRC
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	7/27/17 13:37	ВВ
Total Dissolved Solid-SM2540C	22	2.0	mg/L	7/28/17 12:10	BF



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27946

Wateree Well FGD AS1 (NPDES/CCR)

Date & Time Sampled: July 25, 2017 18:50
Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGDAS1TDS

FGD-01 Login Record File: 170726002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.33	0.50	mg/L	7/27/17 13:37	ВВ
pH by SM4500HB(2011)	5.10	0.00	S.U.	7/31/17 11:53	PRC
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	7/27/17 13:37	ВВ
Total Dissolved Solid-SM2540C	42	2.0	mg/L	8/1/17 12:10	BF

Approved By:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27949

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled: July 26, 2017 08:15

Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGD03TDS

FGD-03 Login Record File: 170726002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	8.49	0.50	mg/L	7/27/17 13:37	ВВ
pH by SM4500HB(2011)	6.02	0.00	S.U.	7/31/17 11:53	PRC
Holding Time of 15 minutes has been ex	xceeded.				
Sulfates by IC EPA 300.0	16.97	0.50	mg/L	7/27/17 13:37	ВВ
Total Dissolved Solid-SM2540C	75	2.0	mg/L	8/1/17 12:10	BF

Approved By:		



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

____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27950

Wateree Well FGD-02 (NPDES/CCR)

Date & Time Sampled: July 26, 2017 08:55

Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGD02TDS

FGD-02 Login Record File: 170726002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.99	0.50	mg/L	7/27/17 13:37	ВВ
pH by SM4500HB(2011)	5.03	0.00	S.U.	7/31/17 11:53	PRC
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	3.57	0.50	mg/L	7/27/17 13:37	ВВ
Total Dissolved Solid-SM2540C	39	2.0	mg/L	8/1/17 12:10	BF



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27951

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled: July 26, 2017 10:05

Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGD04TDS

FGD-04 Login Record File: 170726002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.90	0.50	mg/L	7/27/17 13:37	ВВ
pH by SM4500HB(2011)	4.71	0.00	S.U.	7/31/17 11:53	PRC
Holding Time of 15 minutes has been e	xceeded.				
Sulfates by IC EPA 300.0	4.75	0.50	mg/L	7/27/17 13:37	ВВ
Total Dissolved Solid-SM2540C	29	2.0	mg/L	8/1/17 12:10	BF

Approved By:		
AUDIOVED DV.		



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27952

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled: July 26, 2017 11:00

Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGD05TDS

FGD-05 Login Record File: 170726002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	12.16	0.50	mg/L	7/27/17 13:37	ВВ
pH by SM4500HB(2011)	5.92	0.00	S.U.	7/31/17 11:53	PRC
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	16.06	0.50	mg/L	7/27/17 13:37	ВВ
Total Dissolved Solid-SM2540C	98	2.0	mg/L	8/1/17 12:10	BF

Approved By:		



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

_____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27764

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled: July 10, 2017 09:15
Date & Time Submitted: July 11, 2017 09:54

Collected by: S.SANSBURY Location Code: WAG01TM

MW 1 Login Record File: 170711001

Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Less than	1.0	ppb	7/13/17 13:48	CDB
Less than	2.0	ppb	7/13/17 13:48	CDB
54.9	10.0	ppb	7/13/17 10:10	CDB
Less than	2.0	ppb	7/13/17 10:10	CDB
Less than	1000	ppb	7/13/17 10:10	CDB
Less than	1.0	ppb	7/13/17 13:48	CDB
700	100	ppb	7/13/17 10:10	CDB
Less than	2.0	ppb	7/13/17 13:48	CDB
Less than	2.0	ppb	7/13/17 13:48	CDB
1.2	1.0	ppb	7/13/17 13:48	CDB
Less than	2.0	ppb	7/13/17 10:10	CDB
Less than	0.2	ppb	7/14/17 12:28	MC
Less than	1.0	ppb	7/13/17 13:48	CDB
Less than	10.0	ppb	7/13/17 13:48	CDB
Less than	1.0	ppb	7/13/17 13:48	CDB
	Less than Less than 54.9 Less than Less than 700 Less than 1.2 Less than Less than	Result Limit(MRL) Less than 1.0 Less than 2.0 54.9 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 2.0 Less than 2.0 Less than 2.0 Less than 2.0 Less than 0.2 Less than 1.0 Less than 1.0 Less than 1.0 Less than 1.0	Result Limit(MRL) Units Less than 1.0 ppb Less than 2.0 ppb 54.9 10.0 ppb Less than 2.0 ppb Less than 1.0 ppb T00 100 ppb Less than 2.0 ppb Less than 1.0 ppb	Result Limit(MRL) Units Date & Time Less than 1.0 ppb 7/13/17 13:48 Less than 2.0 ppb 7/13/17 13:48 54.9 10.0 ppb 7/13/17 10:10 Less than 2.0 ppb 7/13/17 10:10 Less than 1.0 ppb 7/13/17 13:48 700 100 ppb 7/13/17 13:48 Less than 2.0 ppb 7/13/17 13:48 Less than 0.2 ppb 7/13/17 12:28 Less than 1.0 ppb 7/13/17 13:48 Less than 1.0 ppb 7/13/17 13:48

Approved By	v :		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27965

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled: July 24, 2017 14:10

Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGD01TM

FGD-01 Login Record File: 170726003

10501			_09		_0000	
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A Date & T	•	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	78.2	10.0	ppb	7/31/17	13:57	CDB
Beryllium EPA 200.7	Less than	2.0	ppb	7/31/17	13:57	CDB
Boron - EPA 200.7	Less than	1000	ppb	7/31/17	13:57	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17	12:39	CDB
Calcium EPA 200.7	1909	1000	ppb	7/31/17	13:57	CDB
Chromium by ICP_MS 200.8	1.2	1.0	ppb	8/2/17	12:39	CDB
Cobalt by ICP_MS 200.8	1.1	1.0	ppb	8/2/17	12:39	CDB
Lead by ICP-MS 200.8	1.2	1.0	ppb	8/2/17	12:39	CDB
Lithium (CWA) 200.7	2.4	2.0	ppb	7/31/17	13:57	CDB
Mercury - 7470A (RCRA)	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



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

____ January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27966

Wateree Well FGD-AS-1 TM (NPDES/CCR)

Date & Time Sampled: July 25, 2017 18:50
Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGDAS1TM

FGD-05 Login Record File: 170726003

					_
Result	Reporting Limit(MRL)	Units		•	Chemist
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
91.4	10.0	ppb	7/31/17	13:57	CDB
Less than	2.0	ppb	7/31/17	13:57	CDB
Less than	1000	ppb	7/31/17	13:57	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
1067	1000	ppb	7/31/17	13:57	CDB
1.0	1.0	ppb	8/2/17	12:39	CDB
2.6	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
3.1	2.0	ppb	7/31/17	13:57	CDB
Less than	0.2	ppb	8/1/17	14:16	MC
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	5.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
	Less than 91.4 Less than 91.4 Less than Less than 1067 1.0 2.6 Less than 3.1 Less than Less than Less than	Result Limit(MRL) Less than 1.0 Less than 1.0 91.4 10.0 Less than 2.0 Less than 1000 Less than 1.0 1067 1000 1.0 1.0 Less than 1.0 Less than 1.0 Less than 0.2 Less than 1.0 Less than 5.0	Result Limit(MRL) Units Less than 1.0 ppb Less than 1.0 ppb 91.4 10.0 ppb Less than 1000 ppb Less than 1.0 ppb 1067 1000 ppb 1.0 1.0 ppb 2.6 1.0 ppb Less than 1.0 ppb Less than 1.0 ppb Less than 0.2 ppb Less than 1.0 ppb Less than 5.0 ppb	Result Limit(MRL) Units Date & Tire Less than 1.0 ppb 8/2/17 Less than 1.0 ppb 8/2/17 91.4 10.0 ppb 7/31/17 Less than 2.0 ppb 7/31/17 Less than 1.00 ppb 8/2/17 Less than 1.0 ppb 8/2/17 1.0 1.0 ppb 8/2/17 2.6 1.0 ppb 8/2/17 Less than 1.0 ppb 8/2/17 Less than 1.0 ppb 8/2/17 Less than 0.2 ppb 8/1/17 Less than 1.0 ppb 8/2/17 Less than 5.0 ppb 8/2/17	Result Limit(MRL) Units Date & Time Less than 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 91.4 10.0 ppb 7/31/17 13:57 Less than 2.0 ppb 7/31/17 13:57 Less than 1000 ppb 7/31/17 13:57 Less than 1.0 ppb 8/2/17 12:39 1067 1000 ppb 7/31/17 13:57 1.0 1.0 ppb 8/2/17 12:39 2.6 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 3.1 2.0 ppb 7/31/17 13:57 Less than 0.2 ppb 8/2/17 14:16 Less than 1.0 ppb 8/2/17 12:39 Less than 5.0 ppb 8/2/17 12:39

Approved By:	



