

2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

EPA CCR RULE COMPLIANCE

SOUTH CAROLINA ELECTRIC & GAS: Cope Station: Class Three Landfill

January 2018

Prepared by:

S. BO

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NO. 1178

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Prepared for:

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



Table of Contents

| 1.0 | INTRODUCTION | 1 |
|-----|---|---|
| 2.0 | GROUNDWATER MONITORING WELL SYSTEM | 2 |
| 3.0 | GROUNDWATER MONITORING | 3 |
| | Groundwater Sampling | |
| 3.2 | . • | |
| 3.3 | , | |
| | KEY PROJECT ACTIVITIES FOR 2018 | |
| T.U | | |

Figures

- 1 Site Location Map: Cope Generating Station
- 2 Site Map: Cope Generating Station

Appendices

- A Results of Field and Laboratory Analyses of Groundwater Samples
- B Statistical Analysis of Detection Monitoring Groundwater Quality Results



1.0 INTRODUCTION

This document presents the 2017 Annual Groundwater Monitoring and Corrective Action report for the Class 3 landfill at South Carolina Electric & Gas (SCE&G) Cope Generating Station in Cope, Orangeburg County, South Carolina in accordance with 40 CFR Part 257.90 (e). The Class 3 landfill is a coal combustion residuals (CCR) handling facility as defined by the US Environmental Protection Agency (EPA) CCR Rule (40 CFR Part 257.93).

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

- 1. A facility map (aerial image) showing the Class 3 landfill and all background (or upgradient) and downgradient monitoring wells, including the well identification numbers, that are part of the groundwater monitoring program for the landfill;
- 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

Six Type II groundwater monitoring wells (designated MW-LF-01 through MW-LF-06) were installed and developed at Cope Station Class Three Landfill in March 2016 to serve as EPA CCR Rule Compliance monitoring wells. Rising head permeability (slug) tests were conducted at monitoring wells MW-LF-01 through MW-LF-06 in May 2016. In addition, two existing monitoring wells which are also used for NPDES and South Carolina Department of Health and Environmental Control (SCDHEC) landfill groundwater monitoring compliance, were incorporated in the system network. The existing wells (MW-06 and MW-16) are designated MW-BG-06 and MW-BG-16 in the CCR groundwater monitoring network A South Carolina licensed well driller with S&ME, Inc. of Wilmington, North Carolina (SC License #1583) performed the drilling and monitoring well installations for monitoring wells MW-LF-01 through MW-LF-06. 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. A site location map for Cope Station is presented as Figure 1 and the locations and designations of the EPA CCR Rule Compliance monitoring wells are presented in Figure 2.

The eight groundwater monitoring wells are used to monitor groundwater quality in the vicinity of the Class Three landfill in compliance with the groundwater monitoring requirements of the US EPA CCR Rule. Monitoring well MW-LF-01, along with monitoring wells MW-BG-06 and MW-BG-16, serve as up-gradient wells to monitor the quality of background groundwater in the surficial aquifer entering the area of the Class Three landfill. Monitoring wells MW-LF-02 through MW-LF-06 serve as down gradient wells to monitor the quality of groundwater down gradient of the Class Three landfill.



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-LF-01 through MW-LF-06 beginning in May 2016 and ending in July 2017. Groundwater samples were collected from monitoring wells MW-LF-01 through MW-LF-06 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 wells MW-BG-06 and MW-BG-16 were added to the monitoring well network as additional background monitoring wells beginning with the November 2016 groundwater monitoring event. Five independent groundwater samples were collected for field and laboratory analysis from background monitoring wells MW-BG-06 and MW-BG-16 during the period of November 2016 through July 2017 in accordance with the stipulations of the Groundwater Sampling and Analysis Plan for the Class 3 Landfill (May 2016; revised July 2016 and October 2016). One groundwater sample was collected from monitoring wells MW-BG-06 and MW-BG-16 during each of the independent monitoring events. All independent groundwater samples collected from the monitoring wells in accordance with 40 CFR Part 257.84 (b) during the period of May 2016 through July 2018 were analyzed by South Carolina Certified laboratories (SCE&G Central Laboratory (Certification Number 32006) and GEL Laboratories, LLC (Certification Numbers 10120001 and 10120002) for the constituents listed in Appendix III and Appendix IV of the EPA CCR Rule (40 CFR Parts 257.50 through 257.107).

In accordance with 40 CFR Part 257.94, the first round of Detection Monitoring was conducted in September 2017 and included groundwater sampling from monitoring wells MW-LF-01 through MW-LF-06, MW-BG-06 and MW-BG-16. 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 in September 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). While Statistical Analysis of the data was not complete at the time, preliminary observed laboratory analytical results for non-metals indicated resampling should occur.



Accordingly, groundwater was resampled during a monitoring event conducted in October 2017.

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 eight 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 4.3 to 6 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 and the subsequent October 2017 resample 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 concentration of chloride reported in the groundwater sample collected from compliance monitoring well MW-LF-02 shows a statistically significant increase over background concentrations (as determined from the data for groundwater samples collected from background monitoring wells MW-LF-01, MW-BG-06 and MW-BG-16). No other statistically significant increases over background concentrations were observed for the CCR Rule Appendix III constituents in the groundwater samples collected from 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 increase in the chloride concentration relative to background concentrations at monitoring well MW-LF-02. The ASD will rely, at a minimum, on historical groundwater quality data, as well as additional groundwater quality data for groundwater samples collected contemporaneously from

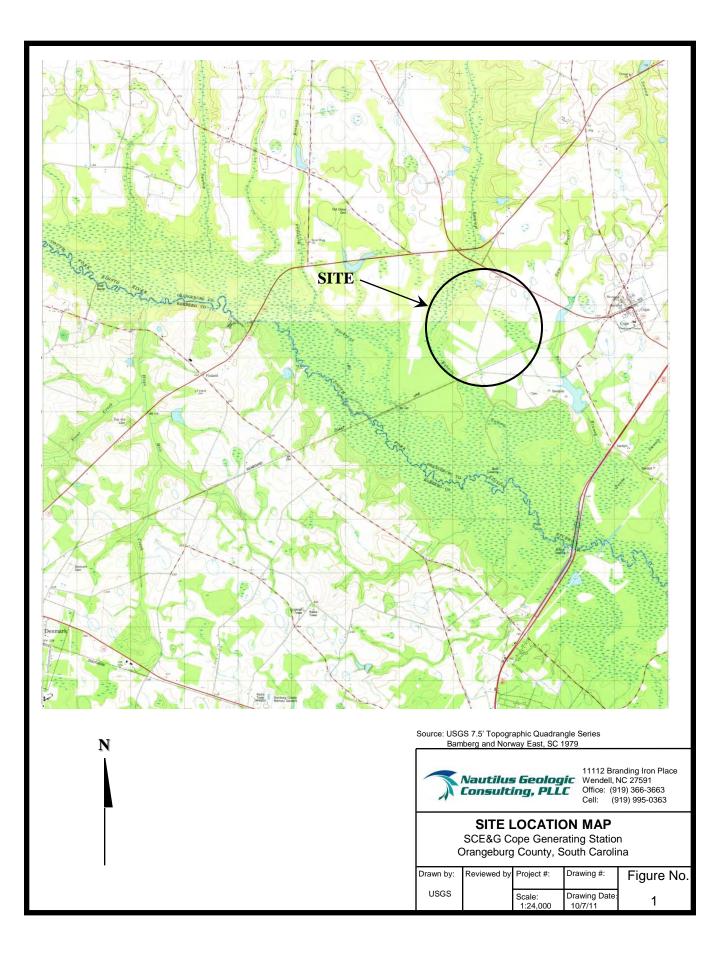


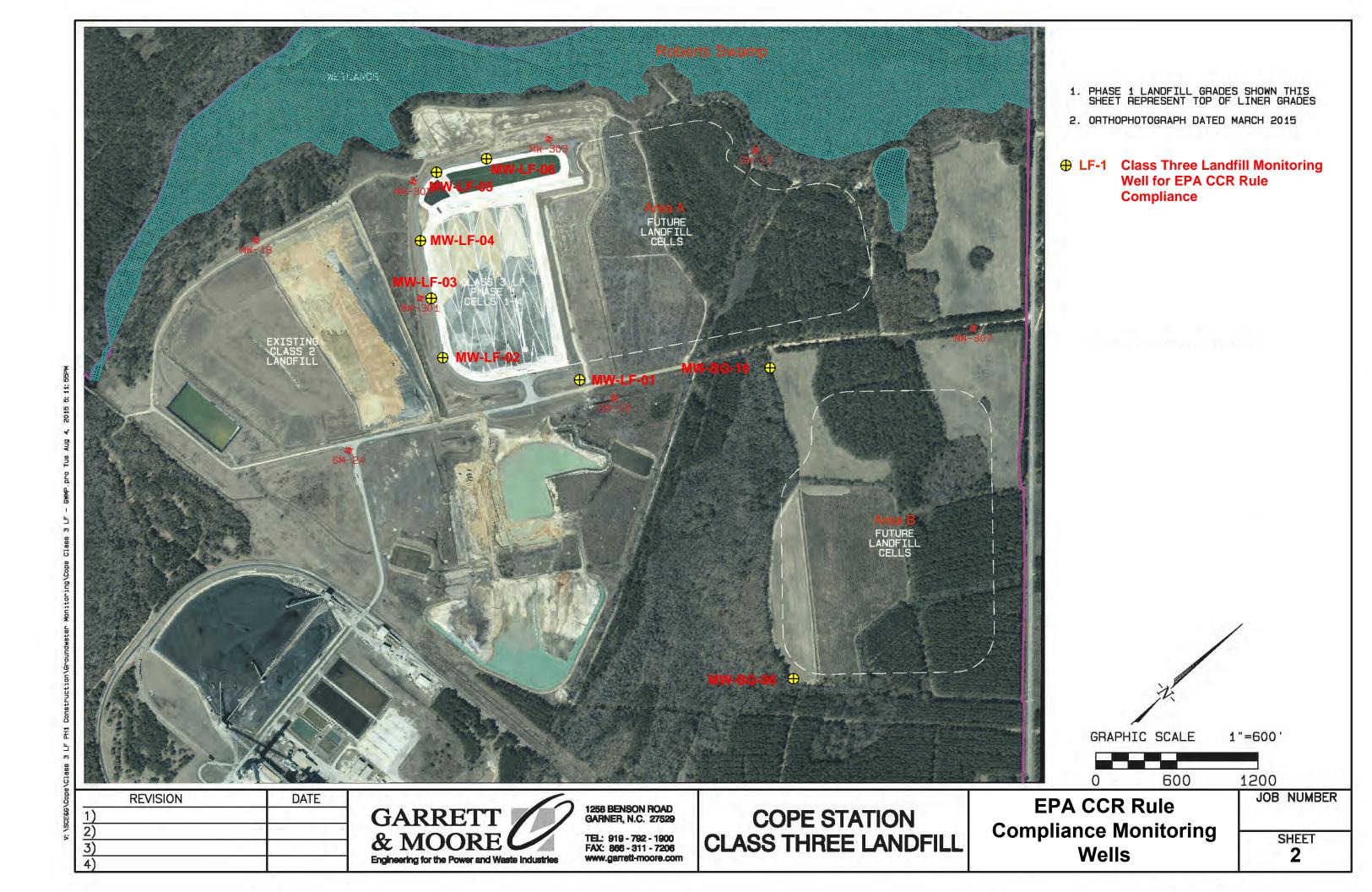
existing monitoring wells and additional monitoring wells installed specifically for the ASD.



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 increase in the concentration of chloride observed at monitoring well MW-LF-02 during the September 2017 Detection Monitoring event is likely attributable to a source(s) other than the Class 3 landfill. 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-LF-01 through MW-LF-06, MW-BG-06 and MW-LF-16.







APPENDIX A

Results of Field and Laboratory Analyses of Groundwater Samples

EPA CCR Rule Compliance Monitoring Wells Groundwater Monitoring Data

South Carolina Electric & Gas: Cope Station Class Three Landfill

Cope Station Class Three Landfill

| | | | | | Gauging Date: 05/12/16 | | |] | | | | | |
|--------------------|----------------------------|-------------------------------------|--------------|------------------------------|-------------------------------|------------------------------|-------------------------------|-------------------|--|--------------------|------------------|-----------|------------|
| | | Well Data | | | | | | | | | | | |
| | | | | Initial G | Initial Gauging | | auging | | Final Water Quality Indicator Parameters | | | | |
| Monitoring Well ID | PVC Pipe Elevation, ft. | Ground Surface Elevation, ft. | Stickup, ft. | Depth to Groundwater, ft. | Groundwater Elevation, ft. | Depth to Groundwater, ft. | Groundwater Elevation, ft. | Temparature °C | pH S.U. | Sp. Cond. µS/cm | Turbidity NTU | ORP mV | DO mg/L |
| LF-1 | 176.41 | 173.74 | 2.67 | 7.56 | 168.85 | 7.71 | 168.70 | 21.4 | 5.4 | 101 | 4.56 | 93.8 | 0.98 |
| LF-2 | 190.08 | 187.15 | 2.93 | 25.38 | 164.70 | 25.52 | 164.56 | 23.8 | 5.1 | 175 | 3.21 | 127 | 1.19 |
| LF-3 | 187.19 | 184.21 | 2.98 | 23.34 | 163.85 | 23.98 | 163.21 | 23.3 | 5.4 | 33 | 2.71 | 90.4 | 3.62 |
| LF-4 | 184.20 | 181.37 | 2.83 | 23.29 | 160.91 | 23.31 | 160.89 | 24.6 | 4.8 | 35 | 4.91 | 120 | 4.43 |
| LF-5 | 177.95 | 175.38 | 2.57 | 20.36 | 157.59 | 20.39 | 157.56 | 23.7 | 5.0 | 46 | 7.83 | 132 | 6.80 |
| LF-6 | 178.57 | 175.75 | 2.82 | 19.12 | 159.45 | 19.15 | 159.42 | 23.8 | 4.8 | 62 | 5.75 | 129 | 5.82 |

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 397444 GEL Work Order: 397444

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

Reviewed by

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 Crok

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Certificate of Analysis

Project:

Client ID:

Report Date: May 25, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-1 Sample ID: 397444001

Matrix: Ground Water
Collect Date: 12-MAY-16 11:29
Receive Date: 13-MAY-16

Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | DF Analyst Date Time Batch Metho | | |
|-----------------------------------|---------------------|----------|-------|---------|----------|----------------------------------|--|--|
| Ion Chromatograp | hy | | | | | | | |
| SW846 9056A An | nions "As Received | " | | | | | | |
| Fluoride | J | 0.0679 | 0.033 | 0.100 | mg/L | 1 MXL2 05/16/16 2111 1567499 1 | | |
| Metals Analysis-Io | CP-MS | | | | | | | |
| SW846 3005A/60 | 20A Liquid "As Re | ceived" | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1 BCD1 05/19/16 1552 1567505 2 | | |
| Rad Gas Flow Pro | portional Counting | | | | | | | |
| GFPC, Ra228, Liquid "As Received" | | | | | | | | |
| Radium-228 | U | ND | 1.81 | 3.00 | pCi/L | AXM6 05/24/16 1212 1567557 3 | | |
| Rad Radium-226 | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Receiv | red" | | | | | | |
| Radium-226 | U | ND | 0.672 | 1.00 | pCi/L | LXP1 05/22/16 0920 1567603 4 | | |
| The following Pre | p Methods were pe | rformed: | | | | | | |
| Method | Description | | | Analyst | Date | Time Prep Batch | | |
| SW846 3005A | ICP-MS 3005. | A PREP | | JP1 | 05/16/16 | 1725 1567504 | | |
| | | | | | | | | |

The following Analytical Methods were performed:

| The following i | The following Finally field with 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 | Recoverv% | Acceptable Limits | | | | | |

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 98.4 (15%-125%)

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Certificate of Analysis

Report Date: May 25, 2016

99.6

(15%-125%)

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-2 Sample ID: 397444002

Matrix: Ground Water
Collect Date: 12-MAY-16 12:23
Receive Date: 13-MAY-16
Collector: Client

Project: SCEG01416C Client ID: GEEL003

| Parameter | Qualifier | Result | DL | RL | Units | DF A | nalyst | Date | Tim | e Batch | Method |
|------------------------------------|-------------------|-----------|-------|---------|----------|------|---------|--------|------|---------|----------|
| Ion Chromatograph | ıy | | | | | | | | | | |
| SW846 9056A Ani | ions "As Received | " | | | | | | | | | |
| Fluoride | | 0.131 | 0.033 | 0.100 | mg/L | 1 N | 1XL2 05 | /16/16 | 2250 | 1567499 | 1 |
| Metals Analysis-IC | CP-MS | | | | | | | | | | |
| SW846 3005A/602 | 20A Liquid "As Re | eceived" | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1 B | CD1 05 | /19/16 | 1620 | 1567505 | 2 |
| Rad Gas Flow Proportional Counting | | | | | | | | | | | |
| GFPC, Ra228, Liquid "As Received" | | | | | | | | | | | |
| Radium-228 | | 3.14 | 2.02 | 3.00 | pCi/L | A | XM6 05 | /24/16 | 1206 | 1567557 | 3 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | |
| Radium-226 | • | 7.16 | 0.540 | 1.00 | pCi/L | L | XP1 05 | /25/16 | 1030 | 1567603 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | Time | Prep | Batch | 1 | | <u> </u> |
| SW846 3005A | ICP-MS 3005 | A PREP | | JP1 | 05/16/16 | 1725 | 1567: | 504 | | | |
| | | | _ | | | | | | | | |

The following Analytical Methods were performed:

GFPC, Ra228, Liquid "As Received"

| 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 | r Recovery Test | Result Nominal Recovery% Acceptable Limits |

Notes:

Barium-133 Tracer

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Certificate of Analysis

Project:

Client ID:

Report Date: May 25, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-3

Sample ID: 397444003 Matrix: Ground Water

Collect Date: 12-MAY-16 13:16 Receive Date: 13-MAY-16

Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | DF Analyst Date Time Batch Me | thod |
|--------------------|-------------------|-----------|-------|---------|----------|-------------------------------|------|
| Ion Chromatograph | y | | | | | | |
| SW846 9056A Anio | ons "As Received | " | | | | | |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | 1 MXL2 05/16/16 2323 1567499 | 1 |
| Metals Analysis-IC | P-MS | | | | | | |
| SW846 3005A/6020 | 0A Liquid "As Re | eceived" | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1 BCD1 05/19/16 1623 1567505 | 2 |
| Rad Gas Flow Prop | ortional Counting | Ţ, | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | ' | | | | | |
| Radium-228 | U | ND | 1.88 | 3.00 | pCi/L | AXM6 05/24/16 1206 1567557 | 3 |
| Rad Radium-226 | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | |
| Radium-226 | • | 1.54 | 0.577 | 1.00 | pCi/L | LXP1 05/22/16 0920 1567603 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | |
| Method | Description | 1 | | Analyst | Date | Time Prep Batch | _ |
| SW846 3005A | ICP-MS 3005 | A PREP | | JP1 | 05/16/16 | 1725 1567504 | _ |

The following Analytical Methods were performed:

| The following | The following Final field 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 | Recoverv% | Acceptable Limits | | | | | |

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 92.2 (15%-125%)

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Certificate of Analysis

Project:

Client ID:

Report Date: May 25, 2016

SCEG01416C

100

(15%-125%)

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: DUP

Sample ID: 397444004 Matrix: Ground Water

Matrix: Ground Water
Collect Date: 12-MAY-16 13:30
Receive Date: 13-MAY-16

Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | DF Analyst Date | Time Batch | Method |
|------------------------------------|------------------|-----------|-------|---------|----------|-------------------|-------------|--------|
| Ion Chromatography | 7 | | | | | | | |
| SW846 9056A Anio | ns "As Received | ." | | | | | | |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | 1 MXL2 05/17/16 (| 1567499 | 1 |
| Metals Analysis-ICP | P-MS | | | | | | | |
| SW846 3005A/6020 | A Liquid "As Re | eceived" | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1 BCD1 05/19/16 1 | 627 1567505 | 2 |
| Rad Gas Flow Proportional Counting | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | ' | | | | | | |
| Radium-228 | U | ND | 1.55 | 3.00 | pCi/L | AXM6 05/24/16 1 | 207 1567557 | 3 |
| Rad Radium-226 | | | | | | | | |
| Lucas Cell, Ra226, 1 | iquid "As Receiv | ved" | | | | | | |
| Radium-226 | | 1.03 | 0.722 | 1.00 | pCi/L | LXP1 05/22/16 (| 920 1567603 | 4 |
| The following Prep l | Methods were pe | erformed: | | | | | | |
| Method | Description | 1 | | Analyst | Date | Time Prep Batch | | |
| SW846 3005A | ICP-MS 3005 | A PREP | | JP1 | 05/16/16 | 1725 1567504 | | |

The following Analytical Methods were performed:

GFPC, Ra228, Liquid "As Received"

| Method | Description | Description | | | | | |
|-----------------|-------------------------------|-------------|---------|-----------|-------------------|--|--|
| 1 | SW846 9056A | | - | | | | |
| 2 | SW846 3005A/6020A | | | | | | |
| 3 | EPA 904.0/SW846 9320 Modified | | | | | | |
| 4 | EPA 903.1 Modified | | | | | | |
| Surrogate/Trace | r Recovery Test | Result | Nominal | Recovery% | Acceptable Limits | | |

Notes:

Barium-133 Tracer

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Certificate of Analysis

Project:

Units

Client ID:

Report Date: May 25, 2016

DF Analyst Date Time Batch Method

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: Field Blank Sample ID: 397444005

Matrix: Water

Collect Date: 12-MAY-16 14:00 Receive Date: 13-MAY-16

Collector: Client

Qualifier

Result

| | C | | | | | | | |
|-------------------------|----------------|-----------------|-------|---------|----------|-----------------|--------------|---|
| Ion Chromatography | | | | | | | | |
| SW846 9056A Anions | "As Received | 1" | | | | | | |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | 1 MXL2 05/17/16 | 0135 1567499 | 1 |
| Metals Analysis-ICP-M | 1S | | | | | | | |
| SW846 3005A/6020A | Liquid "As R | eceived" | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1 BCD1 05/19/16 | 1630 1567505 | 2 |
| Rad Gas Flow Proportion | onal Counting | g | | | | | | |
| GFPC, Ra228, Liquid " | 'As Received' | " | | | | | | |
| Radium-228 | U | ND | 1.34 | 3.00 | pCi/L | AXM6 05/24/16 | 1207 1567557 | 3 |
| Rad Radium-226 | | | | | | | | |
| Lucas Cell, Ra226, liqu | uid "As Recei | ved" | | | | | | |
| Radium-226 | U | ND | 0.704 | 1.00 | pCi/L | LXP1 05/22/16 | 0920 1567603 | 4 |
| The following Prep Me | ethods were pe | erformed: | | | | | | |
| Method | Description | n | | Analyst | Date | Time Prep Batch | 1 | |
| SW846 3005A | ICP-MS 3005 | 5A PREP | | JP1 | 05/16/16 | 1725 1567504 | | |
| The following Analytic | cal Methods v | were performed: | | | | | | |
| Method | Description |] | | | Ana | alyst Comments | | |