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27969

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled: July 26, 2017 08:15

Date & Time Submitted: July 26, 2017 12:38

Collected by: A.HILL Location Code: WAFGD03TM

FGD-03 Login Record File: 170726003

			Ū		
CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysi 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	42.0	10.0	ppb	7/31/17 13:57	' CDB
Beryllium EPA 200.7	Less than	2.0	ppb	7/31/17 13:57	' CDB
Boron - EPA 200.7	Less than	1000	ppb	7/31/17 13:57	CDB
Cadmium by ICP_MS EPA 200.8	Less than	1.0	ppb	8/2/17 12:39) CDB
Calcium EPA 200.7	12920	1000	ppb	7/31/17 13:57	CDB
Chromium by ICP_MS 200.8	2.3	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	1.1	1.0	ppb	8/2/17 12:39) CDB
Lithium (CWA) 200.7	Less than	2.0	ppb	7/31/17 13:57	' CDB
Mercury - 7470A (RCRA)	Less than	0.2	ppb	8/1/17 14:16	6 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

pproved By	y:		
pproved By	y:		



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

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27970

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled: July Date & Time Submitted: July

July 26, 2017 08:55 July 26, 2017 12:38

Collected by: A.HILL

Location Code: WAFGD02TM

FGD-02 Login Record File: 170726003

Result	Reporting Limit(MRL)	Units		•	Chemist
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
74.1	10.0	ppb	7/31/17	13:57	CDB
Less than	2.0	ppb	7/31/17	13:57	CDB
Less than	1000	ppb	7/31/17	13:57	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
2915	1000	ppb	7/31/17	13:57	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
2.2	2.0	ppb	7/31/17	13:57	CDB
Less than	0.2	ppb	8/1/17	14:16	MC
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	5.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
	Less than T4.1 Less than Less than Less than 2915 Less than Less than	Result Limit(MRL) Less than 1.0 Value 1.0 Less than 1.0 Less than 1.00 Less than 1.0 Less than 0.2 Less than 1.0 Less than 5.0	Result Limit(MRL) Units Less than 1.0 ppb Less than 1.0 ppb 74.1 10.0 ppb Less than 2.0 ppb Less than 1.00 ppb Less than 1.0 ppb Less than 0.2 ppb Less than 1.0 ppb Less than 5.0 ppb	Result Limit(MRL) Units bate & T Less than 1.0 ppb 8/2/17 Less than 1.0 ppb 8/2/17 74.1 10.0 ppb 7/31/17 Less than 2.0 ppb 7/31/17 Less than 1.00 ppb 8/2/17 Less than 1.0 ppb 8/2/17 Less than 0.2 ppb 8/1/17 Less than 0.2 ppb 8/2/17 Less than 1.0 ppb 8/2/17 Less than 5.0 ppb 8/2/17	Result Limit(MRL) Units Date & Time Less than 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 74.1 10.0 ppb 7/31/17 13:57 Less than 2.0 ppb 7/31/17 13:57 Less than 1000 ppb 7/31/17 13:57 Less than 1.0 ppb 8/2/17 12:39 2915 1000 ppb 7/31/17 13:57 Less than 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 13:57 Less than 0.2 ppb 7/31/17 13:57 Less than 0.2 ppb 8/2/17 12:39 Less than 0.2 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39

Approved By	/ :		



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

10:05

12:38

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27971

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled: July 26, 2017

Date & Time Submitted: July 26, 2017

Collected by: A.HILL Location Code: WAFGD04TM

FGD-04 Login Record File: 170726003

		-			
Result	Reporting Limit(MRL)	Units		•	Chemist
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
75.4	10.0	ppb	7/31/17	13:57	CDB
Less than	2.0	ppb	7/31/17	13:57	CDB
Less than	1000	ppb	7/31/17	13:57	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
2507	100	ppb	7/31/17	13:57	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	2.0	ppb	7/31/17	13:57	CDB
Less than	0.2	ppb	8/1/17	14:16	MC
Less than	1.0	ppb	8/2/17	12:39	CDB
Less than	5.0	ppb	8/2/17	12:39	CDB
Less than	1.0	ppb	8/2/17	12:39	CDB
	Less than T5.4 Less than Less than Less than 2507 Less than Less than	Result Limit(MRL) Less than 1.0 T5.4 10.0 Less than 2.0 Less than 1000 Less than 1.0 2507 100 Less than 1.0 Less than 1.0 Less than 1.0 Less than 0.2 Less than 1.0 Less than 5.0	Result Limit(MRL) Units Less than 1.0 ppb Less than 1.0 ppb 75.4 10.0 ppb Less than 1000 ppb Less than 1.0 ppb Less than 2.0 ppb Less than 0.2 ppb Less than 1.0 ppb Less than 5.0 ppb	Result Limit(MRL) Units Date & 1 Less than 1.0 ppb 8/2/17 Less than 1.0 ppb 7/31/17 Less than 2.0 ppb 7/31/17 Less than 1000 ppb 7/31/17 Less than 1.0 ppb 8/2/17 Less than 2.0 ppb 8/2/17 Less than 0.2 ppb 8/1/17 Less than 1.0 ppb 8/2/17 Less than 5.0 ppb 8/2/17	Result Limit(MRL) Units Date & Time Less than 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 75.4 10.0 ppb 7/31/17 13:57 Less than 2.0 ppb 7/31/17 13:57 Less than 1.00 ppb 8/2/17 12:39 2507 100 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39 Less than 2.0 ppb 7/31/17 13:57 Less than 0.2 ppb 8/2/17 12:39 Less than 0.2 ppb 8/2/17 12:39 Less than 1.0 ppb 8/2/17 12:39



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

11:00

12:38

January 31, 2018

REPORT TO:

Mike Moore

Sample ID: AB27972

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled: July 26, 2017 Date & Time Submitted: July 26, 2017

Collected by: A.HILL Location Code: WAFGD05TM

FGD-05 Login Record File: 170726003

Result ss than ss than	Reporting Limit(MRL)	Units ppb	Completed A Date & T	Гime	Chemist
		ppb	8/2/17		
ss than			0,2,11	12:39	CDB
	1.0	ppb	8/2/17	12:39	CDB
74.5	10.0	ppb	7/31/17	13:57	CDB
ss than	2.0	ppb	7/31/17	13:57	CDB
ss than	1000	ppb	7/31/17	13:57	CDB
ss than	1.0	ppb	8/2/17	12:39	CDB
23470	1000	ppb	7/31/17	13:57	CDB
1.4	1.0	ppb	8/2/17	12:39	CDB
ss than	1.0	ppb	8/2/17	12:39	CDB
1.0	1.0	ppb	8/2/17	12:39	CDB
2.2	2.0	ppb	7/31/17	13:57	CDB
0.385	0.2	ppb	8/1/17	14:16	MC
ss than	1.0	ppb	8/2/17	12:39	CDB
ss than	5.0	ppb	8/2/17	12:39	CDB
ss than					CDB
•	1.4 ss than 1.0 2.2 0.385 ss than	1.4 1.0 ss than 1.0 1.0 1.0 2.2 2.0 0.385 0.2 ss than 1.0	1.4 1.0 ppb ss than 1.0 ppb 1.0 1.0 ppb 2.2 2.0 ppb 0.385 0.2 ppb ss than 1.0 ppb	1.4 1.0 ppb 8/2/17 ss than 1.0 ppb 8/2/17 1.0 1.0 ppb 8/2/17 2.2 2.0 ppb 7/31/17 0.385 0.2 ppb 8/1/17 ss than 1.0 ppb 8/2/17 ss than 5.0 ppb 8/2/17	1.4 1.0 ppb 8/2/17 12:39 ss than 1.0 ppb 8/2/17 12:39 1.0 1.0 ppb 8/2/17 12:39 2.2 2.0 ppb 7/31/17 13:57 2.385 0.2 ppb 8/1/17 14:16 ss than 1.0 ppb 8/2/17 12:39 ss than 5.0 ppb 8/2/17 12:39

Approved By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permit No.:	County: Richland		
Date Sampled: 09/26/2017	Date Sampled: 09/26/2017		12:00:00AM		
year-month-day (N	umerical)				
		STATION NUMBERS			
PARAMETER NUMBER	MW-AP-01A				
NAME Lab. Certificate No.	32006				
Field pH S.U.	4.550				
Field Sp. Conductivity micromhos/cm	40.000				
Field Turbidity NTU	5.10				
ORP mV	253.900				
Oxygen, dissolved mg/L	5.390				
Temp (Celcius) degrees C	21.530				
Water level elevation ft	114.05				
Authorized Release By:	,	Date:			

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility:	Wateree Station		Permi	t No.:	County: Richland
Date Sampled:	09/27/2017		_	Time Sampled:	12:00:00AM
	year-month-day (N	umerical)			
				STATION NUMBERS	
PARAMETE	R NUMBER	AS-FGD-01	MW-FGD-01		
NAME	Lab. Certificate No.	32006	32006		
Field pH S.U.		4.400	4.510		
Field Sp. Conduct	ivity micromhos/cm	45.000	37.000		
Field Turbidity N	ГИ	7.10	3.20		
ORP mV		269.500	312.600		
Oxygen, dissolved	l mg/L	3.760	3.580		
Гетр (Celcius) de	egrees C	21.360	19.340		
Water level elevat	ion ft	109.98	114.98		

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permi	t No.:	County: Richland
Date Sampled: 09/27/2017		_	Time Sampled:	12:00:00AM
year-month-day (No	umerical)			
			STATION NUMBERS	
PARAMETER NUMBER	MW-FGD-02	MW-FGD-03		
NAME Lab. Certificate No.	32006	32006		
Field pH S.U.	4.880	5.550		
Field Sp. Conductivity micromhos/cm	60.000	81.000		
Field Turbidity NTU	4.10	9.00		
ORP mV	252.600	208.000		
Oxygen, dissolved mg/L	2.400	2.230		
Temp (Celcius) degrees C	21.920	25.770		
Water level elevation ft	104.97	105.61		

Date:

Authorized Release By:

SOUTH CAROLINA DEPARTMENT OF HEALTH & ENVIRONMENTAL CONTROL GROUND-WATER MONITORING REPORT

Facility: Wateree Station		Permi	t No.:	County: Richland
Date Sampled: 09/28/2017		_	Time Sampled:	12:00:00AM
year-month-day (Nu	umerical)			
			STATION NUMBERS	
PARAMETER NUMBER	MW-FGD-04	MW-FGD-05		
NAME Lab. Certificate No.	32006	32006		
Field pH S.U.	4.360	4.990		
Field Sp. Conductivity micromhos/cm	51.000	85.000		
Field Turbidity NTU	1.80	5.10		
ORP mV	263.200	319.400		
Oxygen, dissolved mg/L	1.160	2.780		
Temp (Celcius) degrees C	20.510	21.730		
Water level elevation ft	107.10	107.75		

Date:

Authorized Release By:

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 434131 GEL Work Order: 434131

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.

	Jack N	Crosh			
Reviewed by	,				

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 18, 2017

1

GEL Engineering, LLC Company: Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: MW-1A Sample ID: 434131002 Matrix: Ground Water Collect Date: 26-SEP-17 10:20

03-OCT-17 Receive Date: Collector: Client

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

Ion Chromatography

EPA300.0 Fluoride in Liquid "As Received"

Fluoride 0.033 0.100 mg/L 1 JXH5 10/05/17 1351 1706773

The following Analytical Methods were performed:

Method Description **Analyst Comments**

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

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

QC Summary

Report Date: October 18, 2017

Page 1 of 2

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 434131

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography Batch 1706773											
QC1203889579 434134001 DUP Fluoride	U	ND	U	ND	mg/L	N/A			JXH5	10/05/1	7 21:32
QC1203889683 434131001 DUP Fluoride		0.306		0.304	mg/L	0.557 ^		(+/-0.100)	1	10/05/1	7 12:53
QC1203889577 LCS Fluoride	2.50			2.35	mg/L		93.9	(90%-110%)		10/05/1	7 11:55
QC1203889576 MB Fluoride			U	ND	mg/L					10/05/1	7 11:26
QC1203889581 434134001 PS Fluoride	2.50 U	ND		2.53	mg/L		101	(90%-110%)		10/05/1	7 22:59
QC1203889684 434131001 PS Fluoride	2.50	0.306		2.56	mg/L		90.2	(90%-110%)		10/06/1	7 10:41

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- Result is greater than value reported >
- В The target analyte was detected in the associated blank.
- Е General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Η Analytical holding time was exceeded
- J Value is estimated
- 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
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

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

QC Summary

434131 Page 2 of 2 **Parmname NOM** Sample Qual \mathbf{QC} Units RPD% REC% Range Anlst Date Time

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

RL is used to evaluate the DUP result.

Workorder:

- 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
- 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 e 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

* 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.

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 434133 GEL Work Order: 434133

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
- 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.

	Jack H Con	A		
Reviewed by	•			

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 18, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Wateree CCR

Client Sample ID: FGD-01 Sample ID: 434133004 Matrix: Ground Water Collect Date: 27-SEP-17 14:15 Receive Date: 03-OCT-17

Receive Date: 03-OC Collector: Client

Tarameter Quantity Result DL RE Units 11 DI Analyst Date Time Baten Method	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 0.033 0.100 mg/L 1 JXH5 10/05/17 1810 1706773

The following Analytical Methods were performed:

Method Description Analyst Comments

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

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

Certificate of Analysis

Report Date: October 18, 2017

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-02

Sample ID:

434133005

Matrix: Collect Date: Ground Water

27-SEP-17 15:10

Receive Date: Collector:

03-OCT-17 Client

P	aramei	er	
_	~-		

Qualifier

Result

RL

Units

PF

Analyst Comments

DF Analyst Date

Time Batch Method

Ion Chromatography

EPA300.0 Fluoride in Liquid "As Received"

Fluoride

0.033

DL

0.100

mg/L

Project:

Client ID:

1 JXH5 10/05/17 1839 1706773

SCEG01716c

GEEL003

The following Analytical Methods were performed:

Method

1

Description

EPA 300.0

Notes:

Column headers are defined as follows:

DF: Dilution Factor DL: Detection Limit MDA: Minimum Detectable Activity Lc/LC: Critical Level PF: Prep Factor **RL**: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 18, 2017

Company:

GEL Engineering, LLC

2040 Savage Rd Address:

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-03

Sample ID:

434133006

Matrix: Collect Date: Ground Water 27-SEP-17 16:20

Receive Date:

03-OCT-17

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time Batcl	n Method
Ion Chromatograph	ıy										
EPA300.0 Fluoride	in Liquid "As Re	ceived"									
Fluoride	U	ND	0.033	0.100	mg/L		1	JXH5	10/05/17	1908 170677	3 1
The following Ana	alytical Methods v	vere performed:									
Method	Description					Analy	st Co	mment	S		

Method 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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

GEEL003

Report Date: October 18, 2017

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FB-01

434133007

Sample ID: Matrix:

Ground Water

Collect Date:

27-SEP-17 16:50

Receive Date:

03-OCT-17

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	nalyst Date	Time Batch	Method
Ion Chromatography	7									
EPA300.0 Fluoride i	in Liquid "As Re	ceived"								
Fluoride	U	ND	0.033	0.100	mg/L		1 JX	KH5 10/05/17	1937 1706773	1

The following Analytical Methods were performed:

Method Description **Analyst Comments**

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

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

Certificate of Analysis

Project:

Client ID:

SCEG01716c

1 JXH5 10/05/17 2005 1706773

GEEL003

Report Date: October 18, 2017

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-04

Sample ID:

434133008

Matrix: Collect Date: Ground Water

Receive Date:

28-SEP-17 08:25

Collector:

03-OCT-17 Client

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

0.100

mg/L

Ion Chromatography

EPA300.0 Fluoride in Liquid "As Received"

Fluoride

The following Analytical Methods were performed:

	y	
Method	Description	Analyst Comments
1	EPA 300.0	•

0.033

Notes:

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level PF: Prep Factor DL: Detection Limit MDA: Minimum Detectable Activity **RL**: Reporting Limit

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

Certificate of Analysis

Project:

Client ID:

Analyst Comments

SCEG01716c

GEEL003

Report Date: October 18, 2017

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Wateree CCR

Client Sample ID: FGD-05

Sample ID:

434133009

Matrix:

Ground Water

Collect Date:

28-SEP-17 09:15

Receive Date:

03-OCT-17

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatograp	hy											
EPA300.0 Fluorid	e in Liquid "As Re	eceived"										
Fluoride	U	ND	0.033	0.100	mg/L		1	JXH5	10/05/17	2034	1706773	1
The following An	alytical Methods v	were performe	d:									

Method Description

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

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

QC Summary

Report Date: October 18, 2017

Page 1 of 2

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 434133

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Ion Chromatography Batch 1706773 ———											
QC1203889579 434134001 DUP Fluoride	U	ND	U	ND	mg/L	N/A			JXH5	10/05/1	17 21:32
QC1203889683 434131001 DUP Fluoride		0.306		0.304	mg/L	0.557 ^		(+/-0.100)	1	10/05/1	17 12:53
QC1203889577 LCS Fluoride	2.50			2.35	mg/L		93.9	(90%-110%)		10/05/1	17 11:55
QC1203889576 MB Fluoride			U	ND	mg/L					10/05/1	17 11:26
QC1203889581 434134001 PS Fluoride	2.50 U	ND		2.53	mg/L		101	(90%-110%)		10/05/1	17 22:59
QC1203889684 434131001 PS Fluoride	2.50	0.306		2.56	mg/L		90.2	(90%-110%)		10/06/1	17 10:41

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
- $\ensuremath{N/A}$ $\ensuremath{\mbox{ RPD}}$ 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
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.

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QC Summary

Page 2 of 2 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time

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
	DUITDOSES

R Sample results are rejected

RL is used to evaluate the DUP result.

434133

Workorder:

- 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
- 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 e 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

* 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.



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

September 28, 2017

REPORT TO:

Mike Moore

Sample ID: AB28773

Wateree NPDES Well MW 1 (NPDES)

Date & Time Sampled:

September 26, 2017 10:20

Date & Time Submitted: September 27, 2017 10:34

Collected by: A.HILL

Location Code: WAG01TDS

MW 1

Login Record File: 170927001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	4.97	0.50	mg/L	9/28/17 09:25	BB
pH by SM4500HB(2011)	5.43	0.00	S.U.	9/27/17 15:30	BF
Holding Time of 15 minutes has beer	n exceeded.				
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/28/17 09:25	BB
Total Dissolved Solid-SM2540C	27	2.0	mg/L	9/28/17 15:14	BF

If there are any questions concerning this sample, please contact the lab at (&03) 217-9384.