DL

RL

| Method | Description | Description Analyst Comments | | | | | | | | | |
|--------------------------------|-----------------------------------|------------------------------|---------|-----------|-------------------|--|--|--|--|--|--|
| 1 | SW846 9056A | | - | | | | | | | | |
| 2 | SW846 3005A/6020A | | | | | | | | | | |
| 3 | EPA 904.0/SW846 9320 Modified | | | | | | | | | | |
| 4 | EPA 903.1 Modified | | | | | | | | | | |
| Surrogate/Tracer Recovery Test | | Result | Nominal | Recovery% | Acceptable Limits | | | | | | |
| Barium-133 Tracer | GFPC, Ra228, Liquid "As Received" | | | 95.9 | (15%-125%) | | | | | | |

Notes:

Parameter

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Certificate of Analysis

Project:

Client ID:

Report Date: May 25, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-4

Sample ID: 397444006 Matrix: Ground Water

Collect Date: 12-MAY-16 14:35
Receive Date: 13-MAY-16
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | DF Analyst Date | e Time Batch | Method |
|------------------------|-----------------|-----------|-------|---------|----------|-----------------|--------------|--------|
| Ion Chromatography | | | | | | | | |
| SW846 9056A Anion | s "As Received | " | | | | | | |
| Fluoride | J | 0.0498 | 0.033 | 0.100 | mg/L | 1 MXL2 05/17/16 | 0208 1567499 | 1 |
| Metals Analysis-ICP- | MS | | | | | | | |
| SW846 3005A/6020A | Liquid "As Re | eceived" | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1 BCD1 05/19/16 | 1634 1567505 | 2 |
| Rad Gas Flow Propor | tional Counting | , | | | | | | |
| GFPC, Ra228, Liquid | "As Received" | 1 | | | | | | |
| Radium-228 | U | ND | 1.12 | 3.00 | pCi/L | AXM6 05/24/16 | 1208 1567557 | 3 |
| Rad Radium-226 | | | | | | | | |
| Lucas Cell, Ra226, lic | uid "As Receiv | /ed" | | | | | | |
| Radium-226 | | 0.940 | 0.676 | 1.00 | pCi/L | LXP1 05/22/16 | 0920 1567603 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | |
| Method | Description | 1 | | Analyst | Date | Time Prep Bate | ch | |
| SW846 3005A | ICP-MS 3005 | A PREP | | JP1 | 05/16/16 | 1725 1567504 | | |

The following Analytical Methods were performed:

| The following A | Anarytical Methods were performed. | | | | |
|-----------------|------------------------------------|--------|------------|-----------|-------------------|
| Method | Description | | Analyst Co | omments | |
| 1 | SW846 9056A | | - | | |
| 2 | SW846 3005A/6020A | | | | |
| 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" Result Nominal Recovery Acceptable Limits

95.9 (15%-125%)

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

Certificate of Analysis

Report Date: May 25, 2016

SCEG01416C

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-5

Sample ID: Matrix: Ground Water 12-MAY-16 15:38 Collect Date:

Receive Date: 13-MAY-16 Collector: Client

Project: 397444007 Client ID: GEEL003

Qualifier DL RL Units Parameter Result DF Analyst Date Time Batch Method Ion Chromatography SW846 9056A Anions "As Received" 0.033 0.100 Fluoride 0.0453 mg/L 1 MXL2 05/17/16 0241 1567499 1 Metals Analysis-ICP-MS SW846 3005A/6020A Liquid "As Received" Lithium 2.00 10.0 1 BCD1 05/19/16 1637 1567505 2 ND ug/L Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.10 1.60 3.00 pCi/L AXM6 05/24/16 1208 1567557 3 Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 1.42 0.636 1.00 pCi/L LXP1 05/22/16 0950 1567603 4 The following Prep Methods were performed:

Method Date Prep Batch Description Analyst Time SW846 3005A ICP-MS 3005A PREP JP1 05/16/16 1725 1567504

The following Analytical Methods were performed:

Method Description **Analyst Comments** SW846 9056A 2 SW846 3005A/6020A

3 EPA 904.0/SW846 9320 Modified EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits 87.8 (15%-125%)

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

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

Certificate of Analysis

Project:

Client ID:

Report Date: May 25, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-6

Collector:

Sample ID: 397444008 Matrix: Ground Water Collect Date: 12-MAY-16 16:45

Receive Date: 13-MAY-16 Client

| Parameter | Qualifier | Result | DL | RL | Units | DF An | alyst Date | Time Batch | Method |
|-------------------------|----------------|-----------|-------|---------|----------|-------|-------------|--------------|--------|
| Ion Chromatography | | | | | | | | | |
| SW846 9056A Anions | "As Received | ." | | | | | | | |
| Fluoride | J | 0.0435 | 0.033 | 0.100 | mg/L | 1 MX | L2 05/17/16 | 0313 1567499 | 1 |
| Metals Analysis-ICP-N | ЛS | | | | | | | | |
| SW846 3005A/6020A | Liquid "As Re | eceived" | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1 BC | D1 05/19/16 | 1641 1567505 | 2 |
| Rad Gas Flow Proporti | ional Counting | 5 | | | | | | | |
| GFPC, Ra228, Liquid | "As Received" | ' | | | | | | | |
| Radium-228 | U | ND | 1.68 | 3.00 | pCi/L | AX | M6 05/24/16 | 1208 1567557 | 3 |
| Rad Radium-226 | | | | | | | | | |
| Lucas Cell, Ra226, liqu | uid "As Receiv | ved" | | | | | | | |
| Radium-226 | | 0.916 | 0.462 | 1.00 | pCi/L | LX | P1 05/22/16 | 0950 1567603 | 4 |
| The following Prep Me | ethods were pe | erformed: | | | | | | | |
| Method | Description | 1 | | Analyst | Date | Time | Prep Batcl | 1 | _ |
| SW846 3005A | ICP-MS 3005 | A PREP | | JP1 | 05/16/16 | 1725 | 1567504 | | |

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery Acceptable Limits Test Result Nominal Recovery% Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 95.1 (15%-125%)

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

QC Summary

Report Date: May 25, 2016

Page 1 of 3

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 397444

| Parmname | NOM | Sample | Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|--|--------|--------|------|--------|-------|--------|------|-----------------|----------------|
| Ion Chromatography Batch 1567499 ——— | | | | | | | | | |
| QC1203549313 397444001 DUP Fluoride | J | 0.0679 | J | 0.0652 | mg/L | 4.06 ^ | | (+/-0.100) MXL2 | 05/16/16 21:44 |
| QC1203549312 LCS Fluoride | 2.50 | | | 2.33 | mg/L | | 93 | (90%-110%) | 05/16/16 20:39 |
| QC1203549311 MB Fluoride | | | U | ND | mg/L | | | | 05/16/16 20:06 |
| QC1203549314 397444001 PS Fluoride | 2.50 J | 0.0679 | | 2.45 | mg/L | | 95.3 | (90%-110%) | 05/16/16 22:17 |
| Metals Analysis - ICPMS Batch 1567505 | | | | | | | | | |
| QC1203549328 397444001 DUP Lithium | U | ND | U | ND | ug/L | N/A | | BCD1 | 05/19/16 15:55 |
| QC1203549327 LCS Lithium | 50.0 | | | 48.6 | ug/L | | 97.2 | (80%-120%) | 05/19/16 15:48 |
| QC1203549326 MB Lithium | | | U | ND | ug/L | | | | 05/19/16 15:45 |
| QC1203549329 397444001 MS Lithium | 50.0 U | ND | | 51.3 | ug/L | | 101 | (75%-125%) | 05/19/16 15:59 |
| QC1203549330 397444001 SDILT Lithium | U | ND | U | ND | ug/L | N/A | | (0%-10%) | 05/19/16 16:06 |
| Rad Gas Flow Batch 1567557 ——— | | | | | | | | | |
| QC1203549454 397444008 DUP Radium-228 | U | 0.323 | U | 1.06 | pCi/L | N/A | | N/A AXM6 | 05/24/16 12:07 |
| QC1203549455 LCS Radium-228 | 46.0 | | | 38.7 | pCi/L | | 84.2 | (75%-125%) | 05/24/16 12:07 |
| QC1203549453 MB Radium-228 | | | U | 0.168 | pCi/L | | | | 05/24/16 12:07 |
| Rad Ra-226 Batch 1567603 ——— | | | | | | | | | |

QC1203549580 397457016 DUP

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

QC Summary

Workorder: 397444 Page 2 of 3 **Parmname NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Rad Ra-226 Batch 1567603 Radium-226 2.32 3.17 pCi/L 31.1 (0% - 100%) LXP1 05/22/16 10:50 OC1203549582 LCS 29.5 pCi/L Radium-226 24.4 121 (75% - 125%)05/25/16 10:30 QC1203549579 MB Radium-226 U 0.318 pCi/L 05/25/16 10:30 QC1203549581 397457016 MS 122 2.32 Radium-226 131 pCi/L 105 (75% - 125%)05/22/16 10:50

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

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QC Summary

397444 Page 3 of 3 Sample Qual Parmname **NOM** OC Units RPD% REC% Range Anlst Date Time

- IJ Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification

Workorder:

- 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.
- 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
- 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

May 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22395

Cope Well LF-1 RCRA/CCR

Date & Time Sampled:

May 12, 2016

11:29

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF1TDS

LF-1

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|----------------------|-------|--------------------------------|---------|
| Chlorides by IC- 9056A | 13.7 | 0.50 | mg/L | 5/16/16 04:12 | LS |
| Sulfates by IC - 9056A | 2.72 | 0.5 | mg/L | 5/16/16 04:12 | LS |
| Total Dissolved Solid-SM2540C | 72 | 2.0 | mg/L | 5/17/16 11:18 | 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

May 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22396

Cope Well LF-2 RCRA/CCR

Date & Time Sampled:

May 12, 2016

12:23

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF2TDS

LF-2

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 41.8 | 0.50 | mg/L | 5/16/16 04:12 | LS |
| Sulfates by IC - 9056A | 1.81 | 0.5 | mg/L | 5/16/16 04:12 | LS |
| Total Dissolved Solid-SM2540C | 89 | 2.0 | mg/L | 5/17/16 11:18 | 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

May 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22397

Cope Well LF-3 RCRA/CCR

Date & Time Sampled:

May 12, 2016

13:16

Date & Time Submitted: May 13, 2016 Collected by: C.SANDEL

16:40

Location Code: COLF3TDS

LF-3

Login Record File: 160516001

| | 9 | | | | | | | |
|-------------------------------------|--------|-------------------------|-------|--------------------------------|---------|--|--|--|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | | |
| Chlorides by IC- 9056A | 3.92 | 0.50 | mg/L | 5/16/16 04:12 | LS | | | |
| Sulfates by IC - 9056A | 1.43 | 0.5 | mg/L | 5/16/16 04:12 | LS | | | |
| Total Dissolved Solid-SM2540C | 23 | 2.0 | mg/L | 5/17/16 11:18 | 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

May 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22398

Cope Well Duplicate (RCRA)

Date & Time Sampled:

May 12, 2016

13:30

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: CODUPTDS

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC- 9056A | 4.02 | 0.50 | mg/L | 5/16/16 04:12 | LS |
| Sulfates by IC - 9056A | 1.38 | 0.5 | mg/L | 5/16/16 04:12 | LS |
| Total Dissolved Solid-SM2540C | 24 | 2.0 | mg/L | 5/17/16 11:18 | CDB |

Approved By:

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 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22399

Cope Well LF-4 RCRA/CCR

Date & Time Sampled:

May 12, 2016

14:35

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF4TDS

LF-4

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|----------------------|-------|--------------------------------|---------|
| Chlorides by IC- 9056A | 2.86 | 0.50 | mg/L | 5/16/16 04:12 | LS |
| Sulfates by IC - 9056A | .63 | 0.5 | mg/L | 5/16/16 04:12 | LS |
| Total Dissolved Solid-SM2540C | 5 | 2.0 | mg/L | 5/17/16 11:18 | 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

May 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22400

Cope Well Field Blank (RCRA)

Date & Time Sampled: May 12, 2016

Date & Time Submitted: May 13, 2016 16:40

Collected by: C.SANDEL

Location Code: COFBTDS

14:00

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | Less than | 0.50 | mg/L | 5/16/16 04:12 | LS |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 5/16/16 04:12 | LS |
| Total Dissolved Solid-SM2540C | Less than | 2.0 | mg/L | 5/17/16 11:18 | 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

May 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22401

Cope Well LF-5 RCRA/CCR

Date & Time Sampled: May 12, 2016

15:38 Date & Time Submitted: May 13, 2016 16:40

Collected by: C.SANDEL Location Code: COLF5TDS

Login Record File: 160516001 LF-5

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|----------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 5.02 | 0.50 | mg/L | 5/16/16 04:12 | LS |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 5/16/16 04:12 | LS |
| Total Dissolved Solid-SM2540C | 22 | 2.0 | mg/L | 5/17/16 11:18 | 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

May 18, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22402

Cope Well LF-6 RCRA/CCR

Date & Time Sampled:

May 12, 2016

16:45 16:40

Date & Time Submitted: May 13, 2016 Collected by: C.SANDEL

Location Code: COLF6TDS

LF-6

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 7.81 | 0.50 | mg/L | 5/16/16 04:12 | LS |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 5/16/16 04:12 | LS |
| Total Dissolved Solid-SM2540C | 45 | 2.0 | mg/L | 5/17/16 11:18 | 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

May 19, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22403

Cope Well LF-1 T Metal RCRA/CCR

Date & Time Sampled:

May 12, 2016

11:29

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF1TM

LF-1

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A Date & T | | Chemist |
|-------------------------------------|-----------|----------------------|-------|-------------------------|-------|---------|
| Antimony - 6020A (RCRA) | Less than | 1.0 | ppb | 5/18/16 | 12:02 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 | 12:02 | MC |
| Barium - 6010C (RCRA) | 56.6 | 10.0 | ppb | 5/19/16 | 08:14 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 5/19/16 | 08:14 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 5/19/16 | 08:14 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 5/18/16 | 12:02 | MC |
| Calcium - 6010C (RCRA) | 4840 | 100 | ppb | 5/19/16 | 08:14 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 | 12:02 | MC |
| Cobalt - 6020A (RCRA) | 4.1 | 1.0 | ppb | 5/18/16 | 12:02 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 | 12:02 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 5/18/16 | 14:16 | MC |
| Molybdenum - 6010C | Less than | 5.0 | ppb | 5/19/16 | 08:14 | MC |
| Selenium - 6020A (RCRA) | Less than | 5.0 | ppb | 5/18/16 | 12:02 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 5/18/16 | 12:02 | 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

May 19, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22404

Cope Well LF-2 T Metal RCRA/CCR

Date & Time Sampled:

May 12, 2016

12:23

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF2TM

LF-2

Login Record File: 160516001

| LI -Z | | | | | | |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|--|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | |
| Antimony - 6020A (RCRA) | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | |
| Arsenic by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | |
| Barium - 6010C (RCRA) | 139 | 10.0 | ppb | 5/19/16 08:14 | MC | |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 5/19/16 08:14 | MC | |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 5/19/16 08:14 | MC | |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | |
| Calcium - 6010C (RCRA) | 4900 | 100 | ppb | 5/19/16 08:14 | MC | |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | |
| Cobalt - 6020A (RCRA) | 16.3 | 1.0 | ppb | 5/18/16 12:02 | MC | |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 5/18/16 14:16 | MC | |
| Molybdenum - 6010C | Less than | 5.0 | ppb | 5/19/16 08:14 | MC | |
| Selenium - 6020A (RCRA) | Less than | 5.0 | ppb | 5/18/16 12:02 | MC | |
| Thallium - 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | 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

May 19, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22405

Cope Well LF-3 T Metal RCRA/CCR

Date & Time Sampled:

May 12, 2016

13:16

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF3TM

LF-3

Login Record File: 160516001 Reporting **Completed Analysis** Units Chemist **CERTIFIED BY SCDHEC (LAB ID 32006):** Result Limit(MRL) Date & Time Antimony - 6020A (RCRA) Less than 1.0 ppb 5/18/16 12:02 MC 5/18/16 12:02 MC Arsenic by ICP_MS EPA 6020A Less than 1.0 ppb 10.0 5/19/16 08:14 MC Barium - 6010C (RCRA) 40.6 ppb Beryllium - 6010C (RCRA) 1.0 5/19/16 08:14 MC Less than ppb Boron - 6010C (RCRA) Less than 1000 ppb 5/19/16 08:14 MC 5/18/16 12:02 MC Cadmium by IPC-MS, EPA 6020A Less than 1.0 ppb 5/19/16 08:14 Calcium - 6010C (RCRA) 2010 100 MC ppb 1.0 5/18/16 12:02 MC Chromium by ICP MS EPA 6020A Less than ppb 5/18/16 12:02 MC 2.1 1.0 Cobalt - 6020A (RCRA) ppb MC Lead by ICP-MS EPA 6020A 1.0 5/18/16 12:02 Less than ppb 5/18/16 14:16 MC Mercury - 7470A (RCRA) Less than 0.2 ppb 5.0 5/19/16 08:14 MC Molybdenum - 6010C Less than ppb MC Selenium - 6020A (RCRA) Less than 5.0 ppb 5/18/16 12:02 MC 1.0 5/18/16 12:02 Thallium - 6020A Less than ppb

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 19, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22406

Cope Well Duplicate Tota1 Metal (RCRA)

Date & Time Sampled:

May 12, 2016

13:30

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: CODUPTM

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Anal Date & Time | |
|-------------------------------------|-----------|----------------------|-------|----------------------------|--------|
| Antimony - 6020A (RCRA) | Less than | 1.0 | ppb | 5/18/16 12 | :02 MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12 | 02 MC |
| Barium - 6010C (RCRA) | 44.9 | 10.0 | ppb | 5/19/16 08 | :14 MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 5/19/16 08 | 14 MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 5/19/16 08: | 14 MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12: | 02 MC |
| Calcium - 6010C (RCRA) | 2250 | 100 | ppb | 5/19/16 08: | 14 MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12: | 02 MC |
| Cobalt - 6020A (RCRA) | 2.2 | 1.0 | ppb | 5/18/16 12: | 02 MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12: | 02 MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 5/18/16 14: | 16 MC |
| Molybdenum - 6010C | Less than | 5.0 | ppb | 5/19/16 08: | 14 MC |
| Selenium - 6020A (RCRA) | Less than | 5.0 | ppb | 5/18/16 12: | 02 MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 5/18/16 12: | 02 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

May 19, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22407

Cope Well LF-4 T Metal RCRA/CCR

Date & Time Sampled:

May 12, 2016

14:35

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF4TM

Login Record File: 160516001

LF-4

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Antimony - 6020A (RCRA) | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | МС |
| Barium - 6010C (RCRA) | 10.6 | 10.0 | ppb | 5/19/16 08:14 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 5/19/16 08:14 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 5/19/16 08:14 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Calcium - 6010C (RCRA) | 1130 | 100 | ppb | 5/19/16 08:14 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Cobalt - 6020A (RCRA) | 1.9 | 1.0 | ppb | 5/18/16 12:02 | МС |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 5/18/16 14:26 | МС |
| Molybdenum - 6010C | Less than | 5.0 | ppb | 5/19/16 08:14 | MC |
| Selenium - 6020A (RCRA) | Less than | 5.0 | ppb | 5/18/16 12:02 | МС |
| Thallium - 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | 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

May 19, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22408

Cope Well Field Blank Tota1 Metal (RCRA)

Date & Time Sampled:

May 12, 2016

14:00

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COFBTM

Login Record File: 160516001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|------------------------|-------|--------------------------------|---------|
| Antimony - 6020A (RCRA) | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Barium - 6010C (RCRA) | Less than | 10.0 | ppb | 5/19/16 08:14 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 5/19/16 08:14 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 5/19/16 08:14 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Calcium - 6010C (RCRA) | Less than | 100 | ppb | 5/19/16 08:14 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Cobalt - 6020A (RCRA) | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 5/18/16 14:26 | МС |
| Molybdenum - 6010C | Less than | 5.0 | ppb | 5/19/16 08:14 | MC |
| Selenium - 6020A (RCRA) | Less than | 5.0 | ppb | 5/18/16 12:02 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | 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

May 19, 2016

REPORT TO:

Mike Moore C221

Thallium - 6020A

Sample ID: AB22409

Cope Well LF-5 T Metal RCRA/CCR

Date & Time Sampled:

May 12, 2016

15:38

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF5TM

Login Record File: 160516001

LF-5

Reporting **Completed Analysis** Chemist Units Result **CERTIFIED BY SCDHEC (LAB ID 32006):** Date & Time Limit(MRL) 1.0 ppb 5/18/16 12:02 MC Antimony - 6020A (RCRA) Less than 5/18/16 12:02 MC Less than 1.0 Arsenic by ICP_MS EPA 6020A ppb MC 19.4 10.0 5/19/16 08:14 ppb Barium - 6010C (RCRA) 5/19/16 08:14 MC Less than 1.0 ppb Beryllium - 6010C (RCRA) Less than 1000 ppb 5/19/16 08:14 MC Boron - 6010C (RCRA) 5/18/16 12:02 MC Less than 1.0 ppb Cadmium by IPC-MS, EPA 6020A 5/19/16 08:14 MC Calcium - 6010C (RCRA) 1890 100 ppb 5/18/16 12:02 MC Chromium by ICP_MS EPA 6020A Less than 1.0 ppb MC 5/18/16 12:02 Cobalt - 6020A (RCRA) Less than 1.0 ppb 5/18/16 12:02 MC Lead by ICP-MS EPA 6020A Less than 1.0 ppb 5/18/16 14:26 MC 0.2 Mercury - 7470A (RCRA) Less than ppb 5/19/16 08:14 MC 5.0 Less than ppb Molybdenum - 6010C 5/18/16 12:02 MC Less than 5.0 ppb Selenium - 6020A (RCRA) MC ppb 5/18/16 12:02 1.0

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

Less than



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

May 19, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22410

Cope Well LF-6 T Metal RCRA/CCR

Date & Time Sampled:

May 12, 2016

16:45

Date & Time Submitted: May 13, 2016

16:40

Collected by: C.SANDEL

Location Code: COLF6TM

| LF-6 | | Login Record File: 160516001 | | | | | | | | | |
|-------------------------------------|-----------|---|-------|--------------------------------|---------|--|--|--|--|--|--|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | | | | | |
| Antimony - 6020A (RCRA) | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| Arsenic by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| Barium - 6010C (RCRA) | 24.3 | 10.0 | ppb | 5/19/16 08:14 | MC | | | | | | |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 5/19/16 08:14 | MC | | | | | | |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 5/19/16 08:14 | MC | | | | | | |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| Calcium - 6010C (RCRA) | 2760 | 100 | ppb | 5/19/16 08:14 | MC | | | | | | |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| Cobalt - 6020A (RCRA) | 1.0 | 1.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 5/18/16 14:26 | MC | | | | | | |
| Molybdenum - 6010C | Less than | 5.0 | ppb | 5/19/16 08:14 | MC | | | | | | |
| Selenium - 6020A (RCRA) | Less than | 5.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| Thallium - 6020A | Less than | 1.0 | ppb | 5/18/16 12:02 | MC | | | | | | |
| | | 4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1 | | | | | | | | | |