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28841

Wateree Well FGD-01 (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted: September 28, 2017 11:17

September 27, 2017 14:15

Collected by: A.HILL

Location Code: WAFGD01TDS

FGD-01

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	5.88	0.50	mg/L	9/29/17 10:59	BB
pH by SM4500HB(2011) Holding Time of 15 minutes has been	4.89 exceeded.	0.00	S.U.	9/28/17 11:50	BF
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/29/17 10:59	ВВ
Total Dissolved Solid-SM2540C	29	2.0	mg/L	10/3/17 14:05	BF

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28842

Wateree Well FGD-02 (NPDES/CCR)

Date & Time Sampled:

September 27, 2017 15:10

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGD02TDS

FGD-02

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	7.06	0.50	mg/L	9/29/17 10:59	ВВ
pH by SM4500HB(2011) Holding Time of 15 minutes has been	5.16 exceeded.	0.00	S.U.	9/28/17 11:50	BF
Sulfates by IC EPA 300.0	4.56	0.50	mg/L	9/29/17 10:59	ВВ
Total Dissolved Solid-SM2540C	46	2.0	mg/L	10/3/17 14:05	BF

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28843

Wateree Well FGD-03 (NPDES/CCR)

Date & Time Sampled: Date & Time Submitted: September 28, 2017 11:17

September 27, 2017 16:20

Collected by: A.HILL

Location Code: WAFGD03TDS

FGD-03

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Ai Date & Ti		Chemist
Chlorides by IC EPA 300.0	7.51	0.50	mg/L	9/29/17	10:59	ВВ
pH by SM4500HB(2011)	5.91	0.00	S.U.	9/28/17	11:50	BF
Holding Time of 15 minutes has been	exceeded.					
Sulfates by IC EPA 300.0	4.28	0.50	mg/L	9/29/17	10:59	ВВ
Total Dissolved Solid-SM2540C	61	2.0	mg/L	10/3/17	14:05	BF

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28844

Wateree Well Field Blank (NPDES)

Date & Time Sampled:

September 27, 2017 16:50

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFBTDS

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	0.68	0.50	mg/L	9/29/17 10:59	ВВ
pH by SM4500HB(2011) Holding Time of 15 minutes has been	6.21 exceeded.	0.00	S.U.	9/28/17 11:50	BF
Sulfates by IC EPA 300.0	Less than	0.50	mg/L	9/29/17 10:59	ВВ
Total Dissolved Solid-SM2540C	Less than	2.0	mg/L	10/3/17 14:05	BF

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28845

Wateree Well FGD-04 (NPDES/CCR)

Date & Time Sampled:

September 28, 2017 08:25

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGD04TDS

FGD-04

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	6.09	0.50	mg/L	9/29/17 10:59	ВВ
pH by SM4500HB(2011) Holding Time of 15 minutes has been	4.68 exceeded.	0.00	S.U.	9/28/17 11:50	BF
Sulfates by IC EPA 300.0	4.03	0.50	mg/L	9/29/17 10:59	ВВ
Total Dissolved Solid-SM2540C	33	2.0	mg/L	10/3/17 14:05	BF

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28846

Wateree Well FGD-05 (NPDES/CCR)

Date & Time Sampled:

September 28, 2017 09:15

Date & Time Submitted: September 28, 2017 11:17 Collected by: A.HILL

Location Code: WAFGD05TDS

FGD-05

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Chlorides by IC EPA 300.0	13.90	0.50	mg/L	9/29/17 10:59	ВВ
pH by SM4500HB(2011)	5.21	0.00	S,U.	9/28/17 11:50	BF
Holding Time of 15 minutes has been	exceeded.				
Sulfates by IC EPA 300.0	2.92	0.50	mg/L	9/29/17 10:59	ВВ
Total Dissolved Solid-SM2540C	53	2.0	mg/L	10/3/17 14:05	BF

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



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

September 28, 2017

REPORT TO:

Mike Moore

Sample ID: AB28794

Wateree NPDES Well MW 1 Total Metals (NPDES)

Date & Time Sampled:

September 26, 2017 10:20

Date & Time Submitted: September 27, 2017 10:34

Collected by: A.HILL

Location Code: WAG01TM

MW 1

Login Record File: 170927001

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	9/28/17 13:34	MC
Calcium EPA 200.7	511	100	ppb	9/28/17 13:34	MC

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28856

Wateree Well FGD-AS-1 TM (NPDES/CCR)

Date & Time Sampled:

September 27, 2017 12:04

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGDAS1TM

FGD-05

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analys Date & Time	is Chemist
Boron - EPA 200.7	Less than	1000	ppb	10/2/17 16:00) CDB
Calcium EPA 200.7	921	100	ppb	10/2/17 16:00) CDB

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28859

Wateree Well FGD-01 TM (NPDES/CCR)

Date & Time Sampled:

September 27, 2017 14:15

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGD01TM

FGD-01

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	10/2/17 16:00	CDB
Calcium EPA 200.7	638	100	ppb	10/2/17 16:00	CDB

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28860

Wateree Well FGD-02 TM (NPDES/CCR)

Date & Time Sampled:

September 27, 2017 15:10

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGD02TM

FGD-02

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	10/2/17 16:00	CDB
Calcium EPA 200.7	3498	1000	ppb	10/2/17 16:00	CDB

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28861

Wateree Well FGD-03 TM (NPDES/CCR)

Date & Time Sampled:

September 27, 2017 16:20

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGD03TM

FGD-03

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed An Date & Tir		Chemist
Boron - EPA 200.7	Less than	1000	ppb	10/2/17 1	6:00	CDB
Calcium EPA 200.7	8778	1000	ppb	10/2/17 1	6:00	CDB

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28862

Wateree Well Field Blank T Metals (NPDES)

Date & Time Sampled:

September 27, 2017 16:50

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFBTM

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist
Boron - EPA 200.7	Less than	1000	ppb	10/2/17 16:00	CDB
Calcium EPA 200.7	Less than	100	ppb	10/2/17 16:00	CDB

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28863

Wateree Well FGD-04 TM (NPDES/CCR)

Date & Time Sampled:

September 28, 2017 08:05

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGD04TM

FGD-04

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed Analysis Date & Time	Chemist	
Boron - EPA 200.7	Less than	1000	ppb	10/2/17 16:00	CDB	
Calcium EPA 200.7	1958	1000	ppb	10/2/17 16:00	CDB	

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



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

October 03, 2017

REPORT TO:

Mike Moore

Sample ID: AB28864

Wateree Well FGD-05 TM (NPDES/CCR)

Date & Time Sampled:

September 28, 2017 09:15

Date & Time Submitted: September 28, 2017 11:17

Collected by: A.HILL

Location Code: WAFGD05TM

FGD-05

Login Record File: 170928002

CERTIFIED BY SCDHEC (LAB ID 32006):	Result	Reporting Limit(MRL)	Units	Completed A Date & T		Chemist
Boron - EPA 200.7	Less than	1000	ppb	10/2/17	16:00	CDB
Calcium EPA 200.7	5429	1000	ppb	10/2/17	16:00	CDB

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



APPENDIX B

Statistical Analysis of Detection Monitoring Groundwater Quality
Results

Detection Monitoring Summary

	100 A							Run Id:	1
Location Id:	MW-FGD-02								
Compliance Test:	Double Quantification Rule	e							
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	Re Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend	
Boron, total ug/L	07/26/2017	AB27970			< 1.000	n	_	<u></u>	
Boron, total ug/L	09/27/2017	AB28860			< 1.000	n			
								<u>Run Id:</u>	2
Location Id:	MW-FGD-02								
Compliance Test:	Parametric Prediction Inte	erval on Backgroun	nd						
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u> Testing	Upper Limit	<u>Compliance</u> <u>Result</u>	Exceedance	<u>Possible</u> <u>SSI</u>	<u>Post-Hoc</u> <u>Trend</u>	
Calcium, tot ug/L	07/26/2017	AB27970	1 of 2	1.390	2.920	у	<u> 551</u>	None	
Calcium, tot ug/L	09/27/2017	AB28860	1 of 2	1.390	3.498	у		None	
								Run Id:	3
Location Id:	MW-FGD-02								
Compliance Test:	Parametric Prediction Inte	erval on Backgroun	nd						
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u> Testing	Upper Limit	Compliance Result	<u>Exceedance</u>	Possible SSI	<u>Post-Hoc</u> <u>Trend</u>	
Chlorides mg/L	07/26/2017	AB27950	1 of 2	7.451	6.990	n	<u></u>		
Chlorides mg/L	09/27/2017	AB28842	1 of 2	7.451	7.060	n			
								Run Id:	4

Location Id: MW-FGD-02

Detection Monitoring Summary

Run Id: **Location Id:** MW-FGD-02 Non-Parametric Prediction Interval on Background Useing largest background data value. **Compliance Test:** Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc SSI **Testing** Result Trend Field pH S.U. 07/26/2017 1 of 2 4.980 FLD20170726 4.500 n/n Field pH S.U. 09/27/2017 FLD20170927 1 of 2 4.980 4.880 n/n Run Id: 5 **Location Id:** MW-FGD-02 **Compliance Test: Double Quantification Rule** <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Fluoride, total mg/L 07/26/2017 428960006 < 0.100 n Fluoride, total mg/L 09/27/2017 434133005 < 0.100 n 6 Run Id: **Location Id:** MW-FGD-02 Non-Parametric Prediction Interval on Background Useing largest background data value. **Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter SSI Trend Testing Result 1 of 2 0.830 Sulfate, tot mg/L 07/26/2017 AB27950 3.570 y None Sulfate, tot mg/L 09/27/2017 AB28842 1 of 2 0.830 4.560 None У 7 Run Id:

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.

MW-FGD-02

Location Id:

Detection Monitoring Summary

Run Id: **Location Id:** MW-FGD-02 Non-Parametric Prediction Interval on Background Useing largest background data value. **Compliance Test:** Post-Hoc Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible SSI **Testing** Result Trend Total Dissolved Solids mg/L 1 of 2 96.000 07/26/2017 AB27950 39.000 n Total Dissolved Solids mg/L 09/27/2017 AB28842 1 of 2 96.000 46.000 n Run Id: 8 **Location Id:** MW-FGD-03 **Compliance Test: Double Quantification Rule** Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Boron, total ug/L 07/26/2017 AB27969 < 1.000 n Boron, total ug/L 09/27/2017 AB28861 < 1.000 n 9 Run Id: **Location Id:** MW-FGD-03 Parametric Prediction Interval on Background **Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter Result SSI Trend Testing Calcium, tot ug/L 1 of 2 1.390 07/26/2017 AB27969 12.900 y Downward Calcium, tot ug/L 09/27/2017 AB28861 1 of 2 1.390 8.778 Downward У 10 Run Id:

Location Id: MW-FGD-03

Detection Monitoring Summary

									Run Id:	10
Location Id:	MW-FGD									
Compliance Test:	: Paramet	tric Prediction Inte	erval on Background							
<u>Parameter</u>		Sample Date	<u>Lab Id</u>	<u>Re</u> Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend	
Chlorides mg/L		07/26/2017	AB27949	1 of 2	7.451	8.490	у		Downward	
Chlorides mg/L		09/27/2017	AB28843	1 of 2	7.451	7.510	у		Downward	
									Run Id:	11
Location Id:	MW-FGD	-03								
Compliance Test:	: Non-Par	ametric Prediction	ı Interval on Backgro	ound Useing largest back	kground data value.					
<u>Parameter</u>		Sample Date	<u>Lab Id</u>	<u>Re</u> <u>Testing</u>	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend	
Field pH S.U.		07/26/2017	FLD20170726	1 of 2	4.980	5.270	y/n		<u></u>	
Field pH S.U.		09/27/2017	FLD20170927	1 of 2	4.980	5.550	y/n			
									Run Id:	12
Location Id:	MW-FGD	-03								
Compliance Test:	: Double (Quantification Rul	e							
<u>Parameter</u>		Sample Date	<u>Lab Id</u>	<u>Re</u> Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend	
Fluoride, total mg/	/L	07/26/2017	428960005	resung 		< 0.100	n	<u>551</u>	<u></u>	
Fluoride, total mg/	/L	09/27/2017	434133006			< 0.100	n			
									Run Id:	13

Location Id: MW-FGD-03

Detection Monitoring Summary

Run Id: 13 **Location Id:** MW-FGD-03 Non-Parametric Prediction Interval on Background Useing largest background data value. **Compliance Test:** Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Trend **Testing** Result SSI 1 of 2 0.830 Sulfate, tot mg/L 07/26/2017 AB27949 16.970 None y Sulfate, tot mg/L 09/27/2017 AB28843 1 of 2 0.830 4.280 None y Run Id: 14 **Location Id:** MW-FGD-03 Non-Parametric Prediction Interval on Background Useing largest background data value. Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Total Dissolved Solids mg/L 07/26/2017 AB27949 1 of 2 96.000 75.000 n 1 of 2 Total Dissolved Solids mg/L 09/27/2017 AB28843 96.000 61.000 n 15 Run Id: MW-FGD-04 **Location Id: Double Quantification Rule Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter Result SSI Trend Testing Boron, total ug/L < 1.000 07/26/2017 AB27971 n Boron, total ug/L 09/28/2017 AB28863 < 1.000 n 16 Run Id:

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.

MW-FGD-04

Location Id:

Detection Monitoring Summary

	MW ECD 44							Run Id:	16
Location Id:	MW-FGD-04								
Compliance Test:	Parametric Prediction Int	terval on Background							
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u> Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend	
Calcium, tot ug/L	07/26/2017	AB27971	1 of 2	1.390	2.510	y	<u>—</u>	None	
Calcium, tot ug/L	09/28/2017	AB28863	1 of 2	1.390	1.958	у		None	
								Run Id:	17
Location Id:	MW-FGD-04								
Compliance Test:	Parametric Prediction Int	terval on Background							
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u> <u>Testing</u>	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend	
Chlorides mg/L	07/26/2017	AB27951	1 of 2	7.451	6.900	n	<u>551</u>		
Chlorides mg/L	09/28/2017	AB28845	1 of 2	7.451	6.090	n			
								Run Id:	18
Location Id:	MW-FGD-04								
Compliance Test:	Non-Parametric Prediction	on Interval on Backgro	ound Useing largest bac	kground data value.					
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u> Testing	Upper Limit	Compliance Result	Exceedance	Possible SSI	<u>Post-Hoc</u> Trend	
Field pH S.U.	07/26/2017	FLD20170726	1 of 2	4.980	4.180	n/n	<u>551</u>		
Field pH S.U.	09/28/2017	FLD20170928	1 of 2	4.980	4.360	n/n			
								Run Id:	19

Location Id: MW-FGD-04

Detection Monitoring Summary

Run Id: 19 **Location Id:** MW-FGD-04 **Double Quantification Rule Compliance Test:** Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc SSI Result Trend Testing < 0.100 Fluoride, total mg/L 07/26/2017 428960007 n Fluoride, total mg/L 09/28/2017 434133008 < 0.100 n Run Id: 20 **Location Id:** MW-FGD-04 Non-Parametric Prediction Interval on Background Useing largest background data value. Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Sulfate, tot mg/L 07/26/2017 AB27951 1 of 2 0.830 4.750 y Downward 1 of 2 Sulfate, tot mg/L 09/28/2017 AB28845 0.830 4.030 Downward У Run Id: 21 **Location Id:** MW-FGD-04 Non-Parametric Prediction Interval on Background Useing largest background data value. **Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter SSI Trend Testing Result 1 of 2 Total Dissolved Solids mg/L 07/26/2017 AB27951 96.000 29.000 n Total Dissolved Solids mg/L 09/28/2017 AB28845 1 of 2 96.000 33.000 n 22 Run Id:

Location Id: MW-FGD-05

Detection Monitoring Summary

								Run Id:	22
Location Id:	MW-FGD-05								
Compliance Test:	Double Quantification Rule	e							
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u> <u>Testing</u>	Upper Limit	Compliance Result	Exceedance	Possible SSI	Post-Hoc Trend	
Boron, total ug/L	07/26/2017	AB27972			< 1.000	n			
Boron, total ug/L	09/28/2017	AB28864			< 1.000	n			
								Run Id:	23
Location Id:	MW-FGD-05								
Compliance Test:	Parametric Prediction Inte	rval on Background							
•									
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u> Testing	<u>Upper Limit</u>	Compliance Result	<u>Exceedance</u>	Possible SSI	<u>Post-Hoc</u> <u>Trend</u>	
Calcium, tot ug/L	07/26/2017	AB27972	1 of 2	1.390	23.500	у	<u>551</u>	Upward	
Calcium, tot ug/L	09/28/2017	AB28864	1 of 2	1.390	5.429	y		Upward	
								Run Id:	24
Location Id:	MW-FGD-05								
Compliance Test:	Parametric Prediction Inte	rval on Background							
•		9							
<u>Parameter</u>	Sample Date	<u>Lab Id</u>	Re Testing	<u>Upper Limit</u>	Compliance Result	<u>Exceedance</u>	Possible SSI	Post-Hoc	
Chlorides mg/L	07/26/2017	AB27952	Testing 1 of 2	7.451	12.160	y	<u>331</u>	<u>Trend</u> Upward	
Chlorides mg/L	09/28/2017	AB28846	1 of 2	7.451	13.900	y		Upward	
								<u>Run Id:</u>	25

Location Id: MW-FGD-05

Detection Monitoring Summary

Run Id: 25 **Location Id:** MW-FGD-05 Non-Parametric Prediction Interval on Background Useing largest background data value. **Compliance Test:** Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc SSI **Testing** Result Trend Field pH S.U. 07/26/2017 1 of 2 4.980 FLD20170726 5.480 y/n Field pH S.U. 09/28/2017 FLD20170928 1 of 2 4.980 4.990 y/n Run Id: 26 **Location Id:** MW-FGD-05 **Compliance Test: Double Quantification Rule** <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Fluoride, total mg/L 07/26/2017 < 0.100 428960008 n Fluoride, total mg/L 09/28/2017 434133009 < 0.100 n 27 Run Id: MW-FGD-05 **Location Id:** Non-Parametric Prediction Interval on Background Useing largest background data value. **Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter Result SSI Trend Testing 1 of 2 0.830 Sulfate, tot mg/L 07/26/2017 AB27952 16.060 y None Sulfate, tot mg/L 09/28/2017 AB28846 1 of 2 0.830 2.920 None У 28 Run Id:

Location Id: MW-FGD-05

Detection Monitoring Summary

<u>Run Id:</u> 28

Location Id: MW-FGD-05

Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value.