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

EPA CCR Rule Compliance Monitoring Wells Groundwater Monitoring Data

South Carolina Electric & Gas: Cope Station Class Three Landfill

Cope Station Class Three Landfill

| • | | | | | Gauging Date: | | | | | | | | |
|--------------------|----------------|----------------|--------------|-------------------------------|----------------|------------------|----------------|-------------|---------|-----------------|---------------|-------|------|
| | | Well Data | | 7/14 | 1/16 | 7/14 | 4/16 | | | | | | |
| | | | | Initial Gauging Final Gauging | | | | | Final W | ater Quality In | dicator Param | eters | |
| | | Ground | | | | | | | | | | | |
| | PVC Pipe | Surface | | Depth to | Groundwater | Depth to | Groundwater | Temparature | рН | Sp. Cond. | Turbidity | ORP | DO |
| Monitoring Well ID | Elevation, ft. | Elevation, ft. | Stickup, ft. | Groundwater, ft. | Elevation, ft. | Groundwater, ft. | Elevation, ft. | ۰C | S.U. | μS/cm | NTU | mV | mg/L |
| LF-1 | 176.41 | 173.74 | 2.67 | 8.82 | 167.59 | 9.07 | 167.34 | 28.8 | 4.2 | 92 | 26.60 | 228 | 0.80 |
| LF-2 | 190.08 | 187.15 | 2.93 | 26.30 | 163.78 | 26.38 | 163.70 | 24.7 | 2.8 | 132 | 29.00 | 295 | 1.06 |
| LF-3 | 187.19 | 184.21 | 2.98 | 24.53 | 162.66 | 24.79 | 162.40 | 24.7 | 4.1 | 30 | 13.60 | 196 | 1.61 |
| LF-4 | 184.20 | 181.37 | 2.83 | 24.31 | 159.89 | 24.35 | 159.85 | 27.2 | 4.1 | 39 | 62.00 | 172 | 3.17 |
| LF-5 | 177.95 | 175.38 | 2.57 | 21.25 | 156.70 | 21.25 | 156.70 | 25.6 | 3.8 | 51 | 18.40 | 208 | 5.67 |
| LF-6 | 178.57 | 175.75 | 2.82 | 20.07 | 158.50 | 20.09 | 158.48 | 26.4 | 4.0 | 67 | 13.00 | 200 | 5.32 |

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 401758 GEL Work Order: 401758

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 | , | | | | |

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Certificate of Analysis

Project:

Client ID:

Report Date: July 29, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-1
Sample ID: 401758001
Matrix: Ground Water
Collect Date: 14-JUL-16 11:28

Receive Date: 15-JUL-16 Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|------------------------|-----------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | | |
| SW846 9056A Anion | s "As Received | l" | | | | | | | | | | |
| Fluoride | | 0.140 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 07/22/16 | 0359 | 1582385 | 1 |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| SW846 3005A/6020A | Liquid "As Re | eceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 07/20/16 | 1831 | 1582361 | 2 |
| Rad Gas Flow Propor | tional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liquid | "As Received" | • | | | | | | | | | | |
| Radium-228 | | 1.57 | 1.16 | 3.00 | pCi/L | | | AXM6 | 07/26/16 | 1629 | 1582433 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lic | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | _ | 1.21 | 0.406 | 1.00 | pCi/L | | | LXP1 | 07/28/16 | 0755 | 1583314 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | | Time | Pr | ep Batch | | | |
| SW846 3005A | ICP-MS 3005 | SA PREP | | SXW1 | 07/18/16 | | 0752 | 158 | 32360 | | | |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------------------|------------------|
| 1 | SW846 9056A | · |
| 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 GFPC, Ra228, Liquid "As Received"

91.7 (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:

PF

Units

Result

Nominal

Recovery%

87.5

Acceptable Limits

(15%-125%)

Report Date: July 29, 2016

DF Analyst Date Time Batch Method

SCEG01416C

GEEL003

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-2

Sample ID:

401758002

Matrix:

Parameter

Ground Water

Collect Date: Receive Date: 14-JUL-16 12:39 15-JUL-16

Result

Collector:

Client

Qualifier

| • | | | | | | | - | | | | |
|------------------|---|--|--|---|--|--------|--------|----------|--|--|--|
| | | | | | | | | | | | |
| As Received" | | | | | | | | | | | |
| | 0.196 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 07/22/16 | 0528 | 1582385 | 1 |
| S | | | | | | | | | | | |
| iquid "As Rec | eived" | | | | | | | | | | |
| U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 07/20/16 | 1852 | 1582361 | 2 |
| nal Counting | | | | | | | | | | | |
| As Received" | | | | | | | | | | | |
| U | ND | 2.37 | 3.00 | pCi/L | | | AXM6 | 07/26/16 | 1629 | 1582433 | 3 |
| | | | | | | | | | | | |
| d "As Receive | d" | | | | | | | | | | |
| | 1.51 | 0.435 | 1.00 | pCi/L | | | LXP1 | 07/28/16 | 0755 | 1583314 | 4 |
| hods were perf | formed: | | | | | | | | | | |
| Description | | | Analyst | Date | | Time | Pr | ep Batch | | | |
| ICP-MS 3005A | PREP | | SXW1 | 07/18/16 | | 0752 | 158 | 82360 | | | |
| al Methods we | re performed: | | | | | | | | | | |
| Description | | | | A | Analys | st Cor | nments | 3 | | | |
| SW846 9056A | | | | | - | | | | | | |
| SW846 3005A/6 | 5020A | | | | | | | | | | |
| ED 4 004 0/03370 | 4C 0220 M- 4:C: - 4 | | | | | | | | | | |
| EPA 904.0/SW8 | 46 9320 Modified | | | | | | | | | | |
| | iquid "As Rec U nal Counting As Received" U d "As Receive hods were perf Description ICP-MS 3005A al Methods we Description SW846 9056A SW846 3005A/6 | 0.196 S iquid "As Received" U ND nal Counting As Received" U ND d "As Received" 1.51 hods were performed: Description ICP-MS 3005A PREP al Methods were performed: Description SW846 9056A SW846 3005A/6020A | 0.196 0.033 S iquid "As Received" U ND 2.00 nal Counting As Received" U ND 2.37 d "As Received" 1.51 0.435 hods were performed: Description ICP-MS 3005A PREP al Methods were performed: Description SW846 9056A SW846 3005A/6020A | 0.196 0.033 0.100 S iquid "As Received" U ND 2.00 10.0 nal Counting As Received" U ND 2.37 3.00 d "As Received" 1.51 0.435 1.00 hods were performed: Description Analyst ICP-MS 3005A PREP SXW1 al Methods were performed: Description SW846 9056A SW846 3005A/6020A | 0.196 0.033 0.100 mg/L S iquid "As Received" U ND 2.00 10.0 ug/L nal Counting As Received" U ND 2.37 3.00 pCi/L d "As Received" 1.51 0.435 1.00 pCi/L hods were performed: Description Analyst Date ICP-MS 3005A PREP SXW1 07/18/16 al Methods were performed: Description SW846 9056A SW846 3005A/6020A | 0.196 | 0.196 | 0.196 | 0.196 0.033 0.100 mg/L 1 MAR1 07/22/16 S iquid "As Received" U ND 2.00 10.0 ug/L 1.00 1 BAJ 07/20/16 nal Counting As Received" U ND 2.37 3.00 pCi/L AXM6 07/26/16 d "As Received" 1.51 0.435 1.00 pCi/L LXP1 07/28/16 nods were performed: Description Analyst Date Time Prep Batch ICP-MS 3005A PREP SXW1 07/18/16 0752 1582360 al Methods were performed: Description Analyst Comments SW846 9056A SW846 3005A/6020A | 0.196 0.033 0.100 mg/L 1 MAR1 07/22/16 0528 Siquid "As Received" U ND 2.00 10.0 ug/L 1.00 1 BAJ 07/20/16 1852 MARI Counting As Received" U ND 2.37 3.00 pCi/L AXM6 07/26/16 1629 d "As Received" 1.51 0.435 1.00 pCi/L LXP1 07/28/16 0755 Mods were performed: Description Analyst Date Time Prep Batch ICP-MS 3005A PREP SXW1 07/18/16 0752 1582360 Analyst Comments SW846 9056A SW846 3005A/6020A | 0.196 0.033 0.100 mg/L 1 MAR1 07/22/16 0528 1582385 Siquid "As Received" U ND 2.00 10.0 ug/L 1.00 1 BAJ 07/20/16 1852 1582361 mal Counting As Received" U ND 2.37 3.00 pCi/L AXM6 07/26/16 1629 1582433 d "As Received" 1.51 0.435 1.00 pCi/L LXP1 07/28/16 0755 1583314 hods were performed: Description Analyst Date Time Prep Batch ICP-MS 3005A PREP SXW1 07/18/16 0752 1582360 al Methods were performed: Description Analyst Comments SW846 9056A |

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

GFPC, Ra228, Liquid "As Received"

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: July 29, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-3
Sample ID: 401758003
Matrix: Ground Water

Matrix: Ground Water
Collect Date: 14-JUL-16 13:46
Receive Date: 15-JUL-16
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|------------------------|-----------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | | |
| SW846 9056A Anion | s "As Received | !" | | | | | | | | | | |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 07/22/16 | 0558 | 1582385 | 1 |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| SW846 3005A/6020A | Liquid "As Re | eceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 07/20/16 | 1854 | 1582361 | 2 |
| Rad Gas Flow Proport | tional Counting | <u> </u> | | | | | | | | | | |
| GFPC, Ra228, Liquid | "As Received' | ' | | | | | | | | | | |
| Radium-228 | U | ND | 2.11 | 3.00 | pCi/L | | | AXM6 | 07/26/16 | 1629 | 1582433 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lic | uid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | | 1.30 | 0.391 | 1.00 | pCi/L | | | LXP1 | 07/28/16 | 0755 | 1583314 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | | Time | Pro | ep Batch | | | |
| SW846 3005A | ICP-MS 3005 | A PREP | | SXW1 | 07/18/16 | | 0752 | 158 | 32360 | | | |

The following Analytical Methods were performed:

 Method
 Description
 Analyst Comments

 1
 SW846 9056A

 2
 SW846 3005A/6020A

3 EPA 904.0/SW846 9320 Modified 4 EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

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

89.1 (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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Units

Result

Nominal

Recovery%

80.7

Acceptable Limits

(15%-125%)

Client ID:

PF

Report Date: July 29, 2016

DF Analyst Date Time Batch Method

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner

Client Sample ID:

Cope RCRA
Field Blank

Sample ID:

401758004

Matrix:

Water

Collect Date:

14-JUL-16 14:00

Result

Receive Date:

15-JUL-16

Collector:

Parameter

Client

Qualifier

| MAR1 07/22/16 0628 1582385 1 |
|-------------------------------|
| MAR1 07/22/16 0628 1582385 1 |
| 14AR1 07/22/16 0628 1582385 1 |
| |
| |
| |
| AJ 07/20/16 1857 1582361 2 |
| |
| |
| XM6 07/26/16 1629 1582433 3 |
| |
| |
| XP1 07/28/16 0755 1583314 4 |
| |
| Prep Batch |
| 1582360 |
| |
| ments |
| |
| |
| |
| |
| |

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"

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

Certificate of Analysis

Report Date: July 29, 2016

SCEG01416C

Company: GEL Engineering, LLC 2040 Savage Rd Address:

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-4

Sample ID: 401758005

Matrix: Ground Water Collect Date: 14-JUL-16 15:11 15-JUL-16 Receive Date: Client Collector:

Project: Client ID: GEEL003

Result RL PF Qualifier DL Units DF Analyst Date Time Batch Method Parameter Ion Chromatography SW846 9056A Anions "As Received" 0.033 Fluoride ND 0.100 mg/L MAR1 07/22/16 0658 1582385 1 Metals Analysis-ICP-MS SW846 3005A/6020A Liquid "As Received" Lithium 10.0 07/20/16 1859 1582361 2 ND 2.00 ug/L 1.00 BAJ Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 ND AXM6 07/26/16 1629 1582433 1.35 3.00 pCi/L Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 3.81 0.289 1.00 pCi/L LXP1 07/28/16 0755 1583314 The following Prep Methods were performed: Method Date Prep Batch Description Analyst Time SW846 3005A ICP-MS 3005A PREP SXW1 07/18/16 0752 1582360

The following Analytical Methods were performed:

Method Description **Analyst Comments** SW846 9056A

2 SW846 3005A/6020A

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" 98.7 (15%-125%)

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

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: July 29, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-5

Sample ID: 401758006 Matrix: Ground Water

Collect Date: 14-JUL-16 16:06
Receive Date: 15-JUL-16
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|----------------------|------------------|--------------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | 7 | | | | | | | | | | | |
| SW846 9056A Anio | ns "As Received | <u>l</u> " | | | | | | | | | | |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 07/22/16 | 0728 | 1582385 | 1 |
| Metals Analysis-ICF | P-MS | | | | | | | | | | | |
| SW846 3005A/6020 | A Liquid "As Re | eceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 07/20/16 | 1902 | 1582361 | 2 |
| Rad Gas Flow Propo | rtional Counting | 7 | | | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | • | | | | | | | | | | |
| Radium-228 | U | ND | 1.68 | 3.00 | pCi/L | | | AXM6 | 07/26/16 | 1629 | 1582433 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, 1 | iquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | • | 0.980 | 0.417 | 1.00 | pCi/L | | | LXP1 | 07/28/16 | 0755 | 1583314 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | | Time | Pre | ep Batch | | | |
| SW846 3005A | ICP-MS 3005 | SA PREP | | SXW1 | 07/18/16 | | 0752 | 158 | 32360 | | | |
| The following Anal | vtical Methods v | vere perforn | ned: | | | | | | | | | |

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1SW846 9056A

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 GFPC, Ra228, Liquid "As Received"

84.1 (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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Report Date: July 29, 2016

Time Batch Method

1904 1582361

1

2

4

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID:

DUP

U

401758007

Sample ID: Matrix:

Ground Water

Collect Date:

14-JUL-16 16:20

ND

ND

Receive Date: Collector

15-JUL-16 Client

| Conc | ctor. | ont. | | | | | |
|------------------|--------------------|--------|----|----|-------|----|---------------|
| | | | | | | | |
| Parameter | Qualifier | Result | DL | RL | Units | PF | DF Analyst Da |
| Ion Chromatograp | phy | | | | | | |
| SW846 9056A A | nions "As Received | l" | | | | | |

0.033

2.00

1.92

0.365

0.100

10.0

3.00

1.00

Metals Analysis-ICP-MS

SW846 3005A/6020A Liquid "As Received" Lithium ND

Rad Gas Flow Proportional Counting

GFPC, Ra228, Liquid "As Received" Radium-228

Rad Radium-226

Fluoride

Lucas Cell, Ra226, liquid "As Received"

Radium-226

1.22 The following Prep Methods were performed:

Date Analyst SXW1 07/18/16

Time 0752

Analyst Comments

Prep Batch 1582360

SCEG01416C

GEEL003

Project:

mg/L

ug/L

pCi/L

pCi/L

1.00

Client ID:

AXM6 07/26/16 1629 1582433

LXP1 07/28/16 0830 1583314

1 MAR1 07/22/16 0858 1582385

07/20/16

BAJ

The following Analytical Methods were performed:

Description

ICP-MS 3005A PREP

Method Description SW846 9056A 2 SW846 3005A/6020A

EPA 904.0/SW846 9320 Modified

3 EPA 903.1 Modified

Surrogate/Tracer Recovery Barium-133 Tracer

Test GFPC, Ra228, Liquid "As Received" Result Nominal

Recovery% 73.7

Acceptable Limits

(15%-125%)

Notes:

Method

SW846 3005A

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:

Result

Nominal

Recovery%

87.4

Acceptable Limits

(15%-125%)

Report Date: July 29, 2016

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner

Cope RCRA

Client Sample ID: LF-6 Sample ID:

401758008

Matrix: Collect Date: Ground Water

Receive Date:

14-JUL-16 17:18 15-JUL-16

Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|---------------------|---------------|-------|---------|----------|--------|--------|--------|----------|------|---------|--------|
| Ion Chromatograph | hy | | | | | | | | | | | |
| SW846 9056A An | ions "As Received | " | | | | | | | | | | |
| Fluoride | J | 0.0446 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 07/22/16 | 0928 | 1582385 | 1 |
| Metals Analysis-IC | CP-MS | | | | | | | | | | | |
| SW846 3005A/602 | 20A Liquid "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 07/20/16 | 1907 | 1582361 | 2 |
| Rad Gas Flow Prop | portional Counting | | | | | | | | | | | |
| GFPC, Ra228, Liq | uid "As Received" | | | | | | | | | | | |
| Radium-228 | U | ND | 2.38 | 3.00 | pCi/L | | | AXM6 | 07/26/16 | 1629 | 1582433 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | , liquid "As Receiv | ed" | | | | | | | | | | |
| Radium-226 | | 1.18 | 0.425 | 1.00 | pCi/L | | | LXP1 | 07/28/16 | 0830 | 1583314 | 4 |
| The following Prep | Methods were pe | rformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | | Time | Pr | ep Batch | | | |
| SW846 3005A | ICP-MS 3005. | A PREP | | SXW1 | 07/18/16 | | 0752 | 15 | 82360 | | | |
| The following Ana | alytical Methods w | ere perform | ed: | | | | | | | | | |
| Method | Description | | | | A | Analys | st Cor | nments | S | | | |
| 1 | SW846 9056A | | | | | | | | | | | |
| 2 | SW846 3005A | /6020A | | | | | | | | | | |
| 3 | EPA 904.0/SW | 7846 9320 Mod | ified | | | | | | | | | |

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

QC Summary

Report Date: July 29, 2016

Page 1 of 3

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina Robert Gardner

Workorder: 401758

Contact:

| Parmname | | NOM | | Sample | Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|--|-------|------|---|--------|------|-------|-------|---------|------|-----------------|----------------|
| Ion Chromatography Batch 1582385 | | | | | | | | | | | |
| QC1203586441 401758001 Fluoride | DUP | | | 0.140 | | 0.141 | mg/L | 0.713 ^ | | (+/-0.100) MAR1 | 07/22/16 04:29 |
| QC1203586440 LCS Fluoride | | 2.50 | | | | 2.53 | mg/L | | 101 | (90%-110%) | 07/22/16 03:29 |
| QC1203586439 MB Fluoride | | | | | U | ND | mg/L | | | | 07/22/16 02:59 |
| QC1203586442 401758001 Fluoride | PS | 2.50 | | 0.140 | | 2.53 | mg/L | | 95.8 | (90%-110%) | 07/22/16 04:59 |
| Metals Analysis - ICPMS Batch 1582361 | | | | | | | | | | | |
| QC1203586390 401758001 Lithium | DUP | | U | ND | U | ND | ug/L | N/A | | BAJ | 07/20/16 18:34 |
| QC1203586389 LCS Lithium | | 50.0 | | | | 57.6 | ug/L | | 115 | (80%-120%) | 07/20/16 18:29 |
| QC1203586388 MB Lithium | | | | | U | ND | ug/L | | | | 07/20/16 18:26 |
| QC1203586391 401758001 Lithium | MS | 50.0 | U | ND | | 56.2 | ug/L | | 111 | (75%-125%) | 07/20/16 18:36 |
| QC1203586392 401758001 Lithium | SDILT | | U | ND | U | ND | ug/L | N/A | | (0%-10%) | 07/20/16 18:41 |
| Rad Gas Flow Batch 1582433 | | | | | | | | | | | |
| QC1203586540 401758008 Radium-228 | DUP | | U | 0.314 | U | 0.605 | pCi/L | N/A | | N/A AXM6 | 07/26/16 16:29 |
| QC1203586541 LCS Radium-228 | | 45.0 | | | | 47.0 | pCi/L | | 104 | (75%-125%) | 07/26/16 16:29 |
| QC1203586539 MB Radium-228 | | | | | U | -0.34 | pCi/L | | | | 07/26/16 16:29 |
| Rad Ra-226 Batch 1583314 | | | | | | | | | | | |

QC1203588585 401758001 DUP

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

QC Summary

| Workorder: 401758 | | | | | | | | | Page 2 of 3 |
|---|------|-------------|--------|-------|------|------|-------------|-------|----------------|
| Parmname | NOM | Sample Qual | QC | Units | RPD% | REC% | Range A | Anlst | Date Time |
| Rad Ra-226 Batch 1583314 | | | | | | | | | |
| Radium-226 | | 1.21 | 1.53 | pCi/L | 23.5 | | (0% - 100%) | LXP1 | 07/28/16 09:35 |
| QC1203588587 LCS Radium-226 | 24.4 | | 28.0 | pCi/L | | 115 | (75%-125%) | | 07/28/16 09:35 |
| QC1203588584 MB Radium-226 | | U | 0.0423 | pCi/L | | | | | 07/28/16 09:35 |
| QC1203588586 401758001 MS Radium-226 | 122 | 1.21 | 97.2 | pCi/L | | 78.7 | (75%-125%) | | 07/28/16 09:35 |

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

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QC Summary

Workorder: 401758 Page 3 of 3 Pa

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

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- Gamma Spectroscopy--Uncertain identification UJ
- 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.
- 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.

* 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.

[^] 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.



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

July 26, 2016

REPORT TO:

Mike Moore C221

Cope Well LF-1 T Metal RCRA/CCR Sample ID: **AB22949**

Date & Time Sampled:

July 14, 2016

11:28

Date & Time Submitted: July 15, 2016

09:55

Collected by: ANDERSON,D

Location Code: COLF1TM

LF-1

Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | | Chemist |
|-------------------------------------|-----------|------|-------|---------------------|-------|---------|
| Antimony - 6020A (RCRA) | Less than | 5.0 | ppb | 7/22/16 | 09:17 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Barium - 6010C (RCRA) | 56.0 | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 7/21/16 | 08:41 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 7/21/16 | 08:41 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Calcium - 6010C (RCRA) | 3770 | 100 | ppb | 7/21/16 | 08:41 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1,0 | ppb | 7/26/16 | 14:28 | MC |
| Cobalt - 6020A (RCRA) | 5.1 | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 7/19/16 | 14:13 | MC |
| Molybdenum - 6010C | Less than | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Selenium - 6020A (RCRA) | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |

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



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

July 26, 2016

Login Record File: 160715002

REPORT TO:

Mike Moore C221

Sample ID: AB22951 Cope Well LF-2 T Metal RCRA/CCR

Date & Time Sampled:

July 14, 2016

12:39

Date & Time Submitted: July 15, 2016

09:55

Collected by: ANDERSON,D

Location Code: COLF2TM

LF-2

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | Control of the Contro | Chemist |
|-------------------------------------|-----------|------|-------|------------------|--|---------|
| Antimony - 6020A (RCRA) | Less than | 5.0 | ppb | 7/22/16 | 09:17 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Barium - 6010C (RCRA) | 111 | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 7/21/16 | 08:41 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 7/21/16 | 08:41 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Calcium - 6010C (RCRA) | 3400 | 100 | ppb | 7/21/16 | 08:41 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Cobalt - 6020A (RCRA) | 8.0 | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 7/19/16 | 14:13 | MC |
| Molybdenum - 6010C | Less than | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Selenium - 6020A (RCRA) | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |

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



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

July 26, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22953 Cope Well LF-3 T Metal RCRA/CCR

Date & Time Sampled:

July 14, 2016

13:46

Date & Time Submitted: July 15, 2016

15, 2016 09:55

Collected by: ANDERSON,D

Location Code: COLF3TM

LF-3

Login Record File: 160715002

| 7/22/16 7/26/16 7/21/16 7/21/16 | 09:17 14:28 08:41 | MC MC |
|--|---|--|
| 7/21/16 | 08:41 | |
| | | MC |
| 7/21/16 | 00.44 | |
| | UO.4 I | MC |
| 7/21/16 | 08:41 | MC |
| 7/22/16 | 09:17 | MC |
| 7/21/16 | 08:41 | MC |
| 7/26/16 | 14:28 | MC |
| 7/26/16 | 14:28 | MC |
| 7/22/16 | 09:17 | MC |
| 7/19/16 | 14:13 | MC |
| 7/21/16 | 08:41 | MC |
| 7/26/16 | 14:28 | MC |
| 7/26/16 | 14:28 | MC |
| | 7/21/16 7/22/16 7/21/16 7/26/16 7/26/16 7/22/16 7/21/16 7/21/16 7/26/16 | 7/22/16 09:17 7/21/16 08:41 7/26/16 14:28 7/26/16 14:28 7/22/16 09:17 7/19/16 14:13 7/21/16 08:41 7/26/16 14:28 |

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



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

July 26, 2016

REPORT TO:

Mike Moore C221

Sample ID: **AB22955** Cope Well Field Blank

Date & Time Sampled:

July 14, 2016

14:00

Date & Time Submitted: July 15, 2016

09:55

Collected by: ANDERSON,D

Location Code: COLF3TM

LF-3

Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | | Chemist |
|-------------------------------------|-----------|------|-------|------------------|-------|---------|
| Antimony - 6020A (RCRA) | Less than | 5.0 | ppb | 7/22/16 | 09:17 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Barium - 6010C (RCRA) | Less than | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 7/21/16 | 08:41 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 7/21/16 | 08:41 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Calcium - 6010C (RCRA) | Less than | 100 | ppb | 7/21/16 | 08:41 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Cobalt - 6020A (RCRA) | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 7/19/16 | 14:13 | MC |
| Molybdenum - 6010C | Less than | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Selenium - 6020A (RCRA) | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| | | | | | | |

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



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

July 26, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22957 Cope Well LF-4 T Metal RCRA/CCR

Date & Time Sampled:

July 14, 2016

15:11

Date & Time Submitted: July 15, 2016

09:55

Collected by: ANDERSON,D

Location Code: COLF4TM

| LF-4 | Login Record File: 160715002 | | | | | | | |
|-------------------------------------|------------------------------|------|-------|---------------------|---|---------|--|--|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | THE RESERVE AND ADDRESS OF THE PARTY OF THE | Chemist | | |
| Antimony - 6020A (RCRA) | Less than | 5.0 | ppb | 7/22/16 | 09:17 | MC | | |
| Arsenic by ICP_MS EPA 6020A | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC | | |
| Barium - 6010C (RCRA) | Less than | 10.0 | ppb | 7/21/16 | 08:41 | MC | | |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 7/21/16 | 08:41 | MC | | |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 7/21/16 | 08:41 | MC | | |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC | | |
| Calcium - 6010C (RCRA) | 1040 | 100 | ppb | 7/21/16 | 08:41 | MC | | |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC | | |
| Cobalt - 6020A (RCRA) | 1.2 | 1.0 | ppb | 7/26/16 | 14:28 | MC | | |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC | | |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 7/19/16 | 14:13 | MC | | |
| Molybdenum - 6010C | Less than | 10.0 | ppb | 7/21/16 | 08:41 | МС | | |
| Selenium - 6020A (RCRA) | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC | | |
| Thallium - 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC | | |
| | | | | | | | | |

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



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

July 26, 2016

REPORT TO:

Mike Moore C221

Sample ID: AB22959 Cope Well LF-5 T Metal RCRA/CCR

Date & Time Sampled:

July 14, 2016

16:06

Date & Time Submitted: July 15, 2016

09:55

Collected by: ANDERSON,D

Location Code: COLF5TM

LF-5

Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | the contract of the contract o | Chemist |
|-------------------------------------|-----------|------|-------|------------------|--|---------|
| Antimony - 6020A (RCRA) | Less than | 5.0 | ppb | 7/22/16 | 09:17 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Barium - 6010C (RCRA) | 18.6 | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 7/21/16 | 08:41 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 7/21/16 | 08:41 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Calcium - 6010C (RCRA) | 1830 | 100 | ppb | 7/21/16 | 08:41 | МС |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Cobalt - 6020A (RCRA) | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | МС |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 7/19/16 | 14:13 | МС |
| Molybdenum - 6010C | Less than | 10.0 | ppb | 7/21/16 | 08:41 | МС |
| Selenium - 6020A (RCRA) | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | МС |

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



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

July 26, 2016

REPORT TO:

Mike Moore C221

Cope Well LF-5 T Metal RCRA/CCR Sample ID: **AB22961**

Date & Time Sampled:

July 14, 2016

16:20

Date & Time Submitted: July 15, 2016

09:55

Collected by: ANDERSON,D

Location Code: COLF5TM

LF-5

Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | Chemist | |
|-------------------------------------|-----------|------|-------|------------------|---------|----|
| Antimony - 6020A (RCRA) | Less than | 5.0 | ppb | 7/22/16 | 09:17 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Barium - 6010C (RCRA) | 19.7 | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 7/21/16 | 08:41 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 7/21/16 | 08:41 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Calcium - 6010C (RCRA) | 1910 | 100 | ppb | 7/21/16 | 08:41 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Cobalt - 6020A (RCRA) | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 7/19/16 | 14:13 | MC |
| Molybdenum - 6010C | Less than | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Selenium - 6020A (RCRA) | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| | | | | | | |

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



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

July 26, 2016

REPORT TO:

Mike Moore C221

Cope Well LF-6 T Metal RCRA/CCR Sample ID: AB22963

Date & Time Sampled:

July 14, 2016

17:18

Date & Time Submitted: July 15, 2016

09:55

Collected by: ANDERSON,D

Location Code: COLF6TM

LF-6

Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | IFIED BY SCDHEC (LAB ID 32006): Result | | Units | Completed Date & | Chemist | |
|-------------------------------------|--|------|-------|---------------------|---------|----|
| Antimony - 6020A (RCRA) | Less than | 5.0 | ppb | 7/22/16 | 09:17 | MC |
| Arsenic by ICP_MS EPA 6020A | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Barium - 6010C (RCRA) | 23.7 | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Beryllium - 6010C (RCRA) | Less than | 1.0 | ppb | 7/21/16 | 08:41 | MC |
| Boron - 6010C (RCRA) | Less than | 1000 | ppb | 7/21/16 | 08:41 | MC |
| Cadmium by IPC-MS, EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Calcium - 6010C (RCRA) | 2620 | 100 | ppb | 7/21/16 | 08:41 | MC |
| Chromium by ICP_MS EPA 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Cobalt - 6020A (RCRA) | 1.0 | 1.0 | ppb | 7/26/16 | 14:28 | MC |
| Lead by ICP-MS EPA 6020A | Less than | 1.0 | ppb | 7/22/16 | 09:17 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 7/19/16 | 14:13 | MC |
| Molybdenum - 6010C | Less than | 10.0 | ppb | 7/21/16 | 08:41 | MC |
| Selenium - 6020A (RCRA) | Less than | 10.0 | ppb | 7/26/16 | 14:28 | MC |
| Thallium - 6020A | Less than | 1.0 | ppb | 7/26/16 | 14:28 | MC |

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



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB22948

Cope Well LF-1 RCRA/CCR

Date & Time Sampled: July 14, 2016 11:28
Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF1TDS

LF-1 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|--|----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 19 | 0.50 | ppm | 7/18/16 21:37 | LS |
| pH by SM4500HB | 5.49 | 0.00 | S.U. | 7/20/16 09:43 | PRC |
| Holding Time of 15 minutes has been ex | xceeded. | | | | |
| Sulfates by IC - 9056A | 1.9 | 0.5 | ppm | 7/18/16 21:37 | LS |
| Total Dissolved Solid-SM2540C | 56 | 2.0 | mg/L | 7/18/16 15:23 | PRC |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB22950

Cope Well LF-2 RCRA/CCR

Date & Time Sampled: July 14, 2016 12:39
Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF2TDS

LF-2 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 32 | 1.0 | ppm | 7/18/16 21:37 | LS |
| pH by SM4500HB | 5.68 | 0.00 | S.U. | 7/20/16 09:43 | PRC |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC - 9056A | 3.1 | 1.0 | ppm | 7/18/16 21:37 | LS |
| Total Dissolved Solid-SM2540C | 49 | 2.0 | mg/L | 7/18/16 15:23 | PRC |



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22952

Cope Well LF-3 RCRA/CCR

Date & Time Sampled: July 14, 2016 13:46
Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF3TDS

LF-3 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 3.3 | 0.50 | ppm | 7/18/16 22:34 | LS |
| pH by SM4500HB | 6.08 | 0.00 | S.U. | 7/20/16 09:43 | PRC |
| Holding Time of 15 minutes has been e | xceeded. | | | | |
| Sulfates by IC - 9056A | less than | 0.5 | ppm | 7/18/16 22:34 | LS |
| Total Dissolved Solid-SM2540C | 17 | 2.0 | mg/L | 7/18/16 15:23 | PRC |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB22954

Cope Well Field Blank

Date & Time Sampled: July 14, 2016 14:00 Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF3TDS

LF-3 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | less than | 0.50 | ppm | 7/18/16 23:03 | LS |
| pH by SM4500HB | 7.34 | 0.00 | S.U. | 7/20/16 09:43 | PRC |
| Holding Time of 15 minutes has been e | xceeded. | | | | |
| Sulfates by IC - 9056A | less than | 0.5 | ppm | 7/18/16 23:03 | LS |
| Total Dissolved Solid-SM2540C | 14 | 2.0 | mg/L | 7/18/16 15:23 | PRC |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22956

Cope Well LF-4 RCRA/CCR

Date & Time Sampled: July 14, 2016 15:11
Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF4TDS

LF-4 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---------------------------------------|----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 2.9 | 0.50 | ppm | 7/19/16 01:12 | LS |
| pH by SM4500HB | 5.87 | 0.00 | S.U. | 7/20/16 09:43 | PRC |
| Holding Time of 15 minutes has been e | xceeded. | | | | |
| Sulfates by IC - 9056A | 0.83 | 0.5 | ppm | 7/19/16 01:12 | LS |
| Total Dissolved Solid-SM2540C | 20 | 2.0 | mg/L | 7/18/16 15:23 | PRC |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22958

Cope Well LF-5 RCRA/CCR

Date & Time Sampled: July 14, 2016 16:06

Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF5TDS

LF-5 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 5.35 | 0.50 | mg/L | 7/27/16 15:31 | EB |
| pH by SM4500HB | 6.52 | 0.00 | S.U. | 7/20/16 09:43 | PRC |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 7/27/16 15:31 | EB |
| Total Dissolved Solid-SM2540C | 28 | 2.0 | mg/L | 7/18/16 15:23 | PRC |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB22960

Cope Well LF-5 RCRA/CCR Duplicate

Date & Time Sampled: July 14, 2016 16:20
Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF5TDS

LF-5 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|---|-----------|-------------------------|-------|-----------------------------------|---------|--|--|
| Chlorides by IC- 9056A | 5.3 | 0.50 | ppm | 7/19/16 01:40 | LS | | |
| pH by SM4500HB | 6.55 | 0.00 | S.U. | 7/20/16 09:43 | PRC | | |
| Holding Time of 15 minutes has been exceeded. | | | | | | | |
| Sulfates by IC - 9056A | less than | 0.5 | ppm | 7/19/16 01:40 | LS | | |
| Total Dissolved Solid-SM2540C | 31 | 2.0 | mg/L | 7/18/16 15:23 | PRC | | |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB22962

Cope Well LF-6 RCRA/CCR

Date & Time Sampled: July 14, 2016 17:18

Date & Time Submitted: July 15, 2016 09:55

Collected by: ANDERSON,D Location Code: COLF6TDS

LF-6 Login Record File: 160715002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 7.9 | 0.50 | ppm | 7/19/16 01:55 | LS |
| pH by SM4500HB | 6.55 | 0.00 | S.U. | 7/20/16 09:43 | PRC |
| Holding Time of 15 minutes has been e | xceeded. | | | | |
| Sulfates by IC - 9056A | less than | 0.5 | ppm | 7/19/16 01:55 | LS |
| Total Dissolved Solid-SM2540C | 37 | 2.0 | mg/L | 7/18/16 15:23 | PRC |

| Approved By: | | |
|--------------|--|--|

EPA CCR Rule Compliance Monitoring Wells Groundwater Monitoring Data

South Carolina Electric & Gas: Cope Station Class Three Landfill

Cope Station Class Three Landfill

| • | | | | | Gauging Da | ite: 09/14/16 | |] | | | | | |
|--------------------|----------------------------|-------------------------------------|--------------|------------------------------|-------------------------------|------------------------------|-------------------------------|----------------|--|--------------------|------------------|-----------|------------|
| | | Well Data | | | | | | | | | | | |
| | | | | Initial Ga | auging | Final G | auging | | Final Water Quality Indicator Parameters | | | | |
| Monitoring Well ID | PVC Pipe Elevation, ft. | Ground Surface Elevation, ft. | Stickup, ft. | Depth to Groundwater, ft. | Groundwater Elevation, ft. | Depth to Groundwater, ft. | Groundwater Elevation, ft. | Temparature °C | pH S.U. | Sp. Cond. µS/cm | Turbidity NTU | ORP mV | DO mg/L |
| 154 | 470.44 | 470.74 | 0.07 | 0.40 | 100.00 | 0.44 | 407.07 | 07.0 | 5.0 | 05 | 0.00 | 050 | |
| LF-1 | 176.41 | 173.74 | 2.67 | 8.13 | 168.28 | 8.44 | 167.97 | 27.3 | 5.0 | 65 | 6.20 | 259 | 4.41 |
| LF-2 | 190.08 | 187.15 | 2.93 | 25.40 | 164.68 | 25.54 | 164.54 | 26.1 | 4.4 | 142 | 5.21 | 346 | 1.81 |
| LF-3 | 187.19 | 184.21 | 2.98 | 23.60 | 163.59 | 24.81 | 162.38 | 26.7 | 4.5 | 32 | 5.59 | 339 | 2.12 |
| LF-4 | 184.20 | 181.37 | 2.83 | 24.03 | 160.17 | 24.11 | 160.09 | 24.4 | 4.1 | 47 | 8.33 | 377 | 3.66 |
| LF-5 | 177.95 | 175.38 | 2.57 | 20.83 | 157.12 | 20.86 | 157.09 | 26.5 | 4.8 | 54 | 4.09 | 288 | 3.90 |
| LF-6 | 178.57 | 175.75 | 2.82 | 20.41 | 158.16 | 20.42 | 158.15 | 24.6 | 4.6 | 71 | 4.36 | 345 | 4.89 |

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 406126 GEL Work Order: 406126

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 H | Croh | | | |
|-------------|--------|------|--|--|--|
| Reviewed by | • | | | | |

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

Certificate of Analysis

Project:

Client ID:

Report Date: October 11, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-1
Sample ID: 406126001
Matrix: Ground Water
Collect Date: 14-SEP-16 12:04

Receive Date: 16-SEP-16 Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF I | DF | Analy | st Date | Time | Batch | Method |
|--------------------|--------------------|-----------|-------|---------|----------|------|-----|-------|----------|------|---------|--------|
| Ion Chromatograpl | hy | | | | | | | | | | | |
| EPA300.0 Fluoride | e in Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | 1 | 6.37 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 09/27/16 | 1519 | 1599649 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPDI | ES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | SKJ | 09/20/16 | 1420 | 1599584 | 2 |
| Rad Gas Flow Proj | portional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liq | uid "As Received" | • | | | | | | | | | | |
| Radium-228 | • | 1.60 | 1.40 | 3.00 | pCi/L | | | AXM6 | 10/03/16 | 1640 | 1602003 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 1.17 | 0.410 | 1.00 | pCi/L | | | LXP1 | 10/05/16 | 0907 | 1600164 | 4 |
| The following Prep | p Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | Ti | ime | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | JP1 | 09/16/16 | 18 | 340 | 15 | 99583 | | | |
| | | | | | | | | | | | | |

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" | | | 97.7 | (15%-125%) |

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: October 11, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: Field Blank Sample ID: 406126002

Matrix: Water

Collect Date: 14-SEP-16 12:45
Receive Date: 16-SEP-16
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|-------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | y | | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | U | ND | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 09/27/16 | 1549 | 1599649 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | 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 | 09/20/16 | 1427 | 1599584 | 2 |
| Rad Gas Flow Prop | ortional Counting | ŗ | | | | | | | | | | |
| GFPC, Ra228, Liqu | iid "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 2.11 | 3.00 | pCi/L | | | AXM6 | 10/03/16 | 1640 | 1602003 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | U | ND | 0.428 | 1.00 | pCi/L | | | LXP1 | 10/05/16 | 0907 | 1600164 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | , | Time | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | JP1 | 09/16/16 | | 1840 | 15 | 99583 | | | |

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1EPA 300.02EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified 4 EPA 903.1 Modified

El A 703.1 Wodified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

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

61.3 (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

Project:

Client ID:

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

Certificate of Analysis

Report Date: October 11, 2016

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-2

Sample ID:

406126003

16-SEP-16

Matrix:

Ground Water

Collect Date:

14-SEP-16 12:59

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 | J | 0.0943 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 09/27/16 | 1618 | 1599649 | 1 |
| Chloride | | 25.9 | 0.335 | 1.00 | mg/L | | 5 | MXL2 | 09/28/16 | 1221 | 1599649 | 2 |
| Metals Analysis-I | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | SKJ | 09/20/16 | 1432 | 1599584 | 3 |
| Rad Gas Flow Pro | oportional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Lie | quid "As Received | " | | | | | | | | | | |
| Radium-228 | - | 2.70 | 1.82 | 3.00 | pCi/L | | | AXM6 | 10/03/16 | 1639 | 1602003 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | - | 1.44 | 0.269 | 1.00 | pCi/L | | | LXP1 | 10/05/16 | 0940 | 1600164 | 5 |
| The following Pre | ep Methods were p | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Time | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | JP1 | 09/16/16 | | 1840 | 159 | 99583 | | | |
| TD1 C 11 ' A | 1 2 136 1 1 | 6 1 | | | | | | | | | | |

The following Analytical Methods were performed:

| Method | Description | | Analyst Co | omments | |
|-----------------|-------------------------------|--------|------------|--------------|--------------------|
| 1 | EPA 300.0 | | - | | |
| 2 | EPA 300.0 | | | | |
| 3 | EPA 200.8 SC_NPDES | | | | |
| 4 | EPA 904.0/SW846 9320 Modified | | | | |
| 5 | EPA 903.1 Modified | | | | |
| Cuma anto/Trans | m Danassams Test | Dogult | Naminal | Dagarram (0/ | A acomtoble Limite |

Surrogate/Tracer Recovery Result Nominal Acceptable Limits Test Recovery% Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 78.1 (15%-125%)

Notes:

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Certificate of Analysis

Report Date: October 11, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-2 Project: SCEG01416C Sample ID: 406126003 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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:

Report Date: October 11, 2016

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-3

Sample ID:

406126004

Matrix:

Ground Water

Collect Date:

14-SEP-16 13:45

Receive Date: Collector:

16-SEP-16 Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch Batch | Method |
|-------------------|---------------------|-----------|-------|---------|----------|------|------|-------|----------|------|-------------|--------|
| Ion Chromatograp | ohy | | | | | | | | | | | |
| EPA300.0 Fluorid | le in Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | - | 3.07 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 09/27/16 | 1648 | 1599649 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-I | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | SKJ | 09/20/16 | 1434 | 1599584 | 2 |
| Rad Gas Flow Pro | portional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Lic | quid "As Received" | " | | | | | | | | | | |
| Radium-228 | U | ND | 2.27 | 3.00 | pCi/L | | | AXM6 | 10/03/16 | 1639 | 1602003 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | U | ND | 0.317 | 1.00 | pCi/L | | | LXP1 | 10/05/16 | 0940 | 1600164 | 4 |
| The following Pre | p Methods were po | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | , | Tim | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | JP1 | 09/16/16 | | 1840 | 159 | 99583 | | | |
| TD1 C 11 : A | 1 2 137 1 1 | C | 1 | | | | | | | | | |

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 (15%-125%)

92.2 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

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Certificate of Analysis

Project:

Client ID:

Report Date: October 11, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-4
Sample ID: 406126005
Matrix: Ground Water

Matrix: Ground Water
Collect Date: 14-SEP-16 14:31
Receive Date: 16-SEP-16
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" | | | | | | | | | | |
| Chloride | • | 4.05 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 09/27/16 | 1718 | 1599649 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 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 | SKJ | 09/20/16 | 1436 | 1599584 | 2 |
| Rad Gas Flow Propor | tional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liquid | "As Received | • | | | | | | | | | | |
| Radium-228 | U | ND | 2.05 | 3.00 | pCi/L | | | AXM6 | 10/03/16 | 1639 | 1602003 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lic | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 1.10 | 0.433 | 1.00 | pCi/L | | | LXP1 | 10/05/16 | 0940 | 1600164 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гimе | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | JP1 | 09/16/16 | : | 1840 | 159 | 99583 | | | |

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" | | | 82.2 | (15%-125%) |

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Project:

Client ID:

Report Date: October 11, 2016

3

SCEG01416C

LXP1 10/05/16 0940 1600164

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-5 Sample ID: 406126006

Collector:

Matrix: Ground Water Collect Date: 14-SEP-16 15:09 16-SEP-16 Receive Date: Client

RL PF Qualifier DL Units DF Analyst Date Parameter Result Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" Chloride mg/L 5.85 0.067 0.200 1 MAR1 09/27/16 1748 1599649 1 ND 0.033 0.100 Fluoride mg/L 1 Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium ND 2.00 10.0 ug/L 1.00 1 SKJ 09/20/16 1437 1599584 2

Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 ND 1.93 3.00 pCi/L AXM6 10/03/16 1639 1602003

1.00

pCi/L

Lucas Cell, Ra226, liquid "As Received" Radium-226

Rad Radium-226

The following Prep Methods were performed: Method Description Date Prep Batch Analyst Time

0.331

EPA 200.2 ICP-MS 200.2 PREP 09/16/16 1599583 JP1 1840

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 GFPC, Ra228, Liquid "As Received" 74.6 (15% - 125%)