<u>Parameter</u>	Sample Date	<u>Lab Id</u>	<u>Re</u>	Upper Limit	Compliance	Exceedance	<u>Possible</u>	Post-Hoc
			<u>Testing</u>		Result		<u>SSI</u>	Trend
Total Dissolved Solids mg/L	07/26/2017	AB27952	1 of 2	96.000	98.000	y		Upward
Total Dissolved Solids mg/L	09/28/2017	AB28846	1 of 2	96.000	53.000	n		
i otai Dissolved Solids Ilig/L	03/20/2017	AD20040	1 01 2	20.000	33.000	11		

Location Id: MW-FGD-02 Run Id: 1

Parameter: Boron, total

Method: Double Quantification Rule

Percent ND: 100

Sample Date	Modified Result	Analysis Result	Detection Lmit	<u>PQL</u>	<u>RL</u>	Non Detect	<u>Exceedance</u>
07/26/2017	1.000	0.044	0.044	1.000	0.000	Υ	N
09/27/2017	1.000	0.044	0.044	1.000	0.000	Υ	N

Location Id: MW-FGD-02 Run Id: 5

Parameter: Fluoride, total

Method: Double Quantification Rule

Percent ND: 100

07/26/2017 0.100 0.033 0.033 0.100 0.000 Y N	Sample Date	Modified Result	Analysis Result	Detection Lmit	<u>PQL</u>	<u>RL</u>	Non Detect	Exceedance
00/07/0047	07/26/2017	0.100	0.033	0.033	0.100	0.000	Υ	N
09/27/2017 0.100 0.033 0.033 0.100 0.000 Y N	09/27/2017	0.100	0.033	0.033	0.100	0.000	Y	N

Location Id: MW-FGD-03 Run Id: 8

Parameter: Boron, total

Method: Double Quantification Rule

Percent ND: 100

Sample Date	Modified Result	Analysis Result	Detection Lmit	<u>PQL</u>	<u>RL</u>	Non Detect	Exceedance
07/26/2017	1.000	0.044	0.044	1.000	0.000	Υ	N
09/27/2017	1.000	0.044	0.044	1.000	0.000	Υ	N

1:58:59 PM

All Backgound Results Non-Detect

Location Id: MW-FGD-03 Run Id: 12

Parameter: Fluoride, total

Method: Double Quantification Rule

Percent ND: 100

07/26/2017 0.100	0.050	0.000	0.400			
0.100	0.050	0.033	0.100	0.000	Y	N
09/27/2017 0.100	0.033	0.033	0.100	0.000	Y	N

Location Id: MW-FGD-04 Run Id: 15

Parameter: Boron, total

Method: Double Quantification Rule

Percent ND: 100

Sample Date M	Modified Result	Analysis Result	Detection Lmit	<u>PQL</u>	<u>RL</u>	Non Detect	Exceedance
07/26/2017	1.000	0.044	0.044	1.000	0.000	Υ	N
09/28/2017	1.000	0.044	0.044	1.000	0.000	Υ	N

Location Id: MW-FGD-04 Run Id: 19

Parameter: Fluoride, total

Method: Double Quantification Rule

Percent ND: 100

					<u>RL</u>		
07/26/2017	0.100	0.042	0.033	0.100	0.000	Υ	N
09/28/2017	0.100	0.033	0.033	0.100	0.000	Υ	N

Location Id: MW-FGD-05 Run Id: 22

Parameter: Boron, total

Method: Double Quantification Rule

Percent ND: 100

07/26/2017 1.000 0.044 0.044 1.000 0.000 Y N 09/28/2017 1.000 0.044 0.044 1.000 0.000 Y N	Sample Date	Modified Result	Analysis Result	Detection Lmit	<u>PQL</u>	<u>RL</u>	Non Detect	<u>Exceedance</u>
09/28/2017 1.000 0.044 0.044 1.000 0.000 Y N	07/26/2017	1.000	0.044	0.044	1.000	0.000	Υ	N
	09/28/2017	1.000	0.044	0.044	1.000	0.000	Υ	N

Location Id: MW-FGD-05 Run Id: 26

Parameter: Fluoride, total

Method: Double Quantification Rule

Percent ND: 100

					<u>RL</u>		
07/26/2017	0.100	0.041	0.033	0.100	0.000	Υ	N
09/28/2017	0.100	0.033	0.033	0.100	0.000	Υ	N

Wateree Station Parametric Prediction Interval on Background - Background Data Calculation

Number Of Locations:	4	Annual Site Wide False Positive Rate (SWFPR): 0.10
Number Of Parameters:	7	Sample Events per Year: 2
Sampling Plan:	Interwell	<u>Verification Sampling:</u> Pass 1 of 2 (one resample)

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

<u>Insufficient Background:</u> 0 <u>DOR Tests:</u> 2

Parameter Name:	Calcium, tot, ug/L	Background Date Range:	05/11/2016 to 11/14/2017
Alpha Per Test FPR:	0.00261	Option for LT Pts:	0% to <= 15% Substitute ½ PQL
Total Pts	23	Kappa for Selected Verification Plan:	1.756
<u>LT Pts</u>	0	<u>Mean</u>	0.8284
%LT Pts	0	StdDev	0.3176
Normal/Log Normal	n/y	<u>In Mean</u>	-0.2432
Log Transformed:	y	<u>In StdDev</u>	0.3261

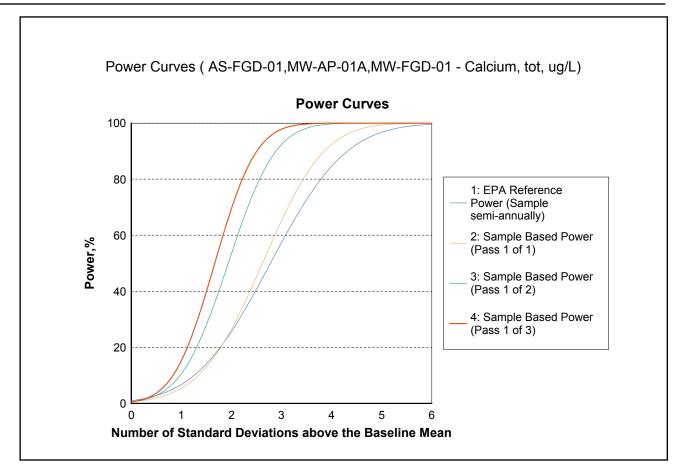
Parameter Name:	Chlorides, mg/L	Background Date Range:	05/11/2016 to 11/14/2017
Alpha Per Test FPR:	0.00261	Option for LT Pts:	0% to <= 15% Substitute $\frac{1}{2}$ PQL
Total Pts	21	Kappa for Selected Verification Plan:	1.768
LT Pts	0	Mean	5.7043
%LT Pts	0	StdDev	0.9879
Normal/Log Normal	y/y	ln Mean	1.7264
Log Transformed:	n	<u>In StdDev</u>	0.1784

Wateree Station Parametric Prediction Interval on Background - Background Data Calculation

 Number Of Locations:
 4
 Annual Site Wide False Positive Rate (SWFPR):
 0.10

 Number Of Parameters:
 7
 Sample Events per Year:
 2

 Sampling Plan:
 Interwell
 Verification Sampling:
 Pass 1 of 2 (one resample)

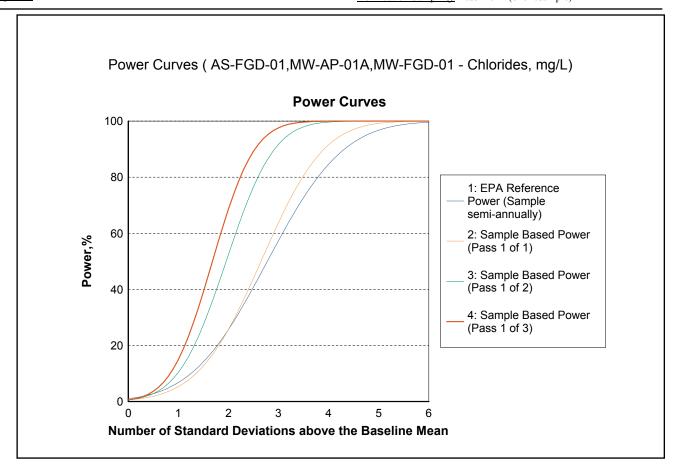


Wateree Station Parametric Prediction Interval on Background - Background Data Calculation

 Number Of Locations:
 4
 Annual Site Wide False Positive Rate (SWFPR):
 0.10

 Number Of Parameters:
 7
 Sample Events per Year:
 2

 Sampling Plan:
 Interwell
 Verification Sampling:
 Pass 1 of 2 (one resample)



User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 11/14/2017

 Compliance Date Range:
 07/24/2017 to 09/28/2017

Compliance Locations: MW-FGD-02,MW-FGD-03,MW-FGD-04,MW-FGD-05

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Location MW-FGD-02

Run Id: 2

Parameter Name: Calcium, tot, ug/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