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

MDC: Minimum Detectable Concentration **SQL: Sample Quantitation Limit**

ND

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

Certificate of Analysis

Project:

Client ID:

Report Date: October 11, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: DUP

Sample ID: 406126007 Matrix: Ground Water Collect Date: 14-SEP-16 15:20

Receive Date: 16-SEP-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" | | | | | | | | | | |
| Chloride | _ | 5.86 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 09/27/16 | 1818 | 1599649 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | P-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | S Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | SKJ | 09/20/16 | 1439 | 1599584 | 2 |
| Rad Gas Flow Prop | ortional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Liqu | uid "As Received | " | | | | | | | | | | |
| Radium-228 | U | ND | 1.59 | 3.00 | pCi/L | | | AXM6 | 10/03/16 | 1639 | 1602003 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | _ | 0.621 | 0.339 | 1.00 | pCi/L | | | LXP1 | 10/05/16 | 0940 | 1600164 | 4 |
| The following Prep | Methods were p | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | 7 | Гimе | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | JP1 | 09/16/16 | | 1840 | 159 | 99583 | | | |
| TT1 - C-11 A | 1 4 1 Mr. 4 1. | | 1. | | | | | | | | | |

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"

73 (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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Certificate of Analysis

Project:

Client ID:

Report Date: October 11, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-6

Sample ID: 406126008 Matrix: Ground Water

Collect Date: 15-SEP-16 09:09
Receive Date: 16-SEP-16
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|-----------------------|------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | | |
| EPA300.0 Fluoride i | n Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | - | 7.65 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 09/27/16 | 1948 | 1599649 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP | -MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | SKJ | 09/20/16 | 1441 | 1599584 | 2 |
| Rad Gas Flow Propo | rtional Counting | 5 | | | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | ' | | | | | | | | | | |
| Radium-228 | | 1.52 | 1.49 | 3.00 | pCi/L | | | AXM6 | 10/03/16 | 1640 | 1602003 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | iquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | • | 0.999 | 0.394 | 1.00 | pCi/L | | | LXP1 | 10/05/16 | 0940 | 1600164 | 4 |
| The following Prep N | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | 7 | Time | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | JP1 | 09/16/16 | | 1840 | 159 | 99583 | | | |

The following Analytical Methods were performed:

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

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|-----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC, Ra228, Liquid "As Received" | | | 93.5 | (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

QC Summary

Report Date: October 11, 2016

Page 1 of 3

GEL Engineering, LLC

2040 Savage Rd Charleston, South Carolina

Contact: Robert Gardner

Workorder: 406126

| Parmname | NOM | | Sample | Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|---|------|---|--------|------|------|-------|------|------|--------------|-------------------|
| Ion Chromatography Batch 1599649 ——— | | | | | | | | | | |
| QC1203629760 406126008 DUP Chloride | | | 7.65 | | 7.65 | mg/L | 0 | | (0%-20%) MAF | 1 09/27/16 20:18 |
| Fluoride | | U | ND | U | ND | mg/L | N/A | | | |
| QC1203629759 LCS Chloride | 5.00 | | | | 4.58 | mg/L | | 91.6 | (90%-110%) | 09/27/16 14:49 |
| Fluoride | 2.50 | | | | 2.40 | mg/L | | 95.9 | (90%-110%) | |
| QC1203629758 MB Chloride | | | | U | ND | mg/L | | | | 09/27/16 14:19 |
| Fluoride | | | | U | ND | mg/L | | | | |
| QC1203629761 406126008 PS Chloride | 5.00 | | 7.65 | | 13.0 | mg/L | | 107 | (90%-110%) | 09/27/16 20:48 |
| Fluoride | 2.50 | U | ND | | 2.38 | mg/L | | 94 | (90%-110%) | |
| Metals Analysis - ICPMS Batch 1599584 ——— | | | | | | | | | | |
| QC1203629605 406126001 DUP Lithium | | U | ND | U | ND | ug/L | N/A | | SI | CJ 09/20/16 14:22 |
| QC1203629604 LCS Lithium | 50.0 | | | | 50.5 | ug/L | | 101 | (80%-120%) | 09/20/16 14:12 |
| QC1203629603 MB Lithium | | | | U | ND | ug/L | | | | 09/20/16 14:10 |
| QC1203629606 406126001 MS Lithium | 50.0 | U | ND | | 52.1 | ug/L | | 103 | (75%-125%) | 09/20/16 14:24 |

Lithium

Batch

Rad Gas Flow

Radium-228

QC1203635578

QC1203629607 406126001 SDILT

1602003

QC1203635577 406126004 DUP

LCS

U

U

ND U

1.10 U

ND

1.26

ug/L

pCi/L

N/A

N/A

(0%-10%)

09/20/16 14:26

N/AAXM6 10/03/16 16:39

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QC Summary

| Workdruct. 400120 | | | | | | | | | | Page | e 2 of 3 |
|-----------------------------------|---------------|----------|------|-------|-------|------|------|-------------|-------|---------|----------|
| Parmname | NOM | Sample (| Qual | QC | Units | RPD% | REC% | Range | Anlst | Date | Time |
| Rad Gas Flow Batch 1602003 | | | | | | | | | | | |
| Radium-228 | 22.0 | | | 20.5 | pCi/L | | 93.2 | (75%-125%) | | 10/03/1 | 6 16:39 |
| QC1203635576 MB Radium-228 | | | U | 0.294 | pCi/L | | | | AXM6 | 10/10/1 | 6 18:36 |
| Rad Ra-226 Batch 1600164 | | | | | | | | | | | |
| QC1203631222 406126 Radium-226 | 008 DUP | 0.999 | | 0.983 | pCi/L | 1.61 | | (0% - 100%) | LXP1 | 10/05/1 | 6 10:10 |
| QC1203631224 LCS Radium-226 | 24.4 | | | 21.2 | pCi/L | | 86.7 | (75%-125%) | | 10/05/1 | 6 10:10 |
| QC1203631221 MB Radium-226 | | | U | 0.192 | pCi/L | | | | | 10/05/1 | 6 10:10 |
| QC1203631223 406126 Radium-226 | 008 MS 122 | 0.999 | | 130 | pCi/L | | 106 | (75%-125%) | | 10/05/1 | 6 10:10 |

Notes:

Workorder:

406126

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.

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QC Summary

Page 3 of 3 Parmname **NOM** Sample Qual OC Units RPD% REC% Range Anlst Date Time

N₁ See case narrative

406126

Workorder:

- Analyte concentration is not detected above the detection limit ND
- 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 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.
- 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.



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

September 30, 2016

REPORT TO:

Total Dissolved Solid-SM2540C

Mike Moore

Sample ID: AB23623

Cope Well LF-1 RCRA/CCR

Date & Time Sampled:

September 14, 2016 12:04

mg/L

Date & Time Submitted: September 15, 2016 11:05 Collected by: C.SANDEL

Location Code: COLF1TDS

9/20/16 09:19

PRC

Login Record File: 160915002

LF-1

Reporting Completed Analysis Chemist CERTIFIED BY SCDHEC (LAB ID 32006): Units Result Limit(MRL) Date & Time 9/29/16 17:18 0.50 LS 6.67 mg/L Chlorides by IC EPA 300.0 0.50 mg/L 9/29/16 17:18 LS Sulfates by IC EPA 300.0 0.69

2.0

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

24



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

September 30, 2016

REPORT TO:

Mike Moore

Sample ID: AB23625

Cope Well LF-2 RCRA/CCR

Date & Time Sampled:

September 14, 2016 12:59 Date & Time Submitted: September 15, 2016 11:05

Collected by: C.SANDEL.

Location Code: COLF2TDS

LF-2

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 27.0 | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Sulfates by IC EPA 300.0 | 3.25 | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Total Dissolved Solid-SM2540C | 56 | 2.0 | mg/L | 9/20/16 09:19 | PRC |

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 30, 2016

REPORT TO:

Mike Moore

Sample ID: AB23624

Cope Well Field Blank (RCRA)

Date & Time Sampled:

September 14, 2016 12:45

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

Collected by: C.SANDEL

Location Code: COFBTDS

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | LESS THAN | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Sulfates by IC EPA 300.0 | LESS THAN | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Total Dissolved Solid-SM2540C | Less than | 2.0 | mg/L | 9/20/16 09:19 | PRC |

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 30, 2016

REPORT TO:

Mike Moore

Sample ID: AB23626

Cope Well LF-3 RCRA/CCR

Date & Time Sampled:

September 14, 2016 13:45

Date & Time Submitted: September 15, 2016 11:05 Collected by: C.SANDEL

Location Code: COLF3TDS

LF-3

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 3.18 | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Sulfates by IC EPA 300.0 | LESS THAN | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Total Dissolved Solid-SM2540C | 25 | 2.0 | mg/L | 9/20/16 09:19 | PRC |

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 30, 2016

REPORT TO:

Mike Moore

Sample ID: AB23627

Cope Well LF-4 RCRA/CCR

Date & Time Sampled:

September 14, 2016 14:31

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

Collected by: C.SANDEL

Location Code: COLF4TDS

LF-4

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 4.32 | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Sulfates by IC EPA 300.0 | LESS THAN | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Total Dissolved Solid-SM2540C | 32 | 2.0 | mg/L | 9/20/16 09:19 | PRC |

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 30, 2016

REPORT TO:

Mike Moore

Sample ID: AB23628

Cope Well LF-5 RCRA/CCR

Date & Time Sampled:

September 14, 2016 15:09

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

Collected by: C.SANDEL

Location Code: COLF5TDS

LF-5

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|--|
| Chlorides by IC EPA 300.0 | 5.91 | 0.50 | mg/L | 9/22/16 05:33 | LS | |
| Sulfates by IC EPA 300.0 | LESS THAN | 0.50 | mg/L | 9/22/16 05:33 | LS | |
| Total Dissolved Solid-SM2540C | 20 | 2.0 | mg/L | 9/20/16 09:19 | PRC | |

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 30, 2016

REPORT TO:

Mike Moore

Sample ID: AB23629

Cope Well Duplicate (RCRA)

Date & Time Sampled:

September 14, 2016 15:20

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

Collected by: C.SANDEL

Location Code: CODUPTDS

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 5.92 | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Sulfates by IC EPA 300.0 | LESS THAN | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Total Dissolved Solid-SM2540C | 17 | 2.0 | mg/L | 9/20/16 09:19 | PRC |

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 30, 2016

REPORT TO:

Mike Moore

Sample ID: AB23630

Cope Well LF-6 RCRA/CCR

Date & Time Sampled:

September 15, 2016 09:09

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

Collected by: C.SANDEL

Location Code: COLF6TDS

LF-6

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 7.70 | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Sulfates by IC EPA 300.0 | LESS THAN | 0.50 | mg/L | 9/22/16 05:33 | LS |
| Total Dissolved Solid-SM2540C | 26.5 | 2.0 | mg/L | 9/20/16 09:19 | PRC |

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 20, 2016

REPORT TO:

Mike Moore

Sample ID: AB23648

Cope Well LF-1 T Metal RCRA/CCR

Date & Time Sampled:

September 14, 2016 12:04

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

Collected by: C.SANDEL

Location Code: COLF1TM

LF-1

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units ppb | Completed Date & | Chemist | |
|-------------------------------------|-----------|------|------------------|---------------------|---------|-----|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | | 9/20/16 | 12:07 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Barium (CWA) 200.7 | 38.8 | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Calcium EPA 200.7 | 2350 | 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Cobalt by ICP_MS EPA 200.8 | 1.3 | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:35 | MC |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | 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

September 20, 2016

REPORT TO:

Mike Moore

Sample ID: AB23649

Cope Well Field Blank Tota1 Metal

Date & Time Sampled:

September 14, 2016 12:45

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

Collected by: C.SANDEL

Location Code: COFBTM

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | Chemist | |
|-------------------------------------|-----------|-------|-------|------------------|---------|------|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | √ MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Barium (CWA) 200.7 | Less than | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Calcium EPA 200.7 | Less than | . 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:35 | MC |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | 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

September 20, 2016

REPORT TO:

Mike Moore

Sample ID: **AB23650** Cope Well LF-2 T Metal RCRA/CCR

Date & Time Sampled:

September 14, 2016 12:59

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

Collected by: C.SANDEL

Location Code: COLF2TM

LF-2

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | | Chemist |
|-------------------------------------|-----------|------|-------|---------------------|-------|---------|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |
| Barium (CWA) 200.7 | 83.4 | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |
| Calcium EPA 200.7 | 3420 | 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Cobalt by ICP_MS EPA 200.8 | 2.5 | 1.0 | ppb | 9/20/16 | 12:07 | МС |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:35 | MC |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | МС |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | МС |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |

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 20, 2016

REPORT TO:

Mike Moore

Sample ID: AB23651 Cope Well LF-3 T Metal RCRA/CCR

Date & Time Sampled:

September 14, 2016 13:45

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

Collected by: C.SANDEL

Location Code: COLF3TM

LF-3

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | | Chemist |
|-------------------------------------|-----------|------|-------|------------------|-------|---------|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Barium (CWA) 200.7 | 25.3 | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Calcium EPA 200.7 | 883 | 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:40 | MC |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | 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

September 20, 2016

REPORT TO:

Mike Moore

Sample ID: **AB23652**

Cope Well LF-4 T Metal RCRA/CCR

Date & Time Sampled:

September 14, 2016 14:31

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

Collected by: C.SANDEL

Location Code: COLF4TM

LF-4

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | Chemist | |
|-------------------------------------|-----------|------|-------|---------------------|---------|-----|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Barium (CWA) 200.7 | 19.8 | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Calcium EPA 200.7 | 1700 | 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:40 | MC |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | 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

September 20, 2016

REPORT TO:

Mike Moore

Sample ID: AB23653 Cope Well LF-5 T Metal RCRA/CCR

Date & Time Sampled:

September 14, 2016 15:09

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

Collected by: C.SANDEL

Location Code: COLF5TM

LF-5

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | | Chemist |
|-------------------------------------|-----------|------|-------|---------------------|-------|---------|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Barium (CWA) 200.7 | 24.4 | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Calcium EPA 200.7 | 2002 | 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:40 | MC |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | 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

September 20, 2016

REPORT TO:

Mike Moore

Sample ID: AB23654 **Cope Well Duplicate Tota1 Metal**

Date & Time Sampled:

September 14, 2016 15:20

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

Collected by: C.SANDEL

Location Code: CODUPTM

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | | Chemist |
|-------------------------------------|-----------|------|-------|---------------------|-------|---------|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Barium (CWA) 200.7 | 23.6 | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Calcium EPA 200.7 | 1950 | 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:40 | МС |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |

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

| Approved by: | |
|--------------|--|
| Approved by: | |



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

September 20, 2016

REPORT TO:

Mike Moore

Sample ID: **AB23655** Cope Well LF-6 T Metal RCRA/CCR

Date & Time Sampled:

September 15, 2016 09:09

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

Collected by: C.SANDEL

Location Code: COLF6TM

LF-6

Login Record File: 160915002

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | MDL | Units | Completed Date & | | Chemist |
|-------------------------------------|-----------|------|-------|------------------|-------|---------|
| Antimony by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | МС |
| Barium (CWA) 200.7 | 27.7 | 10.0 | ppb | 9/20/16 | 12:28 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 9/20/16 | 12:28 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/20/16 | 12:28 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Calcium EPA 200.7 | 2650 | 100 | ppb | 9/20/16 | 12:28 | CDB |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 9/20/16 | 18:40 | MC |
| Molybdenum - EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 9/20/16 | 12:07 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 9/20/16 | 12:07 | MC |

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

EPA CCR Rule Compliance Monitoring Wells Groundwater Monitoring Data

South Carolina Electric & Gas: Cope Station Class Three Landfill

Cope Station Class Three Landfill

| | | | | Gauging Date: 11/08/16 | | | | | | | | | | |
|--------------------|----------------|----------------|--------------|------------------------|----------------|------------------|----------------|--|------|-----------|-----------|-----|------|--|
| | | Well Data | | | | | | | | | | | | |
| | | | | Initial G | auging | Final G | auging | Final Water Quality Indicator Parameters | | | | | | |
| | | Ground | | | | | | | | | | | | |
| | PVC Pipe | Surface | | Depth to | Groundwater | Depth to | Groundwater | Temparature | pН | Sp. Cond. | Turbidity | ORP | DO | |
| Monitoring Well ID | Elevation, ft. | Elevation, ft. | Stickup, ft. | Groundwater, ft. | Elevation, ft. | Groundwater, ft. | Elevation, ft. | δC | S.U. | μS/cm | NTU | mV | mg/L | |
| LF-1 | 176.41 | 173.74 | 2.67 | 8.48 | 167.93 | 8.73 | 167.68 | 24.5 | 4.2 | 70 | 4.51 | 273 | 5.74 | |
| LF-2 | 190.08 | 187.15 | 2.93 | 26.68 | 163.40 | 26.85 | 163.23 | 25.2 | 3.9 | 141 | 6.14 | 329 | 3.83 | |
| LF-3 | 187.19 | 184.21 | 2.98 | 24.61 | 162.58 | 25.54 | 161.65 | 25.1 | 4.1 | 33 | 4.09 | 323 | 3.62 | |
| LF-4 | 184.20 | 181.37 | 2.83 | 24.03 | 160.17 | 24.09 | 160.11 | 24.8 | 3.9 | 48 | 7.18 | 350 | 5.65 | |
| LF-5 | 177.95 | 175.38 | 2.57 | 20.75 | 157.20 | 20.77 | 157.18 | 24.7 | 4.0 | 62 | 4.29 | 363 | 6.47 | |
| LF-6 | 178.57 | 175.75 | 2.82 | 19.88 | 158.69 | 19.89 | 158.68 | 24.5 | 4.0 | 72 | 5.58 | 370 | 6.47 | |
| MW-6 | 187.95 | | | 12.82 | 175.13 | 12.86 | 175.09 | 20.4 | 3.9 | 205 | 4.36 | 367 | 6.67 | |
| MW-16 | 182.52 | | | 9.06 | 173.46 | 9.11 | 173.41 | 18.8 | 4.1 | 36 | 4.09 | 429 | 6.18 | |

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 410294 GEL Work Order: 410294

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.

| | Jack N | lroh | | |
|-------------|--------|------|--|--|
| Reviewed by | , | | | |

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

Certificate of Analysis

Report Date: December 9, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-1 Sample ID: 410294001

Collector:

Matrix: Ground Water
Collect Date: 08-NOV-16 12:52
Receive Date: 10-NOV-16

Client

Project: SCEG01416C Client ID: GEEL003

Prep Batch

1615196

Time

0733

RL PF Qualifier DL Units DF Analyst Date Parameter Result Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" Fluoride 0.033 0.0548 0.100 mg/L MAR1 11/18/16 0004 1615506 1 Chloride 10.6 0.134 0.400 MAR1 11/18/16 0844 1615506 mg/L 2 Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium ND 2.00 10.0 ug/L 1.00 1 BAJ 11/15/16 2119 1615197 3 Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.72 1.20 3.00 pCi/L AXM6 12/07/16 1113 1619857 Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 1.31 0.449 1.00 pCi/L LXP1 12/05/16 0820 1616869 5 The following Prep Methods were performed:

The following Analytical Methods were performed:

Description

ICP-MS 200.2 PREP

 Method
 Description
 Analyst Comments

 1
 EPA 300.0

 2
 EPA 300.0

 3
 EPA 200.8 SC_NPDES

 4
 EPA 904.0/SW846 9320 Modified

 5
 EPA 903.1 Modified

Analyst

SXW1

Date

11/11/16

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

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

97.8 (15%-125%)

Notes:

Method

EPA 200.2

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

Certificate of Analysis

Report Date: December 9, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-1 Project: SCEG01416C Sample ID: 410294001 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

Project:

Client ID:

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

Certificate of Analysis

Report Date: December 9, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-2
Sample ID: 410294002
Matrix: Ground Water

Collect Date: 08-NOV-16 13:28
Receive Date: 10-NOV-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 | | 0.120 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 11/18/16 | 0033 | 1615506 | 1 |
| Chloride | | 26.0 | 0.335 | 1.00 | mg/L | | 5 | MAR1 | 11/18/16 | 0916 | 1615506 | 2 |
| 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 | 11/15/16 | 2129 | 1615197 | 3 |
| Rad Gas Flow Propo | ortional Counting | 2 | | | | | | | | | | |
| GFPC, Ra228, Liqui | id "As Received" | ' | | | | | | | | | | |
| Radium-228 | | 3.21 | 2.04 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1113 | 1619857 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, 1 | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | | 1.29 | 0.380 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0820 | 1616869 | 5 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гimе | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 11/11/16 | (| 0733 | 16 | 15196 | | | |

The following Analytical Methods were performed:

| Method | Description | | Analyst Co | mments | |
|-------------------------|-------------------------------|--------|------------|-----------|-------------------|
| 1 | EPA 300.0 | | - | | |
| 2 | EPA 300.0 | | | | |
| 3 | EPA 200.8 SC_NPDES | | | | |
| 4 | EPA 904.0/SW846 9320 Modified | | | | |
| 5 | EPA 903.1 Modified | | | | |
| Surrogate/Tracer Recove | ery Test | Result | Nominal | Recovery% | Acceptable Limits |

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

Result Nominal Recovery Acceptable Limits

97.6 (15%-125%)

Notes:

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

Certificate of Analysis

Report Date: December 9, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-2 Project: SCEG01416C Sample ID: 410294002 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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:

Report Date: December 9, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-3 Sample ID: 410294003

Matrix: Ground Water
Collect Date: 08-NOV-16 14:18
Receive Date: 10-NOV-16
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--|------------------|----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | • | | | | | | | | | | | |
| EPA300.0 Fluoride i | n Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | • | 3.10 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 11/18/16 | 0102 | 1615506 | 1 |
| Fluoride | J | 0.0505 | 0.033 | 0.100 | mg/L | | 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 | BAJ | 11/15/16 | 2132 | 1615197 | 2 |
| Rad Gas Flow Propo | rtional Counting | 7 | | | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | ' | | | | | | | | | | |
| Radium-228 | | 2.33 | 1.28 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1113 | 1619857 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | iquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 0.861 | 0.317 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0820 | 1616869 | 4 |
| The following Prep Methods were performed: | | | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | 7 | Γime | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 11/11/16 | (|)733 | 16 | 15196 | | | |

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" | | | 95.8 | (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:

Report Date: December 9, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: DUP Sample ID: 410294004

Matrix: Ground Water
Collect Date: 08-NOV-16 14:40
Receive Date: 10-NOV-16
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" | | | | | | | | | | |
| Chloride | - | 3.12 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 11/18/16 | 0131 | 1615506 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 11/15/16 | 2140 | 1615197 | 2 |
| Rad Gas Flow Propor | tional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liquid | "As Received" | 1 | | | | | | | | | | |
| Radium-228 | | 2.20 | 1.40 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1113 | 1619857 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lic | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | _ | 0.426 | 0.272 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0820 | 1616869 | 4 |
| The following Prep Methods were performed: | | | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | 7 | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 11/11/16 | (|)733 | 16 | 15196 | | | |

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 | GEPC, Ra228, Liquid "As Received" | | | 92.1 | (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

Report Date: December 9, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: Field Blank Project: SCEG01416C Sample ID: 410294005 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 08-NOV-16 15:00
Receive Date: 10-NOV-16
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" | | | | | | | | | | |
| Chloride | J | 0.0996 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 11/18/16 | 0200 | 1615506 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 11/15/16 | 2143 | 1615197 | 2 |
| Rad Gas Flow Propor | tional Counting | 7 | | | | | | | | | | |
| GFPC, Ra228, Liquid | l "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 1.46 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1113 | 1619857 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lie | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 9.43 | 0.504 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0820 | 1616869 | 4 |
| The following Prep Methods were performed: | | | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 11/11/16 | (|)733 | 16 | 15196 | | | |

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"

101 (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

Project:

Client ID:

Nominal

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

Certificate of Analysis

Report Date: December 9, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-4 Sample ID: 410294006

Matrix: Ground Water Collect Date: 08-NOV-16 15:18 10-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 | ceived" | | | | | | | | | | |
| Chloride | • | 3.53 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 11/18/16 | 0228 | 1615506 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 11/15/16 | 2145 | 1615197 | 2 |
| Rad Gas Flow Propor | tional Counting | 5 | | | | | | | | | | |
| GFPC, Ra228, Liquid | l "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 2.14 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1113 | 1619857 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lie | quid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | U | ND | 0.362 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0820 | 1616869 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 11/11/16 | (| 0733 | 16 | 15196 | | | |

The following Analytical Methods were performed:

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

3 EPA 904.0/SW846 9320 Modified EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result

Recovery% Acceptable Limits Barium-133 Tracer (15%-125%) GFPC, Ra228, Liquid "As Received" 93.4

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: December 9, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-5 Sample ID: 410294007

Matrix: Ground Water
Collect Date: 08-NOV-16 16:01
Receive Date: 10-NOV-16
Collector: Client

LF-5 Project: SCEG01416C 410294007 Client ID: GEEL003

RL Qualifier DL Units PF Parameter Result DF Analyst Date Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" Chloride mg/L 6.22 0.067 0.200 1 MAR1 11/18/16 0257 1615506 1 0.0397 0.033 Fluoride 0.100 mg/L 1 Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium ND 2.00 10.0 ug/L 1.00 1 BAJ 11/15/16 2148 1615197 2 Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.00 1.52 3.00 pCi/L AXM6 12/07/16 1115 1619857 3 Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 1.08 0.566 1.00 pCi/L LXP1 12/05/16 0820 1616869 The following Prep Methods were performed: Method Date Prep Batch Description Analyst Time EPA 200.2 ICP-MS 200.2 PREP 11/11/16 1615196 SXW1 0733

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1EPA 300.0

2 EPA 200.8 SC_NPDES 3 EPA 904.0/SW846 9320 Modified

4 EPA 903.1 Modified

El A 703.1 Wodified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

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

97.8 (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:

Report Date: December 9, 2016

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-6

Sample ID: 410294008 Matrix: Ground Water

Matrix: Ground Water
Collect Date: 08-NOV-16 16:39
Receive Date: 10-NOV-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 | ceived" | | | | | | | | | | |
| Chloride | • | 8.06 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 11/18/16 | 0326 | 1615506 | 1 |
| Fluoride | J | 0.0496 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICF | 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 | 11/15/16 | 2151 | 1615197 | 2 |
| Rad Gas Flow Propo | ortional Counting | Ţ | | | | | | | | | | |
| GFPC, Ra228, Liqui | id "As Received' | 1 | | | | | | | | | | |
| Radium-228 | U | ND | 1.66 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1116 | 1619857 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, 1 | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | - | 1.02 | 0.360 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0850 | 1616869 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гimе | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 11/11/16 | (| 0733 | 16 | 15196 | | | |

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"

106 (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

Report Date: December 9, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: MW-16 Project: SCEG01416C Sample ID: 410294009 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 09-NOV-16 09:40
Receive Date: 10-NOV-16
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" | | | | | | | | | | |
| Chloride | _ | 3.97 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 11/18/16 | 0453 | 1615506 | 1 |
| Fluoride | J | 0.0356 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | -MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 11/15/16 | 2153 | 1615197 | 2 |
| Rad Gas Flow Propor | rtional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liquio | d "As Received" | 1 | | | | | | | | | | |
| Radium-228 | | 2.64 | 1.82 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1116 | 1619857 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 0.540 | 0.246 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0850 | 1616869 | 4 |
| The following Prep N | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | 7 | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 11/11/16 | (|)733 | 16 | 15196 | | | |

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" | | | 91.4 | (15%-125%) |

Notes:

Column headers are defined as follows:

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

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

Certificate of Analysis

Project:

Client ID:

Report Date: December 9, 2016

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID:

MW-06

Sample ID:

410294010

Matrix:

Ground Water

Collect Date: Receive Date: 09-NOV-16 10:31 10-NOV-16

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 | J | 0.0624 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 11/18/16 | 0522 | 1615506 | 1 |
| Chloride | | 17.7 | 0.335 | 1.00 | mg/L | | 5 | MAR1 | 11/18/16 | 0944 | 1615506 | 2 |
| 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 | 11/15/16 | 2156 | 1615197 | 3 |
| Rad Gas Flow Pro | oportional Counting | 9 | | | | | | | | | | |
| GFPC, Ra228, Lie | quid "As Received' | " | | | | | | | | | | |
| Radium-228 | _ | 4.30 | 1.39 | 3.00 | pCi/L | | | AXM6 | 12/07/16 | 1116 | 1619857 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | - | 3.40 | 0.261 | 1.00 | pCi/L | | | LXP1 | 12/05/16 | 0850 | 1616869 | 5 |
| The following Pre | ep Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гimе | Pro | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 11/11/16 | (| 0733 | 161 | 15196 | | | |
| The following Ar | nalytical Methods v | vere performed: | | | | | | | | | | |
| | | | | | | | | | | | | |

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

Surrogate/Tracer Recovery Acceptable Limits Test Result Nominal Recovery% 102 (15%-125%) Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

Notes:

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

Certificate of Analysis

Report Date: December 9, 2016

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: MW-06 Project: SCEG01416C Sample ID: 410294010 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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 9, 2016

Page 1 of 3

GEL Engineering, LLC 2040 Savage Rd Charleston, South Carolina

Robert Gardner

Workorder: 410294

Contact:

| Parmname | NOM | Sample Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|---|--------|-------------|--------|-------|--------|------|---------------|----------------|
| Ion Chromatography Batch 1615506 ——— | | | | | | | | |
| QC1203668461 410294010 DUP Chloride | | 17.7 | 17.7 | mg/L | 0.0735 | | (0%-20%) MAR1 | 11/18/16 10:13 |
| Fluoride | J | 0.0624 J | 0.0647 | mg/L | 3.62 ^ | | (+/-0.100) | 11/18/16 05:51 |
| QC1203668460 LCS Chloride | 5.00 | | 4.96 | mg/L | | 99.3 | (90%-110%) | 11/17/16 23:35 |
| Fluoride | 2.50 | | 2.61 | mg/L | | 104 | (90%-110%) | |
| QC1203668459 MB Chloride | | U | ND | mg/L | | | | 11/17/16 23:06 |
| Fluoride | | U | ND | mg/L | | | | |
| QC1203668462 410294010 PS Chloride | 5.00 | 3.53 | 8.91 | mg/L | | 107 | (90%-110%) | 11/18/16 10:42 |
| Fluoride | 2.50 J | 0.0624 | 2.76 | mg/L | | 108 | (90%-110%) | 11/18/16 06:20 |
| Metals Analysis - ICPMS Batch 1615197 ——— | | | | | | | | |
| QC1203667712 410294001 DUP Lithium | U | ND U | ND | ug/L | N/A | | BAJ | 11/15/16 21:22 |
| QC1203667711 LCS Lithium | 50.0 | | 51.9 | ug/L | | 104 | (80%-120%) | 11/15/16 21:16 |
| QC1203667710 MB Lithium | | U | ND | ug/L | | | | 11/15/16 21:14 |
| QC1203667714 410294001 MS Lithium | 50.0 U | ND | 51.9 | ug/L | | 103 | (75%-125%) | 11/15/16 21:24 |
| QC1203667716 410294001 SDILT Lithium | U | ND U | ND | ug/L | N/A | | (0%-10%) | 11/15/16 21:27 |
| Rad Gas Flow Batch 1619857 ——— | | | | | | | | |
| QC1203679349 410294008 DUP Radium-228 | U | 1.06 U | 0.0699 | pCi/L | N/A | | N/A AXM6 | 12/07/16 11:19 |
| QC1203679350 LCS | | | | | | | | |

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QC Summary

| Workdraci: 410274 | | | | | | | | | Page 2 of 3 |
|---|------|---|-------------|-------|-------|------|------|-------------|----------------|
| Parmname | NOM | | Sample Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
| Rad Gas Flow Batch 1619857 | | | | | | | | | |
| Radium-228 | 21.5 | | | 22.6 | pCi/L | | 105 | (75%-125%) | 12/07/16 11:19 |
| QC1203679348 MB Radium-228 | | | | 0.991 | pCi/L | | | AXM6 | 12/07/16 11:19 |
| Rad Ra-226 Batch 1616869 | | | | | | | | | |
| QC1203671654 410294006 Di Radium-226 | UP | U | 0.126 U | 0.184 | pCi/L | N/A | | N/A LXP1 | 12/05/16 09:25 |
| QC1203671656 LCS Radium-226 | 24.4 | | | 19.7 | pCi/L | | 80.9 | (75%-125%) | 12/05/16 09:25 |
| QC1203671653 MB Radium-226 | | | U | 0.358 | pCi/L | | | | 12/05/16 08:50 |
| QC1203671655 410294006 M Radium-226 | 122 | U | 0.126 | 92.9 | pCi/L | | 76.1 | (75%-125%) | 12/05/16 09:25 |

Notes:

Workorder:

410294

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.

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QC Summary

410294 Page 3 of 3 Parmname **NOM** Sample Qual OC Units RPD% REC% Range Anlst Date Time

N₁ See case narrative

Workorder:

- Analyte concentration is not detected above the detection limit ND
- 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
- IJ 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
- 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.



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB24481

Cope Well LF-1 RCRA/CCR

Date & Time Sampled: November 08, 2016 12:52 Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF1TDS

LF-1 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 11.23 | 0.50 | mg/L | 11/17/16 02:36 | GWE |
| Sulfates by IC - 9056A | 0.63 | 0.5 | mg/L | 11/17/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 30 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By: | | |
|--------------|--|--|



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB24482

Cope Well LF-2 RCRA/CCR

Date & Time Sampled: November 08, 2016 13:28
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF2TDS

LF-2 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 27.06 | 0.50 | mg/L | 11/17/16 02:36 | GWE |
| Sulfates by IC - 9056A | 2.63 | 0.5 | mg/L | 11/17/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 54 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24483

Cope Well LF-3 RCRA/CCR

Date & Time Sampled: November 08, 2016 14:18

Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF3TDS

LF-3 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC- 9056A | 3.19 | 0.50 | mg/L | 11/17/16 02:36 | GWE |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 11/17/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 21 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved | Bv: | | |
|----------|-----|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB24484

Cope Well Duplicate (RCRA)

Date & Time Sampled: November 08, 2016 14:40
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: CODUPTDS

Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC- 9056A | 3.20 | 0.50 | mg/L | 11/17/16 02:36 | GWE |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 11/17/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 16 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB24485

Cope Well Field Blank (RCRA)

Date & Time Sampled: November 08, 2016 15:00 Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COFBTDS

Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | Less than | 0.50 | mg/L | 11/17/16 02:36 | GWE |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 11/17/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | Less than | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By | ': | | |
|-------------|----|--|--|



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB24486

Cope Well LF-4 RCRA/CCR

Date & Time Sampled: November 08, 2016 15:18

Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF4TDS

LF-4 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 3.52 | 0.50 | mg/L | 11/17/16 02:36 | GWE |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 11/17/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 17 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By | ·: | | |
|-------------|----|--|--|



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB24487

Cope Well LF-5 RCRA/CCR

Date & Time Sampled: November 08, 2016 16:01
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF5TDS

LF-5 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC- 9056A | 6.13 | 0.50 | mg/L | 11/17/16 02:36 | GWE |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 11/17/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 27 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24488

Cope Well LF-6 RCRA/CCR

Date & Time Sampled: November 08, 2016 16:39
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF6TDS

LF-6 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 7.87 | 0.50 | mg/L | 11/16/16 02:36 | GWE |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 11/16/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 39 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24489

Cope GW Well MW-16 TDS (RCRA)

Date & Time Sampled: November 09, 2016 09:40
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COG16TDS

MW-16 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 4.11 | 0.50 | mg/L | 11/16/16 02:36 | GWE |
| Sulfates by IC - 9056A | 1.09 | 0.5 | mg/L | 11/16/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 14 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By | / : | | |
|-------------|------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB24490

Cope GW Well MW-6 TDS - RCRA

Date & Time Sampled: November 09, 2016 10:31
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COG06TDS

MW-06 Login Record File: 161110001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|--------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 18.69 | 0.50 | mg/L | 11/16/16 02:36 | GWE |
| Sulfates by IC - 9056A | 1.0 | 0.5 | mg/L | 11/16/16 02:36 | GWE |
| Total Dissolved Solid-SM2540C | 106 | 2.0 | mg/L | 11/14/16 09:02 | BF |

| Approved By | / : | | |
|-------------|------------|--|--|



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

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24503

Cope Well LF-1 T Metal CCR

Date & Time Sampled: November 08, 2016 12:52 Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF1TM

LF-1 Login Record File: 161110002

| | | • | | |
|-----------|--|---|--|--|
| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 40.4 | 10.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 2.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1000 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 2632 | 100 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 16:09 | MC |
| 1.1 | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 10 | ppb | 11/16/16 15:23 | PRC |
| Less than | 0.2 | ppb | 11/16/16 15:40 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 5.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| | Less than 40.4 Less than Less than Less than 2632 Less than 1.1 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 40.4 10.0 Less than 2.0 Less than 1000 Less than 1.0 2632 100 Less than 1.0 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 40.4 10.0 ppb Less than 1000 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 & Time Less than 1.0 ppb 11/16/16 09:09 Less than 1.0 ppb 11/16/16 09:09 40.4 10.0 ppb 11/16/16 11:15 Less than 2.0 ppb 11/16/16 11:15 Less than 1000 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 09:09 2632 100 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 16:09 1.1 1.0 ppb 11/16/16 09:09 Less than 1.0 ppb 11/16/16 09:09 Less than 0.2 ppb 11/16/16 15:40 Less than 1.0 ppb 11/16/16 09:09 Less than 5.0 ppb 11/16/16 09:09 |

| Approved By: | · |
|--------------|---|
| | |



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

13:28

14:50

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24504

Cope Well LF-2 T Metal CCR

Date & Time Sampled: November 08, 2016

Date & Time Submitted: November 10, 2016

Collected by: C.SANDEL Location Code: COLF2TM

LF-2 Login Record File: 161110002

| LIT-Z | | | Loginited | .010 1 IIe. 10 11 10002 | |
|-------------------------------------|-----------|-------------------------|-----------|-----------------------------------|---------|
| 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 | 11/16/16 09:09 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Barium (CWA) 200.7 | 80.2 | 10.0 | ppb | 11/16/16 11:15 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 11/16/16 11:15 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 11/16/16 11:15 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Calcium EPA 200.7 | 3000 | 100 | ppb | 11/16/16 11:15 | PRC |
| Chromium by ICP_MS EPA 200.8 | 1.7 | 1.0 | ppb | 11/16/16 16:09 | MC |
| Cobalt by ICP_MS EPA 200.8 | 3.2 | 1.0 | ppb | 11/16/16 09:09 | MC |
| Lead by ICP-MS EPA 200.8 | 1.1 | 1.0 | ppb | 11/16/16 09:09 | MC |
| Lithium (CWA) 200.7 | Less than | 10 | ppb | 11/16/16 15:23 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 11/16/16 15:40 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 11/16/16 09:09 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |

| Approved By: | | |
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Tel: (803)217-9384 Fax: (803) 217-9911

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24505

Cope Well LF-3 T Metal CCR

Date & Time Sampled: Date & Time Submitted:

Collected by: C.SANDEL

November 08, 2016 14:18 November 10, 2016 14:50

Location Code: COLF3TM

LF-3 Login Record File: 161110002

| 20911110002 | | | | |
|-------------|--|---|---|--|
| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 23.8 | 10.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 2.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1000 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 842 | 100 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 16:09 | MC |
| 1.1 | 1.0 | ppb | 11/16/16 09:09 | MC |
| 1.2 | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 10 | ppb | 11/16/16 15:23 | PRC |
| Less than | 0.2 | ppb | 11/16/16 15:40 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 5.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| | Less than 23.8 Less than Less than Less than 842 Less than 1.1 1.2 Less than Less than Less than Less than Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 23.8 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 1.0 1.1 1.0 1.2 1.0 Less than 10 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 23.8 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 10 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 & Time Less than 1.0 ppb 11/16/16 09:09 Less than 1.0 ppb 11/16/16 09:09 23.8 10.0 ppb 11/16/16 11:15 Less than 2.0 ppb 11/16/16 11:15 Less than 1000 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 09:09 842 100 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 16:09 1.1 1.0 ppb 11/16/16 09:09 Less than 10 ppb 11/16/16 09:09 Less than 0.2 ppb 11/16/16 15:40 Less than 1.0 ppb 11/16/16 09:09 Less than 5.0 ppb 11/16/16 09:09 |

| Approved By: |
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Tel: (803)217-9384 Fax: (803) 217-9911

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB24506

Cope Well Duplicate Tota1 Metal (CCR)

Date & Time Sampled: November 08, 2016 14:40
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: CODUPTM

Login Record File: 161110002

| 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 | 11/16/16 09:09 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Barium (CWA) 200.7 | 24.3 | 10.0 | ppb | 11/16/16 11:15 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 11/16/16 11:15 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 11/16/16 11:15 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Calcium EPA 200.7 | 861 | 100 | ppb | 11/16/16 11:15 | PRC |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 16:09 | MC |
| Cobalt by ICP_MS EPA 200.8 | 1.2 | 1.0 | ppb | 11/16/16 09:09 | MC |
| Lead by ICP-MS EPA 200.8 | 1.0 | 1.0 | ppb | 11/16/16 09:09 | MC |
| Lithium (CWA) 200.7 | Less than | 10 | ppb | 11/16/16 15:23 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 11/16/16 15:40 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 11/16/16 09:09 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24507

Cope Well Field Blank Tota1 Metal (CCR)

Date & Time Sampled:
Date & Time Submitted:

November 08, 2016 15:00 November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COFBTM

Login Record File: 161110002

| 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 | 11/16/16 09:09 | MC |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Barium (CWA) 200.7 | Less than | 10.0 | ppb | 11/16/16 11:15 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 11/16/16 11:15 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 11/16/16 11:15 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Calcium EPA 200.7 | Less than | 100 | ppb | 11/16/16 11:15 | PRC |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 16:09 | MC |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Lithium (CWA) 200.7 | Less than | 10 | ppb | 11/16/16 15:23 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 11/16/16 15:40 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 11/16/16 09:09 | MC |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
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| pproved By | y: | | |



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

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24508

Cope Well LF-4 T Metal CCR

Date & Time Sampled:
Date & Time Submitted:

Collected by: C.SANDEL

November 08, 2016 15:18 November 10, 2016 14:50

Location Code: COLF4TM

LF-4 Login Record File: 161110002

| 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 | 11/16/16 09:09 | MC | |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Barium (CWA) 200.7 | 15.4 | 10.0 | ppb | 11/16/16 11:15 | PRC | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 11/16/16 11:15 | PRC | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 11/16/16 11:15 | PRC | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Calcium EPA 200.7 | 1239 | 100 | ppb | 11/16/16 11:15 | PRC | |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 16:09 | MC | |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Lithium (CWA) 200.7 | Less than | 10 | ppb | 11/16/16 15:23 | PRC | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 11/16/16 15:40 | PRC | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 11/16/16 09:09 | MC | |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |

| Approved By: | _ |
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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 25, 2018

Mike Moore C221

Sample ID: AB24509

Cope Well LF-5 T Metal CCR

Date & Time Sampled: November 08, 2016 16:01

Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF5TM

LF-5 Login Record File: 161110002

| 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 | 11/16/16 09:09 | MC | |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Barium (CWA) 200.7 | 20.9 | 10.0 | ppb | 11/16/16 11:15 | PRC | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 11/16/16 11:15 | PRC | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 11/16/16 11:15 | PRC | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Calcium EPA 200.7 | 1760 | 100 | ppb | 11/16/16 11:15 | PRC | |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 16:09 | MC | |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Lithium (CWA) 200.7 | Less than | 10 | ppb | 11/16/16 15:23 | PRC | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 11/16/16 15:40 | PRC | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 11/16/16 09:09 | MC | |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |

| Approved By | v : | | |
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Tel: (803)217-9384 Fax: (803) 217-9911

January 25, 2018

Mike Moore C221

REPORT TO:

Sample ID: AB24510

Cope Well LF-6 T Metal CCR

Date & Time Sampled: November 08, 2016 16:39
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COLF6TM

LF-6 Login Record File: 161110002

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-----------|--|---|--|--|
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 27.6 | 10.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 2.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1000 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 2328 | 100 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 16:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 10 | ppb | 11/16/16 15:23 | PRC |
| Less than | 0.2 | ppb | 11/16/16 15:40 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 5.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| | Less than 27.6 Less than Less than Less than 2328 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 27.6 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 1.0 Less than 1.0 Less than 1.0 Less than 10 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 27.6 10.0 ppb Less than 2.0 ppb Less than 1000 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 & Time Less than 1.0 ppb 11/16/16 09:09 Less than 1.0 ppb 11/16/16 09:09 27.6 10.0 ppb 11/16/16 11:15 Less than 2.0 ppb 11/16/16 11:15 Less than 1000 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 09:09 2328 100 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 16:09 Less than 1.0 ppb 11/16/16 09:09 Less than 1.0 ppb 11/16/16 15:23 Less than 0.2 ppb 11/16/16 15:40 Less than 1.0 ppb 11/16/16 09:09 Less than 5.0 ppb 11/16/16 09:09 |

| Approved By: | · |
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_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24511

Cope GW Well MW-16 Tota1 Metal (CCR)

Date & Time Sampled: November 09, 2016 09:40
Date & Time Submitted: November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COMW16TM

MW-16 Login Record File: 161110002

| 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 | 11/16/16 09:09 | MC | |
| Arsenic by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Barium (CWA) 200.7 | 12.9 | 10.0 | ppb | 11/16/16 11:15 | PRC | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 11/16/16 11:15 | PRC | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 11/16/16 11:15 | PRC | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Calcium EPA 200.7 | 2045 | 100 | ppb | 11/16/16 11:15 | PRC | |
| Chromium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 16:09 | MC | |
| Cobalt by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Lead by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Lithium (CWA) 200.7 | Less than | 10 | ppb | 11/16/16 15:23 | PRC | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 11/16/16 15:40 | PRC | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
| Selenium by ICP-MS EPA 200.8 | Less than | 5.0 | ppb | 11/16/16 09:09 | MC | |
| Thallium by ICP-MS EPA 200.8 | Less than | 1.0 | ppb | 11/16/16 09:09 | MC | |
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Tel: (803)217-9384 Fax: (803) 217-9911