 Sample Date
 Analysis Result
 Upper Limit
 Upper Limit

 7/26/2017
 2.920
 1.390
 y

 9/27/2017
 3.498
 1.390
 y

Run Id: 3

Parameter Name: Chlorides, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

Sample Date	Analysis Result	<u>Upper Limit</u>	Upper Limit
7/26/2017	6.990	7.451	n
9/27/2017	7.060	7.451	n

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 11/14/2017

 Compliance Date Range:
 07/24/2017 to 09/28/2017

Compliance Locations: MW-FGD-02,MW-FGD-03,MW-FGD-04,MW-FGD-05

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Location MW-FGD-03

Run Id: 9

Parameter Name: Calcium, tot, ug/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

 Sample Date
 Analysis Result
 Upper Limit
 Upper Limit

 7/26/2017
 12.900
 1.390
 y

 9/27/2017
 8.778
 1.390
 y

Run Id: 10

Parameter Name: Chlorides, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

Sample Date	Analysis Result	<u>Upper Limit</u>	Upper Limit
7/26/2017	8.490	7.451	у
9/27/2017	7.510	7.451	y

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 11/14/2017

 Compliance Date Range:
 07/24/2017 to 09/28/2017

Compliance Locations: MW-FGD-02,MW-FGD-03,MW-FGD-04,MW-FGD-05

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Location MW-FGD-04

Run Id: 16

Parameter Name: Calcium, tot, ug/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

 Sample Date
 Analysis Result
 Upper Limit
 Upper Limit

 7/26/2017
 2.510
 1.390
 y

 9/28/2017
 1.958
 1.390
 y

Run Id: 17

Parameter Name: Chlorides, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

Sample Date	Analysis Result	<u>Upper Limit</u>	<u>Upper Limit</u>
7/26/2017	6.900	7.451	n
9/28/2017	6.090	7.451	n

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 11/14/2017

 Compliance Date Range:
 07/24/2017 to 09/28/2017

Compliance Locations: MW-FGD-02,MW-FGD-03,MW-FGD-04,MW-FGD-05

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Location MW-FGD-05

Run Id: 23

Parameter Name: Calcium, tot, ug/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

 Sample Date
 Analysis Result
 Upper Limit
 Upper Limit

 7/26/2017
 23.500
 1.390
 y

 9/28/2017
 5.429
 1.390
 y

Run Id: 24

Parameter Name: Chlorides, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

Sample Date	Analysis Result	<u>Upper Limit</u>	Upper Limit
7/26/2017	12.160	7.451	y
9/28/2017	13.900	7.451	у

Wateree Station Parametric Prediction Interval on Background - Compliance Analysis

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 11/14/2017

 Compliance Date Range:
 07/24/2017 to 09/28/2017

Compliance Locations: MW-FGD-02,MW-FGD-03,MW-FGD-04,MW-FGD-05

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Prediction Interval is based on Normal Distribution and the number of compliance periods (k).

User Supplied Information

Background Date Range: 05/11/2016 to 11/14/2017 **Compliance Date Range:** 07/24/2017 to 9/28/2017

No. of Verification Resamples:

Run Id:

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Parameter Code Parameter Name **Units** Sample Count Option for LT Pts. 00400 Field pH S.U. 23 0% to <= 15% Substitute

Background

Background

PQL

One-Sided Upper **One-Sided Lower** PU (Upper) Value: PL (Lower) Value:

Confidence Level, % Confidence Level, %

98.70 74.19 4.980 3.440

Sample Sample Greater than Less than PL (Lower) Location Result PU (Upper) Date MW-FGD-02 07/26/2017 4.500 n n MW-FGD-02 09/27/2017 4.880 n

Run Id: 6

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Parameter Code Parameter Name Option for LT Pts. **Units** Sample Count 00945 Sulfate, tot > 50% to <= 100 % mg/L 21

Substitute PQL

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 0.830

Sample Greater than Sample Location Date Result PU (Upper) MW-FGD-02 07/26/2017 3.570 у MW-FGD-02 09/27/2017 4.560 y

User Supplied Information

 Background Date Range:
 05/11/2016
 to 11/14/2017

 Compliance Date Range:
 07/24/2017
 to 9/28/2017

No. of Verification Resamples:

Run Id: 7

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Parameter Code
00515Parameter Name
Total Dissolved SolidsUnits
mg/LSample Count
21Option for LT Pts.
0% to <= 15% Substitute</th>

Background

Background

PQL

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 96.000

 Location
 Date
 Result
 PU (Upper)

 MW-FGD-02
 07/26/2017
 39.000
 n

 MW-FGD-02
 09/27/2017
 46.000
 n

Run Id: 11

Confidence Level, %

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Confidence Level, %

PQL

One-Sided Upper One-Sided Lower PU (Upper) Value: PL (Lower) Value:

98.70 74.19 4.980 3.440

Sample Greater than Less than Sample PL (Lower) Location Date Result PU (Upper) MW-FGD-03 07/26/2017 5.270 у MW-FGD-03 09/27/2017 5.550 y n

User Supplied Information

Background

Background

 Background Date Range:
 05/11/2016
 to 11/14/2017

 Compliance Date Range:
 07/24/2017
 to 9/28/2017

No. of Verification Resamples:

Run Id: 13

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 0.830

 Location
 Date
 Result
 PU (Upper)

 MW-FGD-03
 07/26/2017
 16.970
 y

 MW-FGD-03
 09/27/2017
 4.280
 y

Run Id: 14

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

 Parameter Code 00515
 Parameter Name Total Dissolved Solids
 Units mg/L
 Sample Count mg/L
 Option for LT Pts.

 21
 0% to <= 15% Substitute POL</td>

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 96.000

 Location
 Date
 Result
 PU (Upper)

 MW-FGD-03
 07/26/2017
 75.000
 n

 MW-FGD-03
 09/27/2017
 61.000
 n

User Supplied Information

 Background Date Range:
 05/11/2016
 to 11/14/2017

 Compliance Date Range:
 07/24/2017
 to 9/28/2017

No. of Verification Resamples:

Run Id: 18

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Parameter Code
00400Parameter Name
Field pHUnits
S.U.Sample Count
23Option for LT Pts.
0% to <= 15% Substitute</th>

Background

Background

PQL

One-Sided Upper One-Sided Lower PU (Upper) Value: PL (Lower) Value:

Confidence Level, % Confidence Level, %

98.70 74.19 4.980 3.440

Sample Sample Greater than Less than PL (Lower) Location Result PU (Upper) Date MW-FGD-04 07/26/2017 4.180 n n MW-FGD-04 09/28/2017 4.360 n

Run Id: 20

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

 $\begin{array}{c|ccccc} \underline{Parameter\ Code} & \underline{Parameter\ Name} & \underline{Units} & \underline{Sample\ Count} & \underline{Option\ for\ LT\ Pts.} \\ 00945 & Sulfate,\ tot & mg/L & 21 & >50\%\ to <= 100\ \% \end{array}$

Substitute PQL

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 0.830

 Sample
 Sample
 Greater than

 Location
 Date
 Result
 PU (Upper)

 MW-FGD-04
 07/26/2017
 4.750
 y

 MW-FGD-04
 09/28/2017
 4.030
 y

User Supplied Information

 Background Date Range:
 05/11/2016
 to 11/14/2017

 Compliance Date Range:
 07/24/2017
 to 9/28/2017

No. of Verification Resamples: 1

Run Id: 21

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

Parameter Code
00515Parameter Name
Total Dissolved SolidsUnits
mg/LSample Count
21Option for LT Pts.
0% to <= 15% Substitute</th>

Background

Background

PQL

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 96.000

 Location
 Date
 Result
 PU (Upper)

 MW-FGD-04
 07/26/2017
 29.000
 n

 MW-FGD-04
 09/28/2017
 33.000
 n

Run Id: 25

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

PQL

One-Sided Upper One-Sided Lower PU (Upper) Value: PL (Lower) Value:

Confidence Level, % Confidence Level, %

98.70 74.19 4.980 3.440

Sample Greater than Less than Sample PL (Lower) Location Date Result PU (Upper) MW-FGD-05 07/26/2017 5.480 у MW-FGD-05 09/28/2017 4.990 y n

User Supplied Information

Background

Background

 Background Date Range:
 05/11/2016
 to 11/14/2017

 Compliance Date Range:
 07/24/2017
 to 9/28/2017

No. of Verification Resamples:

Run Id: 27

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 0.830

 Location
 Date
 Result
 PU (Upper)

 MW-FGD-05
 07/26/2017
 16.060
 y

 MW-FGD-05
 09/28/2017
 2.920
 y

Run Id: 28

Background Locations: AS-FGD-01,MW-AP-01A,MW-FGD-01

 Parameter Code 00515
 Parameter Name Total Dissolved Solids
 Units mg/L
 Sample Count mg/L
 Option for LT Pts.