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB24512

Cope GW Well MW-6 Tota1 Metal (CCR)

Date & Time Sampled: Novemble
N

November 09, 2016 10:31 November 10, 2016 14:50

Collected by: C.SANDEL Location Code: COMW06TM

MW-06 Login Record File: 161110002

| Result | Reporting | | Completed Analysis | |
|-----------|---|--|---|---|
| | Limit(MRL) | Units | Date & Time | Chemist |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 120 | 10.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 2.0 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1000 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| 9462 | 100 | ppb | 11/16/16 11:15 | PRC |
| Less than | 1.0 | ppb | 11/16/16 16:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 10 | ppb | 11/16/16 15:23 | PRC |
| Less than | 0.2 | ppb | 11/16/16 15:40 | PRC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 5.0 | ppb | 11/16/16 09:09 | MC |
| Less than | 1.0 | ppb | 11/16/16 09:09 | MC |
| | Less than 120 Less than Less than 9462 Less than Less than | Less than 1.0 120 10.0 Less than 2.0 Less than 1000 Less than 1.0 9462 100 Less than 1.0 Less than 5.0 | Less than 1.0 ppb 120 10.0 ppb Less than 2.0 ppb Less than 1000 ppb Less than 1.0 ppb 462 100 ppb Less than 1.0 ppb Less than 5.0 ppb | Less than 1.0 ppb 11/16/16 09:09 120 10.0 ppb 11/16/16 11:15 Less than 2.0 ppb 11/16/16 11:15 Less than 1000 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 09:09 9462 100 ppb 11/16/16 11:15 Less than 1.0 ppb 11/16/16 16:09 Less than 1.0 ppb 11/16/16 09:09 Less than 1.0 ppb 11/16/16 09:09 Less than 0.0 ppb 11/16/16 09:09 Less than 1.0 ppb 11/16/16 15:23 Less than 0.2 ppb 11/16/16 15:40 Less than 1.0 ppb 11/16/16 09:09 Less than 0.2 ppb 11/16/16 09:09 |

| Approved By | / : | | |
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EPA CCR Rule Compliance Monitoring Wells Groundwater Monitoring Data

South Carolina Electric & Gas: Cope Station Class Three Landfill

Cope Station Class Three Landfill

| • | | | | | | | | - | | | | | |
|--------------------|----------------|----------------|--------------|------------------|----------------|------------------|----------------|-------------|----------|------------------|---------------|-------|------|
| | | | | | 1/25-26/2017 | | | | | | | | |
| | | Well Data | | | | | | | | | | | |
| | | | | Initial G | auging | Final G | auging | | Final Wa | ater Quality Ind | dicator Param | eters | |
| | | Ground | | | | | | | | | | | |
| | PVC Pipe | Surface | | Depth to | Groundwater | Depth to | Groundwater | Temparature | рН | Sp. Cond. | Turbidity | ORP | DO |
| Monitoring Well ID | Elevation, ft. | Elevation, ft. | Stickup, ft. | Groundwater, ft. | Elevation, ft. | Groundwater, ft. | Elevation, ft. | .°C | Ś.U. | μS/cm | NTU | mV | mg/L |
| | | | | | | | | | | | | | |
| LF-1 | 176.41 | 173.74 | 2.67 | 5.95 | 170.46 | 6.21 | 170.20 | 18.5 | 5.4 | 49 | 7.37 | 149 | 5.2 |
| LF-2 | 190.08 | 187.15 | 2.93 | 23.82 | 166.26 | 24.09 | 165.99 | 22.8 | 4.4 | 125 | 7.59 | 192 | 2.23 |
| LF-3 | 187.19 | 184.21 | 2.98 | 22.78 | 164.41 | 23.72 | 163.47 | 22.5 | 4.9 | 31 | 7.50 | 182 | 3.18 |
| LF-4 | 184.20 | 181.37 | 2.83 | 22.78 | 161.42 | 22.81 | 161.39 | 22.6 | 4.7 | 41 | 8.49 | 215 | 4.19 |
| LF-5 | 177.95 | 175.38 | 2.57 | 19.41 | 158.54 | 19.45 | 158.50 | 23.2 | 4.6 | 54 | 7.65 | 225 | 5.33 |
| LF-6 | 178.57 | 175.75 | 2.82 | 18.76 | 159.81 | 18.78 | 159.79 | 23.3 | 4.5 | 61 | 7.83 | 231 | 4.96 |
| MW-6 | 187.95 | 185.20 | 2.75 | 10.76 | 177.19 | 10.81 | 177.14 | 18.1 | 4.4 | 186 | 6.26 | 184 | 5.93 |
| MW-16 | 182.52 | 179.70 | 2.82 | 7.63 | 174.89 | 7.69 | 174.83 | 17.5 | 5.0 | 46 | 6.08 | 139 | 5.79 |

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 415209 GEL Work Order: 415209

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.

| | Jack N | lroh | | |
|-------------|--------|------|--|--|
| Reviewed by | , | | | |

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

Certificate of Analysis

Project:

Client ID:

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-1
Sample ID: 415209001
Matrix: Ground Water
Collect Date: 25-JAN-17 11:22

Receive Date: 27-JAN-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 | ceived" | | | | | | | | | | |
| Chloride | - | 7.86 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 01/30/17 | 1836 | 1635391 | 1 |
| Fluoride | J | 0.044 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 02/10/17 | 1939 | 1634898 | 2 |
| Rad Gas Flow Proport | tional Counting | ŗ | | | | | | | | | | |
| GFPC, Ra228, Liquid | "As Received" | ' | | | | | | | | | | |
| Radium-228 | | 2.06 | 2.03 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1045 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lic | uid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | U | ND | 0.398 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0835 | 1635018 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | , | Time | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 01/30/17 | (| 0938 | 16. | 34897 | | | |

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"

91.1 (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:

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: Field Blank Sample ID: 415209002

Matrix: Water

Collect Date: 25-JAN-17 12:00
Receive Date: 27-JAN-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|-------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | y | | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | J | 0.118 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 01/30/17 | 1957 | 1635391 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | P-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | S Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 02/10/17 | 1950 | 1634898 | 2 |
| Rad Gas Flow Prop | ortional Counting | 2 | | | | | | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | ' | | | | | | | | | | |
| Radium-228 | | 1.83 | 1.58 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1046 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | U | ND | 0.511 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0835 | 1635018 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Time | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 01/30/17 | (| 0938 | 163 | 34897 | | | |

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"

88 (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

Project:

Client ID:

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

Certificate of Analysis

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-2

Sample ID:

415209003

Matrix:

Ground Water

Collect Date:

25-JAN-17 12:05

Receive Date: Collector:

27-JAN-17 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 | | 0.118 | 0.033 | 0.100 | mg/L | | 1 | MXL2 | 01/30/17 | 2024 | 1635391 | 1 |
| Chloride | | 23.5 | 0.335 | 1.00 | mg/L | | 5 | MXL2 | 01/31/17 | 1142 | 1635391 | 2 |
| 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 | BAJ | 02/10/17 | 1952 | 1634898 | 3 |
| Rad Gas Flow Propo | ortional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | • | | | | | | | | | | |
| Radium-228 | | 4.24 | 2.19 | 3.00 | pCi/L | | | AXM6 | 02/13/17 | 1113 | 1635133 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 1.90 | 0.427 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0905 | 1635018 | 5 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гimе | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 01/30/17 | (| 0938 | 163 | 34897 | | | |

The following Analytical Methods were performed:

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

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|-----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC, Ra228, Liquid "As Received" | | | 84 | (15%-125%) |

Notes:

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

Certificate of Analysis

Report Date: February 23, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-2 Project: SCEG01416C Sample ID: 415209003 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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:

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-3
Sample ID: 415209004
Matrix: Ground Water

Collect Date: 25-JAN-17 12:49
Receive Date: 27-JAN-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|---------------------|-------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | y | | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | _ | 3.28 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 01/30/17 | 2051 | 1635391 | 1 |
| Fluoride | J | 0.0615 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICl | P-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | S Metals "As Red | eived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 02/10/17 | 2000 | 1634898 | 2 |
| Rad Gas Flow Prop | ortional Counting | 5 | | | | | | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 1.17 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1046 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | _ | 0.791 | 0.233 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0905 | 1635018 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 01/30/17 | (|)938 | 163 | 34897 | | | |

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 904.0/S w 840 9320 M EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

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

91.9 (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

Certificate of Analysis

Project:

Client ID:

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: DUP

Sample ID:

415209005

27-JAN-17

Matrix:

Ground Water

Collect Date:

25-JAN-17 13:10

Receive Date: Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|------------------|---------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatogra | phy | | | | | | | | | | | |
| EPA300.0 Fluori | de in Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | • | 3.29 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 01/30/17 | 2118 | 1635391 | 1 |
| Fluoride | J | 0.0496 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis- | ICP-MS | | | | | | | | | | | |
| 200.8/200.2 NPI | DES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 02/10/17 | 2003 | 1634898 | 2 |
| Rad Gas Flow Pr | oportional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Li | iquid "As Received" | " | | | | | | | | | | |
| Radium-228 | U | ND | 1.54 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1046 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra22 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 0.966 | 0.376 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0905 | 1635018 | 4 |
| The following Pr | ep Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гimе | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 01/30/17 | (| 0938 | 16. | 34897 | | | |
| FF1 C 11 : A | 1 136 1 | 6 1 | | | | | | | | | | |

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

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

(15%-125%) 92.9

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

SQL: Sample Quantitation Limit MDC: Minimum Detectable Concentration

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

Certificate of Analysis

Project:

Client ID:

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-4

Sample ID:

415209006

Matrix: Collect Date: Ground Water

Receive Date:

25-JAN-17 13:55 27-JAN-17

Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst l | Date | Time | Batch | Method |
|-------------------|---------------------|------------------|-------|---------|----------|------|------|-----------|--------|------|---------|--------|
| Ion Chromatograp | ohy | | | | | | | | | | | |
| EPA300.0 Fluorid | le in Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | • | 4.21 | 0.067 | 0.200 | mg/L | | 1 | MXL2 01 | /30/17 | 2145 | 1635391 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 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 02 | /10/17 | 2005 | 1634898 | 2 |
| Rad Gas Flow Pro | portional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Lic | quid "As Received' | " | | | | | | | | | | |
| Radium-228 | U | ND | 1.59 | 3.00 | pCi/L | | | AXM6 02 | /09/17 | 1046 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 0.874 | 0.523 | 1.00 | pCi/L | | | LXP1 02 | /22/17 | 0905 | 1635018 | 4 |
| The following Pre | ep Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | , | Time | e Prep | Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 01/30/17 | | 0938 | 163489 | 97 | | | |
| The fellowing Ar | alutical Mathadau | riana manfanna d | | | | | | | | | | |

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 (15%-125%) GFPC, Ra228, Liquid "As Received" 95.8

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

Notes:

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

Certificate of Analysis

Project:

Client ID:

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-5

Sample ID: 415209007 Matrix: Ground Water Collect Date: 25-JAN-17 14:45

Receive Date: 27-JAN-17 Collector: Client

| Parameter | Qualifier | Result | Ι | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|-------------------|-----------|-----|----|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | ıy | | | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | ceived" | | | | | | | | | | | |
| Chloride | • | 6.20 | 0.0 | 67 | 0.200 | mg/L | | 1 | MXL2 | 01/30/17 | 2305 | 1635391 | 1 |
| Fluoride | J | 0.0578 | 0.0 | 33 | 0.100 | mg/L | | 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 | BAJ | 02/10/17 | 2008 | 1634898 | 2 |
| Rad Gas Flow Prop | ortional Counting | Ţ | | | | | | | | | | | |
| GFPC, Ra228, Liqu | uid "As Received" | 1 | | | | | | | | | | | |
| Radium-228 | | 1.50 | 1. | 40 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1046 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | | |
| Radium-226 | U | ND | 0.2 | 96 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0905 | 1635018 | 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 | | | | SXW1 | 01/30/17 | (| 0938 | 16. | 34897 | | | |

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" 93.4

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

Project:

Client ID:

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

Certificate of Analysis

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-6

Sample ID:

415209008

Matrix: Collect Date: Ground Water

Receive Date:

25-JAN-17 15:34 27-JAN-17

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" | | | | | | | | | | |
| Chloride | _ | 7.93 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 01/30/17 | 2332 | 1635391 | 1 |
| Fluoride | J | 0.0709 | 0.033 | 0.100 | mg/L | | 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 | BAJ | 02/10/17 | 2011 | 1634898 | 2 |
| Rad Gas Flow Propo | ortional Counting | 5 | | | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 1.26 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1046 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, 1 | iquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 1.06 | 0.424 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0905 | 1635018 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | <u> </u> | | Analyst | Date |] | Γime | Pre | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 01/30/17 | C | 938 | 163 | 34897 | | | |
| The following Anal | ytical Methods v | vere performe | ed: | | | | | | | | | |
| 3.6.4.1 | ъ | | | | | | ~ | | | | | |

| 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

Acceptable Limits Surrogate/Tracer Recovery Test Result Nominal Recovery% Barium-133 Tracer GFPC, Ra228, Liquid "As Received" (15%-125%) 86.6

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

SQL: Sample Quantitation Limit MDC: Minimum Detectable Concentration

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

Certificate of Analysis

Project:

Client ID:

Report Date: February 23, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: MW-16
Sample ID: 415209009
Matrix: Ground Water
Collect Date: 26-JAN-17 09:25

Receive Date: 27-JAN-17 Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|-----------------------|------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | | |
| EPA300.0 Fluoride i | n Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | • | 3.88 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 01/30/17 | 2359 | 1635391 | 1 |
| Fluoride | J | 0.0598 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP | -MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 02/10/17 | 2013 | 1634898 | 2 |
| Rad Gas Flow Propo | rtional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | " | | | | | | | | | | |
| Radium-228 | | 1.45 | 1.14 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1046 | 1635133 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | iquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 0.724 | 0.401 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0935 | 1635018 | 4 |
| The following Prep I | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | r | Time | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 01/30/17 | (| 0938 | 16. | 34897 | | | |

The following Analytical Methods were performed:

 Method
 Description
 Analyst Comments

 1
 EPA 300.0

 2
 EPA 200.8 SC_NPDES

3 EPA 904.0/SW846 9320 Modified

4 EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 90.7 (15%-125%)

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

SCEG01416C

GEEL003

Report Date: February 23, 2017

Company:

GEL Engineering, LLC 2040 Savage Rd

Address:

Charleston, South Carolina 29417

Contact:

Robert Gardner

Project:

Cope RCRA

Sample ID:

Client Sample ID: MW-06 415209010

Matrix:

Ground Water

Collect Date:

26-JAN-17 10:28

Receive Date:

27-JAN-17

Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|--------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograp | hy | | | | | | | | | | | |
| EPA300.0 Fluoride | e in Liquid "As Re | eceived" | | | | | | | | | | |
| Fluoride | J | 0.0631 | 0.033 | 0.100 | mg/L | | 1 | MXL2 | 01/31/17 | 0026 | 1635391 | 1 |
| Chloride | | 17.7 | 0.335 | 1.00 | mg/L | | 5 | MXL2 | 01/31/17 | 1209 | 1635391 | 2 |
| Metals Analysis-IO | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 02/10/17 | 2016 | 1634898 | 3 |
| Rad Gas Flow Pro | portional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Liq | uid "As Received | " | | | | | | | | | | |
| Radium-228 | | 4.47 | 2.64 | 3.00 | pCi/L | | | AXM6 | 02/09/17 | 1430 | 1635133 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 3.50 | 0.327 | 1.00 | pCi/L | | | LXP1 | 02/22/17 | 0935 | 1635018 | 5 |
| The following Pre | p Methods were p | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | 7 | Гim | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 01/30/17 | (|)938 | 16 | 34897 | | | |
| FF1 6 11 | | | | | | | | | | | | |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments | |
|--------|-------------------------------|------------------|--|
| 1 | EPA 300.0 | • | |
| 2 | EPA 300.0 | | |
| 3 | EPA 200.8 SC_NPDES | | |
| 4 | EPA 904.0/SW846 9320 Modified | | |
| 5 | EPA 903 1 Modified | | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|-----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GEPC, Ra228, Liquid "As Received" | | | 95.8 | (15%-125%) |

Notes:

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

Certificate of Analysis

Report Date: February 23, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: MW-06 Project: SCEG01416C Sample ID: 415209010 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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: February 23, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 415209

| Parmname | NOM | Sample Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|---|--------|-------------|--------|-------|--------|------|---------------|----------------|
| Ion Chromatography Batch 1635391 ——— | | | | | | | | |
| QC1203718503 415209001 DUP Chloride | | 7.86 | 8.03 | mg/L | 2.18 | | (0%-20%) MXL2 | 01/30/17 19:03 |
| Fluoride | J | 0.044 J | 0.0603 | mg/L | 31.3 ^ | | (+/-0.100) | - |
| QC1203718502 LCS Chloride | 5.00 | | 4.87 | mg/L | | 97.5 | (90%-110%) | 01/30/17 18:09 |
| Fluoride | 2.50 | | 2.31 | mg/L | | 92.5 | (90%-110%) | |
| QC1203718501 MB Chloride | | U | ND | mg/L | | | | 01/30/17 17:43 |
| Fluoride | | U | ND | mg/L | | | | |
| QC1203718504 415209001 PS Chloride | 5.00 | 7.86 | 13.2 | mg/L | | 107 | (90%-110%) | 01/30/17 19:30 |
| Fluoride | 2.50 J | 0.044 | 2.77 | mg/L | | 109 | (90%-110%) | |
| Metals Analysis - ICPMS Batch 1634898 ——— | | | | | | | | |
| QC1203717086 415209001 DUP Lithium | U | ND U | ND | ug/L | N/A | | BAJ | 02/10/17 19:42 |
| QC1203717085 LCS Lithium | 50.0 | | 49.4 | ug/L | | 98.7 | (80%-120%) | 02/10/17 19:36 |
| QC1203717084 MB Lithium | | U | ND | ug/L | | | | 02/10/17 19:34 |

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QC Summary

Workorder: 415209 Page 2 of 4 QC **Parmname** NOM Sample Qual Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 1634898 Batch QC1203717087 415209001 MS ND 101 BAJ 02/10/17 19:44 Lithium 50.0 U 51.0 ug/L (75%-125%) QC1203717088 415209001 SDILT Lithium U ND U ND N/A (0%-10%)02/10/17 19:47 ug/L Rad Gas Flow Batch 1635133 QC1203717742 414773020 DUP Radium-228 U 0.393 3.34 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 QC1203717741 MB U Radium-228 0.738 pCi/L 02/09/17 10:49 Rad Ra-226 1635018 Batch QC1203717408 415209010 DUP Radium-226 3.50 2.83 pCi/L 21.2* (0%-20%) LXP1 02/22/17 11:30 QC1203717410 LCS Radium-226 26.0 21.0 pCi/L 80.9 (75% - 125%)02/22/17 11:30 QC1203717407 MB U 02/22/17 11:30 Radium-226 -0.0263 pCi/L QC1203717409 415209010 MS Radium-226 130 3.50 102 pCi/L 75.9 (75% - 125%)02/22/17 11:30

Notes:

The Qualifiers in this report are defined as follows:

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

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QC Summary

Workorder: 415209 Page 3 of 4 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

R Sample results are rejected

purposes.

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

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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:

415209

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 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25483
Cope Well LF-1 CCR

Date & Time Sampled: January 25, 2017 11:22

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF1TDS

LF-1 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|---|-----------|-------------------------|-------|-----------------------------------|---------|--|--|
| Chlorides by IC EPA 300.0 | 7.92 | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| pH by SM4500HB | 6.09 | | S.U. | 1/27/17 12:00 | BF | | |
| Holding Time of 15 minutes has been exceeded. | | | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| Total Dissolved Solid-SM2540C | 130 | 2.0 | mg/L | 1/30/17 10:00 | BF | | |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB25485

Cope Well Field Blank CCR

Date & Time Sampled: January 25, 2017 12:00

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COFBTDS

Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|---|-----------|-------------------------|-------|-----------------------------------|---------|--|--|
| Chlorides by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| pH by SM4500HB | 6.85 | | S.U. | 1/27/17 12:00 | BF | | |
| Holding Time of 15 minutes has been exceeded. | | | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| Total Dissolved Solid-SM2540C | 8 | 2.0 | mg/L | 1/30/17 10:00 | BF | | |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB25487

Cope Well LF-2 CCR

Date & Time Sampled: January 25, 2017 12:05

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF2TDS

LF-2 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | |
|---|--------|-------------------------|-------|-----------------------------------|---------|--|
| Chlorides by IC EPA 300.0 | 26.16 | 0.50 | mg/L | 1/31/17 16:35 | EB | |
| pH by SM4500HB | 4.41 | | S.U. | 1/27/17 12:00 | BF | |
| Holding Time of 15 minutes has been exceeded. | | | | | | |
| Sulfates by IC EPA 300.0 | 3.82 | 0.50 | mg/L | 1/31/17 16:35 | EB | |
| Total Dissolved Solid-SM2540C | 52 | 2.0 | mg/L | 1/30/17 10:00 | BF | |

| Approved By: | | |
|--------------|--|--|
| AUUIUVEU DV. | | |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB25489
Cope Well LF-3 CCR

Date & Time Sampled: January 25, 2017 12:49
Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF3TDS

LF-3 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|---|-----------|-------------------------|-------|-----------------------------------|---------|--|--|
| Chlorides by IC EPA 300.0 | 3.34 | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| pH by SM4500HB | 5.23 | | S.U. | 1/27/17 12:00 | BF | | |
| Holding Time of 15 minutes has been exceeded. | | | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| Total Dissolved Solid-SM2540C | 21 | 2.0 | mg/L | 1/30/17 10:00 | BF | | |

| Approved By: | | |
|--------------|--|--|
| AUUIUVEU DV. | | |



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB25491

Cope Well Duplicate CCR

Date & Time Sampled: January 25, 2017 13:10

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: CODUPTDS

Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|---|-----------|-------------------------|-------|-----------------------------------|---------|--|--|
| Chlorides by IC EPA 300.0 | 3.34 | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| pH by SM4500HB | 5.27 | | S.U. | 1/27/17 12:00 | BF | | |
| Holding Time of 15 minutes has been exceeded. | | | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| Total Dissolved Solid-SM2540C | 11 | 2.0 | mg/L | 1/30/17 10:00 | BF | | |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB25493
Cope Well LF-4 CCR

Date & Time Sampled: January 25, 2017 13:55

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF4TDS

LF-4 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|---|-----------|-------------------------|-------|-----------------------------------|---------|--|--|
| Chlorides by IC EPA 300.0 | 4.13 | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| pH by SM4500HB | 4.72 | | S.U. | 1/27/17 12:00 | BF | | |
| Holding Time of 15 minutes has been exceeded. | | | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB | | |
| Total Dissolved Solid-SM2540C | 17 | 2.0 | mg/L | 1/30/17 10:00 | BF | | |