 21
 0% to <= 15% Substitute POL</td>

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.47 96.000

 Location
 Date
 Result
 PU (Upper)

 MW-FGD-05
 07/26/2017
 98.000
 y

 MW-FGD-05
 09/28/2017
 53.000
 n

Location ID: MW-FGD-02 Confidence Level: 0.95 Date Range: 05/11/2016 to 09/27/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	01022 Boron, total ug/L 100
Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	0.000	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/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	

Location ID: MW-FGD-02 Confidence Level: 0.95 Date Range: 05/11/2016 to 09/27/2017	Parameter Code: Parameter: Units:	00916 Calcium, tot 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:	-0.876	ug/L per year
Lower Confidence Limit of Slope, M1:	-5.553	ug/L per year
Upper Confidence Limit of Slope, M2+1:	1.500	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	

Location ID: MW-FGD-02 Confidence Level: 0.95 Date Range: 05/11/2016 to 09/27/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00940 Chlorides mg/L
		0
Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
Median Slope:	-4.455	mg/L per year
Lower Confidence Limit of Slope, M1:	-9.618	mg/L per year
Upper Confidence Limit of Slope, M2+1:	-1.824	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-2.815	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	Downward	

Location ID: MW-FGD-02 Confidence Level: 0.95 Date Range: 05/11/2016 to 09/27/2017	Parameter Code: Parameter: Units:	00400 Field pH 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:	0.219	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.832	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.934	S.U. 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	

Post Hoc Trend Analysis Run Id: 5

Location ID: MW-FGD-02 00951 **Parameter Code:** Parameter: Fluoride, total **Confidence Level: Units:** mg/L Date Range: 05/11/2016 to 09/27/2017 > 50% to <= 100 % Substitute PQL **Option for LT Points:** 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: 0.000mg/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

None

At the 1.0 % Confidence Level (One-Sided Test):

Location ID: MW-FGD-02 Confidence Level: 0.95 Date Range: 05/11/2016 to 09/27/2017	Parameter Code: Parameter: Units:	00945 Sulfate, tot 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:	-1.454	mg/L per year
Lower Confidence Limit of Slope, M1:	-18.770	mg/L per year
Upper Confidence Limit of Slope, M2+1:	3.927	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	

Location ID: MW-FGD-02 Confidence Level: 0.95 Date Range: 05/11/2016 to 09/27/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00515 Total Dissolved Solids mg/L 0
Median Slope:	-20.116	mg/L per year
Lower Confidence Limit of Slope, M1:	-51.173	mg/L per year
Upper Confidence Limit of Slope, M2+1:	-7.874	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-1.981	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	Downward	

Location ID: MW-FGD-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/27/2017	Parameter Code: Parameter: Units:	01022 Boron, total ug/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	ug/L per year
Lower Confidence Limit of Slope, M1:	0.000	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/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	

Location ID: MW-FGD-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/27/2017	Parameter Code: Parameter: Units:	00916 Calcium, tot 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:	-13.551	ug/L per year
Lower Confidence Limit of Slope, M1:	-31.110	ug/L per year
Upper Confidence Limit of Slope, M2+1:	-5.953	ug/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):	Downward	

Location ID: MW-FGD-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/27/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00940 Chlorides mg/L
		0
Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
Median Slope:	-1.579	mg/L per year
Lower Confidence Limit of Slope, M1:	-5.593	mg/L per year
Upper Confidence Limit of Slope, M2+1:	-0.283	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-1.981	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	Downward	

Location ID: MW-FGD-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/27/2017	Parameter Code: Parameter: Units:	00400 Field pH 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:	-0.523	S.U. per year
Lower Confidence Limit of Slope, M1:	-1.161	S.U. per year
Upper Confidence Limit of Slope, M2+1:	-0.247	S.U. 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):	Downward	

Location ID: MW-FGD-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/27/2017	Parameter Code: Parameter: Units:	00951 Fluoride, total mg/L
Option for LT Points: > 50% to <= 100 % Substitute PQL	Percent of ND:	78
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:	-0.024	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:	-1.159	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	None	

Location ID: MW-FGD-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/27/2017	Parameter Code: Parameter: Units:	00945 Sulfate, tot 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:	-24.176	mg/L per year
Lower Confidence Limit of Slope, M1:	-77.819	mg/L per year
Upper Confidence Limit of Slope, M2+1:	10.164	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-1.355	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	None	

Post Hoc Trend Analysis Run Id: 14

Location ID: MW-FGD-03 Parameter Code: 00515

Confidence Level: 0.95 Parameter: Total Dissolved Solids

Date Range: 05/12/2016 to 09/27/2017 Units: mg/L

Option for LT Points: 0% to $\le 15\%$ Substitute PQL Percent of ND: 0

Theil-Sen Non-parametric estimate of the slope (One-Sided Test)

Median Slope:-68.157mg/L per yearLower Confidence Limit of Slope, M1:-163.929mg/L per yearUpper Confidence Limit of Slope, M2+1:-11.121mg/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): Downward

Location ID: MW-FGD-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: >50% to <= 100 % Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	01022			
		Boron, total ug/L 100			
			Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
			Median Slope:	0.000	ug/L per year
Lower Confidence Limit of Slope, M1:	0.000	ug/L per year			
Upper Confidence Limit of Slope, M2+1:	0.000	ug/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				

Location ID: MW-FGD-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00916			
		Calcium, tot ug/L 0			
			Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
			Median Slope:	-0.497	ug/L per year
Lower Confidence Limit of Slope, M1:	-1.224	ug/L per year			
Upper Confidence Limit of Slope, M2+1:	0.349	ug/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				

Location ID: MW-FGD-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00940 Chlorides mg/L
		0
Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
Median Slope:	-2.090	mg/L per year
Lower Confidence Limit of Slope, M1:	-3.019	mg/L per year
Upper Confidence Limit of Slope, M2+1:	0.868	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-1.355	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	None	

Location ID: MW-FGD-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00400 Field pH S.U.
		0
Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
Median Slope:	-0.180	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.658	S.U. per year
Upper Confidence Limit of Slope, M2+1:	0.505	S.U. per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-0.313	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	None	

Post Hoc Trend Analysis Run Id: 19

Location ID: MW-FGD-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00951 Fluoride, total mg/L 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	

None

At the 1.0 % Confidence Level (One-Sided Test):

Location ID: MW-FGD-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00945 Sulfate, tot mg/L
		0
Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
Median Slope:	-1.986	mg/L per year
Lower Confidence Limit of Slope, M1:	-7.077	mg/L per year
Upper Confidence Limit of Slope, M2+1:	-0.234	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	-1.772	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	Downward	

Post Hoc Trend Analysis Run Id: 21

Location ID: MW-FGD-04 00515 **Parameter Code:** Parameter: **Total Dissolved Solids Confidence Level: Units:** mg/L Date Range: 05/12/2016 to 09/28/2017 0% to <= 15% Substitute PQL **Option for LT Points:** Percent of ND: 0 Theil-Sen Non-parametric estimate of the slope (One-Sided Test) Median Slope: mg/L per year -4.138 Lower Confidence Limit of Slope, M1: -15.711 mg/L per year Upper Confidence Limit of Slope, M2+1: 8.934 mg/L per year Non-parametric Mann-Kendall Test for Trend S Statistic: -0.210

1.645

None

Z test:

At the 1.0 % Confidence Level (One-Sided Test):

Location ID: MW-FGD-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017	Parameter Code: Parameter: Units:	01022 Boron, total ug/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	ug/L per year
Lower Confidence Limit of Slope, M1:	0.000	ug/L per year
Upper Confidence Limit of Slope, M2+1:	0.000	ug/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	

Location ID: MW-FGD-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00916			
		Calcium, tot ug/L 0			
			Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
			Median Slope:	3.582	ug/L per year
Lower Confidence Limit of Slope, M1:	0.247	ug/L per year			
Upper Confidence Limit of Slope, M2+1:	8.723	ug/L per year			
Non-parametric Mann-Kendall Test for Trend					
S Statistic:	1.981				
Z test:	1.645				
At the 1.0 % Confidence Level (One-Sided Test):	Upward				

Location ID: MW-FGD-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00940 Chlorides mg/L 0
Median Slope:	2.456	mg/L per year
Lower Confidence Limit of Slope, M1:	1.186	mg/L per year
Upper Confidence Limit of Slope, M2+1:	3.766	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	2.424	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	Upward	

Location ID: MW-FGD-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00400 Field pH S.U.
		0
Theil-Sen Non-parametric estimate of the slope (One-Sided Test)		
Median Slope:	0.580	S.U. per year
Lower Confidence Limit of Slope, M1:	-0.098	S.U. per year
Upper Confidence Limit of Slope, M2+1:	1.384	S.U. per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	1.355	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	None	

Post Hoc Trend Analysis Run Id: 26

Location ID: MW-FGD-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00951 Fluoride, total mg/L 100
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	

Location ID: MW-FGD-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: > 15% to <= 50% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00945 Sulfate, tot
		mg/L 22
Median Slope:	1.935	mg/L per year
Lower Confidence Limit of Slope, M1:	-1.192	mg/L per year
Upper Confidence Limit of Slope, M2+1:	2.996	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	

Location ID: MW-FGD-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/28/2017 Option for LT Points: 0% to <= 15% Substitute PQL	Parameter Code: Parameter: Units: Percent of ND:	00515 Total Dissolved Solids mg/L 0
Median Slope:	8.919	mg/L per year
Lower Confidence Limit of Slope, M1:	3.025	mg/L per year
Upper Confidence Limit of Slope, M2+1:	22.231	mg/L per year
Non-parametric Mann-Kendall Test for Trend		
S Statistic:	2.554	
Z test:	1.645	
At the 1.0 % Confidence Level (One-Sided Test):	Upward	