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25495
Cope Well LF-5 CCR

Date & Time Sampled: January 25, 2017 14:45

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF5TDS

LF-5 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 6.23 | 0.50 | mg/L | 1/31/17 16:35 | EB |
| pH by SM4500HB | 4.62 | | S.U. | 1/27/17 12:00 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB |
| Total Dissolved Solid-SM2540C | 24 | 2.0 | mg/L | 1/30/17 10:00 | BF |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB25497
Cope Well LF-6 CCR

Date & Time Sampled: January 25, 2017 15:34

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF6TDS

LF-6 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 7.83 | 0.50 | mg/L | 1/31/17 16:35 | EB |
| pH by SM4500HB | 4.66 | | S.U. | 1/27/17 12:00 | BF |
| Holding Time of 15 minutes has been e | xceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB |
| Total Dissolved Solid-SM2540C | 27 | 2.0 | mg/L | 1/30/17 10:00 | BF |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB25499

Cope Well MW-16 TDS CCR

Date & Time Sampled: January 26, 2017 09:25

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COMW16TDS

LF-6 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---------------------------------------|----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 3.98 | 0.50 | mg/L | 1/31/17 16:35 | EB |
| pH by SM4500HB | 4.76 | | S.U. | 1/27/17 12:00 | BF |
| Holding Time of 15 minutes has been e | xceeded. | | | | |
| Sulfates by IC EPA 300.0 | 1.35 | 0.50 | mg/L | 1/31/17 16:35 | EB |
| Total Dissolved Solid-SM2540C | 15 | 2.0 | mg/L | 1/30/17 10:00 | BF |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB25501

Cope Well MW-06 TDS CCR

Date & Time Sampled: January 26, 2017 10:28

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COMW06TDS

LF-6 Login Record File: 170127001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 19.28 | 0.50 | mg/L | 1/31/17 16:35 | EB |
| pH by SM4500HB | 4.34 | | S.U. | 1/27/17 12:00 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 1/31/17 16:35 | EB |
| Total Dissolved Solid-SM2540C | 84 | 2.0 | mg/L | 1/30/17 10:00 | BF |



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

____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25484

Cope Well LF-1 T Metal CCR

Date & Time Sampled: January 25, 2017 11:22

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF1TM

LF-1 Login Record File: 170127001

| Result Less than | Reporting Limit(MRL) | Units | Completed A | • | Chemist |
|------------------|---|---|---|---|--|
| Less than | | | | ime | |
| | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| Less than | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| 34.2 | 10.0 | ppb | 1/31/17 | 15:33 | PRC |
| Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC |
| Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC |
| Less than | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| 2002 | 100 | ppb | 1/31/17 | 15:33 | PRC |
| Less than | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| Less than | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| Less than | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC |
| Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC |
| Less than | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| Less than | 5.0 | ppb | 2/6/17 | 16:19 | MC |
| Less than | 1.0 | ppb | 2/6/17 | 16:19 | MC |
| | 34.2 Less than Less than 2002 Less than Less than | 34.2 10.0 Less than 2.0 Less than 1000 Less than 1.0 2002 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 | Less than 1.0 ppb 34.2 10.0 ppb Less than 2.0 ppb Less than 1000 ppb Less than 1.0 ppb 2002 100 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 1.0 ppb 2/6/17 34.2 10.0 ppb 1/31/17 Less than 2.0 ppb 1/31/17 Less than 1000 ppb 1/31/17 Less than 1.0 ppb 2/6/17 Less than 2.0 ppb 1/31/17 Less than 0.2 ppb 1/31/17 Less than 1.0 ppb 2/6/17 Less than 5.0 ppb 2/6/17 | Less than 1.0 ppb 2/6/17 16:19 34.2 10.0 ppb 1/31/17 15:33 Less than 2.0 ppb 1/31/17 15:33 Less than 1000 ppb 1/31/17 15:33 Less than 1.0 ppb 2/6/17 16:19 2002 100 ppb 1/31/17 15:33 Less than 1.0 ppb 2/6/17 16:19 Less than 1.0 ppb 2/6/17 16:19 Less than 1.0 ppb 1/31/17 15:33 Less than 0.2 ppb 1/31/17 15:33 Less than 0.2 ppb 1/31/17 15:22 Less than 1.0 ppb 2/6/17 16:19 Less than 1.0 ppb 2/6/17 16:19 Less than 5.0 ppb 2/6/17 16:19 |



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

January 25, 2018

REPORT TO:

Mike Moore C221 Sample ID: AB25486

Cope Well Field Blank T Metal CCR

Date & Time Sampled: January 25, 2017 12:00

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COFBTM

Login Record File: 170127001

| | Login Record File: 170127001 | | | | | | |
|-------------------------------------|------------------------------|-------------------------|-------|--------------------|-------|---------|--|
| 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 | 2/7/17 | 07:53 | MC | |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:53 | MC | |
| Barium by ICP-OES 200.7 | Less than | 10.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:54 | МС | |
| Calcium EPA 200.7 | Less than | 100 | ppb | 1/31/17 | 15:33 | PRC | |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:53 | MC | |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:53 | MC | |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:53 | MC | |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:54 | MC | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | 07:53 | MC | |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:54 | MC | |
| | | | | | | | |

| pproved By | y: | | |
|------------|----|--|--|
| pproved By | y: | | |



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

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25488

Cope Well LF-2 T Metal CCR

Date & Time Sampled: January 25, 2017 12:05

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF2TM

LF-2 Login Record File: 170127001

| Result | Reporting Limit(MRL) | Units | | • | Chemist | |
|-----------|--|---|--|--|--|--|
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| 60.8 | 10.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| 2787 | 100 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| 1.3 | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 5.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| | Less than Less than 60.8 Less than Less than 2787 Less than 1.3 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 60.8 10.0 Less than 2.0 Less than 1000 Less than 1.0 2787 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 | Result Limit(MRL) Units Less than 1.0 ppb Less than 1.0 ppb 60.8 10.0 ppb Less than 2.0 ppb Less than 1.00 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 | Result Limit(MRL) Units Date & 1 Less than 1.0 ppb 2/7/17 Less than 1.0 ppb 1/31/17 Less than 2.0 ppb 1/31/17 Less than 1000 ppb 1/31/17 Less than 1.0 ppb 2/7/17 2787 100 ppb 1/31/17 Less than 1.0 ppb 2/7/17 Less than 1.0 ppb 2/7/17 Less than 1.0 ppb 1/31/17 Less than 0.2 ppb 1/31/17 Less than 0.2 ppb 1/31/17 Less than 1.0 ppb 2/7/17 Less than 5.0 ppb 2/7/17 | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 2/7/17 07:55 Less than 1.0 ppb 2/7/17 07:55 60.8 10.0 ppb 1/31/17 15:33 Less than 2.0 ppb 1/31/17 15:33 Less than 1.00 ppb 2/7/17 07:55 2787 100 ppb 1/31/17 15:33 Less than 1.0 ppb 2/7/17 07:55 1.3 1.0 ppb 2/7/17 07:55 Less than 1.0 ppb 1/31/17 15:33 Less than 2.0 ppb 1/31/17 15:33 Less than 2.0 ppb 1/31/17 15:33 Less than 0.2 ppb 1/31/17 15:33 Less than 0.2 ppb 1/31/17 15:22 Less than 0.0 ppb 2/7/17 07:55 Less than 5.0 ppb 2/7/17 07:55 | |

| Approved By: | · |
|--------------|---|
| | |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221 Sample ID: AB25490

Cope Well LF-3 T Metal CCR

Date & Time Sampled: January 25, 2017 12:49
Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF3TM

LF-3 Login Record File: 170127001

| LF-3 | LogiiTNecold File. 170127001 | | | | | | |
|-------------------------------------|------------------------------|-------------------------|-------|-------------|-------|---------|--|
| 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 | 2/7/17 | 07:55 | MC | |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Barium by ICP-OES 200.7 | 24.5 | 10.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Calcium EPA 200.7 | 761 | 100 | ppb | 1/31/17 | 15:33 | PRC | |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Lithium (CWA) 200.7 | 2.0 | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | 07:55 | MC | |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |

| Approved By: | · |
|--------------|---|
| | |



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25492

Cope Well Duplicate T Metal CCR

Date & Time Sampled: January 25, 2017 13:10

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: CODUPTM

Login Record File: 170127001

| | | | Login Nec | | 27001 | |
|-------------------------------------|-----------|-------------------------|-----------|-------------|-------|---------|
| 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 | 2/7/17 | 07:55 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC |
| Barium by ICP-OES 200.7 | 25.8 | 10.0 | ppb | 1/31/17 | 15:33 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC |
| Calcium EPA 200.7 | 776 | 100 | ppb | 1/31/17 | 15:33 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC |
| Lithium (CWA) 200.7 | 2.0 | 2.0 | ppb | 1/31/17 | 15:33 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | 07:55 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC |

| Approved By: |
|--------------|
|--------------|



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

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25494

Cope Well LF-4 T Metal CCR

Date & Time Sampled: January 25, 2017 13:55

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF4TM

LF-4 Login Record File: 170127001

| 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 | 2/7/17 | 07:55 | MC | |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Barium by ICP-OES 200.7 | 18.9 | 10.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Calcium EPA 200.7 | 1385 | 100 | ppb | 1/31/17 | 15:33 | PRC | |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | 07:55 | MC | |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | • | 7 07:55 7 07:55 | |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221 Sample ID: AB25496

Cope Well LF-5 T Metal CCR

Date & Time Sampled: January 25, 2017 14:45

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COLF5TM

LF-5 Login Record File: 170127001

| LF-0 | LogiiTNecold File. 170127001 | | | | | | |
|-------------------------------------|------------------------------|-------------------------|-------|-------------|-------|---------|--|
| 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 | 2/7/17 | 07:55 | MC | |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Barium by ICP-OES 200.7 | 21.9 | 10.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Calcium EPA 200.7 | 1697 | 100 | ppb | 1/31/17 | 15:33 | PRC | |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | 07:55 | MC | |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |



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January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25498

Cope Well LF-6 T Metal CCR

Date & Time Sampled:

January 25, 2017

15:34

Date & Time Submitted:

January 27, 2017

08:54

Collected by: SANDEL,C

Location Code: COLF6TM

LF-6 Login Record File: 170127001

| Result | Reporting Limit(MRL) | Units | | • | Chemist | |
|-----------|---|--|--|---|---|--|
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| 19.8 | 10.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| 1712 | 100 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | |
| Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 5.0 | ppb | 2/7/17 | 07:55 | MC | |
| Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | |
| | Less than 19.8 Less than Less than Less than 1712 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 19.8 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 1.0 Less than 1.0 Less than 1.0 Less than 2.0 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 19.8 10.0 ppb Less than 2.0 ppb Less than 1.00 ppb Less than 1.0 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 | Result Limit(MRL) Units Date & - Less than 1.0 ppb 2/7/17 Less than 1.0 ppb 1/31/17 Less than 2.0 ppb 1/31/17 Less than 1000 ppb 1/31/17 Less than 1.0 ppb 2/7/17 1712 100 ppb 1/31/17 Less than 1.0 ppb 2/7/17 Less than 1.0 ppb 2/7/17 Less than 1.0 ppb 1/31/17 Less than 2.0 ppb 1/31/17 Less than 0.2 ppb 1/31/17 Less than 0.2 ppb 2/7/17 Less than 1.0 ppb 2/7/17 Less than 5.0 ppb 2/7/17 | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 2/7/17 07:55 Less than 1.0 ppb 2/7/17 07:55 19.8 10.0 ppb 1/31/17 15:33 Less than 2.0 ppb 1/31/17 15:33 Less than 1.00 ppb 2/7/17 07:55 1712 100 ppb 1/31/17 15:33 Less than 1.0 ppb 2/7/17 07:55 Less than 1.0 ppb 2/7/17 07:55 Less than 1.0 ppb 2/7/17 07:55 Less than 2.0 ppb 1/31/17 15:33 Less than 0.2 ppb 1/31/17 15:33 Less than 0.2 ppb 1/31/17 07:55 Less than 0.2 ppb 1/31/17 15:22 Less than 1.0 ppb 2/7/17 07:55 Less than 5.0 ppb 2/7/17 07:55 | |

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

09:25

08:54

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25500

Cope Well MW-16 T Metal CCR

Date & Time Sampled: January 26, 2017
Date & Time Submitted: January 27, 2017

Collected by: SANDEL,C Location Code: COMW16TM

MW-16 Login Record File: 170127001

| 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 | 2/7/17 | 07:55 | MC | | | |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| Barium by ICP-OES 200.7 | 13.0 | 10.0 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| Calcium EPA 200.7 | 1866 | 100 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | | | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 07:55 | MC | | | |
| | | | | | | | | | |

| pproved By | y: | | |
|------------|----|--|--|
| pproved By | y: | | |



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

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB25502

Cope Well MW-06 T Metal CCR

Date & Time Sampled: January 26, 2017 10:28

Date & Time Submitted: January 27, 2017 08:54

Collected by: SANDEL,C Location Code: COMW06TM

MW-06 Login Record File: 170127001

| 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 | 2/7/17 | 08:02 | MC | | | |
| Arsenic by ICP_MS 200.8 | 1.5 | 1.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| Barium by ICP-OES 200.7 | 119 | 10.0 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| Calcium EPA 200.7 | 8856 | 100 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 1/31/17 | 15:33 | PRC | | | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 1/31/17 | 15:22 | PRC | | | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 2/7/17 | 08:02 | MC | | | |
| | | | | | | | | | |

| Approved By | <i>'</i> : | | |
|-------------|------------|--|--|

EPA CCR Rule Compliance Monitoring Wells Groundwater Monitoring Data

South Carolina Electric & Gas: Cope Station Class Three Landfill

Cope Station Class Three Landfill

| • | | | | 3/29-30/2017 | | | | | | | | | |
|--------------------|----------------|----------------|--------------|------------------|----------------|------------------|----------------|-------------|----------|------------------|---------------|-------|------|
| | | Well Data | | | | | | 1 | | | | | |
| | | | | Initial G | auging | Final G | auging | | Final Wa | ater Quality Ind | dicator Param | eters | |
| | | Ground | | | | | | | | | | | |
| | PVC Pipe | Surface | | Depth to | Groundwater | Depth to | Groundwater | Temparature | рН | Sp. Cond. | Turbidity | ORP | DO |
| Monitoring Well ID | Elevation, ft. | Elevation, ft. | Stickup, ft. | Groundwater, ft. | Elevation, ft. | Groundwater, ft. | Elevation, ft. | °C | S.U. | μS/cm | NTU | mV | mg/L |
| | 1 | | | | | | | | | | | | Ļ |
| LF-1 | 176.41 | 173.74 | 2.67 | 7.08 | 169.33 | 7.29 | 169.12 | 19.7 | 4.6 | 58 | 1.56 | 316 | 5.20 |
| LF-2 | 190.08 | 187.15 | 2.93 | 25.61 | 164.47 | 25.75 | 164.33 | 23.1 | 4.1 | 158 | 7.05 | 358 | 1.06 |
| LF-3 | 187.19 | 184.21 | 2.98 | 23.99 | 163.20 | 24.67 | 162.52 | 21.1 | 4.6 | 29 | 0.38 | 285 | 2.34 |
| LF-4 | 184.20 | 181.37 | 2.83 | 23.49 | 160.71 | 23.57 | 160.63 | 21.9 | 4.5 | 37 | 27.9 | 297 | 4.38 |
| LF-5 | 177.95 | 175.38 | 2.57 | 20.18 | 157.77 | 20.20 | 157.75 | 22.5 | 4.5 | 55 | 2.29 | 312 | 5.96 |
| LF-6 | 178.57 | 175.75 | 2.82 | 19.18 | 159.39 | 19.19 | 159.38 | 22.3 | 4.5 | 57 | 1.80 | 305 | 5.41 |
| MW-6 | 187.95 | 185.20 | 2.75 | 12.55 | 175.40 | 12.57 | 175.38 | 19 | 4.3 | 165 | 1.56 | 344 | 6.92 |
| MW-16 | 182.52 | 179.70 | 2.82 | 8.22 | 174.30 | 8.25 | 174.27 | 18.3 | 4.6 | 36 | 1.39 | 313 | 6.36 |

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 419613 GEL Work Order: 419613

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 | , | | | |

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

Certificate of Analysis

Report Date: April 25, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: MW-16 Project: SCEG01416C Sample ID: 419613001 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 29-MAR-17 15:00
Receive Date: 31-MAR-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF I |)F | Analyst Date | Time | Batch | Method |
|--|-----------------|----------|-------|---------|----------|------|-----|---------------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | |
| EPA300.0 Fluoride in | Liquid "As Re | eceived" | | | | | | | | | |
| Chloride | _ | 3.41 | 0.067 | 0.200 | mg/L | | 1 1 | MXL2 03/31/17 | 1735 | 1652638 | 1 |
| Fluoride | J | 0.0495 | 0.033 | 0.100 | mg/L | | 1 | | | | |
| Metals Analysis-ICP- | ·MS | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1] | BAJ 04/07/17 | 2041 | 1652449 | 2 |
| Rad Gas Flow Propor | tional Counting | 3 | | | | | | | | | |
| GFPC, Ra228, Liquid | l "As Received" | 1 | | | | | | | | | |
| Radium-228 | U | ND | 1.66 | 3.00 | pCi/L | | 4 | AXM6 04/14/17 | 1111 | 1652760 | 3 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226, lie | quid "As Recei | ved" | | | | | | | | | |
| Radium-226 | | 0.544 | 0.193 | 1.00 | pCi/L | |] | MXH8 04/21/17 | 0820 | 1652782 | 4 |
| The following Prep Methods were performed: | | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | Ti | me | Prep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 03/31/17 | 09 | 39 | 1652448 | | | |

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 | GEPC, Ra228, Liquid "As Received" | | | 70.6 | (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

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

Certificate of Analysis

Report Date: April 25, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: MW-06 Project: SCEG01416C Sample ID: 419613002 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 29-MAR-17 16:00
Receive Date: 31-MAR-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time | Batch | Method |
|--|------------------------|---------|-------|---------|----------|------|------|---------------|------|---------|--------|
| Ion Chromatograph | ny | | | | | | | | | | |
| EPA300.0 Fluoride in Liquid "As Received" | | | | | | | | | | | |
| Fluoride | J | 0.0883 | 0.033 | 0.100 | mg/L | | 1 | MXL2 03/31/17 | 1901 | 1652638 | 1 |
| Chloride | | 17.9 | 0.335 | 1.00 | mg/L | | 5 | MXL2 04/03/17 | 1822 | 1652638 | 2 |
| Metals Analysis-IC | Metals Analysis-ICP-MS | | | | | | | | | | |
| 200.8/200.2 NPDF | ES Metals "As Rec | ceived" | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ 04/07/17 | 2051 | 1652449 | 3 |
| Rad Gas Flow Prop | ortional Counting | 9 | | | | | | | | | |
| GFPC, Ra228, Liq | uid "As Received' | ' | | | | | | | | | |
| Radium-228 | | 2.80 | 1.68 | 3.00 | pCi/L | | | AXM6 04/14/17 | 1114 | 1652760 | 4 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226, | , liquid "As Receiv | ved" | | | | | | | | | |
| Radium-226 | - | 2.24 | 0.191 | 1.00 | pCi/L | | | MXH8 04/21/17 | 0820 | 1652782 | 5 |
| The following Prep Methods were performed: | | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | 7 | Гіте | Prep Batch | l | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 03/31/17 | C | 939 | 1652448 | | | |

The following Analytical Methods were performed:

| Method | Description | | Analyst Co | omments | |
|-----------------|-------------------------------|--------|------------|-----------|-------------------|
| 1 | EPA 300.0 | | - | | |
| 2 | EPA 300.0 | | | | |
| 3 | EPA 200.8 SC_NPDES | | | | |
| 4 | EPA 904.0/SW846 9320 Modified | | | | |
| 5 | EPA 903.1 Modified | | | | |
| Surrogate/Trace | r Recovery Test | Result | Nominal | Recovery% | Acceptable Limits |

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

Notes:

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

Certificate of Analysis

Report Date: April 25, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: MW-06 Project: SCEG01416C Sample ID: 419613002 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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: April 25, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-1

Sample ID: 419613003 Matrix: Ground Water Collect Date: 29-MAR-17 16:58

Receive Date: 31-MAR-17 Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF DF | Analyst Date | Time Batch | Method |
|-----------------------|------------------|-----------|-------|---------|----------|--------|---------------|--------------|--------|
| Ion Chromatography | | | | | | | | | |
| EPA300.0 Fluoride in | n Liquid "As Re | eceived" | | | | | | | |
| Fluoride | J | 0.0865 | 0.033 | 0.100 | mg/L | 1 | MXL2 03/31/17 | 1930 1652638 | 1 |
| Chloride | | 12.9 | 0.134 | 0.400 | mg/L | 2 | MXL2 04/03/17 | 1851 1652638 | 2 |
| 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 04/07/17 | 2054 1652449 | 3 |
| Rad Gas Flow Propos | rtional Counting | 3 | | | | | | | |
| GFPC, Ra228, Liquio | d "As Received" | " | | | | | | | |
| Radium-228 | U | ND | 1.71 | 3.00 | pCi/L | | AXM6 04/14/17 | 1114 1652760 | 4 |
| Rad Radium-226 | | | | | | | | | |
| Lucas Cell, Ra226, li | quid "As Recei | ved" | | | | | | | |
| Radium-226 | | 0.404 | 0.172 | 1.00 | pCi/L | | MXH8 04/21/17 | 0820 1652782 | 5 |
| The following Prep N | Methods were pe | erformed: | | | | | | | |
| Method | Description | n | | Analyst | Date | Tim | e Prep Batch | l | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 03/31/17 | 0939 | 1652448 | | |

The following Analytical Methods were performed:

| Method | Description | | Analyst Co | omments | |
|-----------------|-------------------------------|--------|--------------|-----------|-------------------|
| 1 | EPA 300.0 | | - | | |
| 2 | EPA 300.0 | | | | |
| 3 | EPA 200.8 SC_NPDES | | | | |
| 4 | EPA 904.0/SW846 9320 Modified | | | | |
| 5 | EPA 903.1 Modified | | | | |
| Surrogate/Trace | er Recovery Test | Result | Nominal | Recovery% | Acceptable Limits |

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

Result Nominal Recovery Acceptable Limits

79.9 (15%-125%)

Notes:

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

Certificate of Analysis

Report Date: April 25, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-1 Project: SCEG01416C Sample ID: 419613003 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Project:

Client ID:

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Certificate of Analysis

Report Date: April 25, 2017

SCEG01416C

GEEL003

Company: Address:

GEL Engineering, LLC

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-2

Sample ID:

419613004

Matrix: Collect Date: Ground Water 29-MAR-17 17:57

Receive Date:

31-MAR-17

Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Dat | :e | Time | Batch | Method |
|------------------|---------------------|-----------|-------|---------|----------|------|------|-------------|----|------|---------|--------|
| Ion Chromatogra | phy | | | | | | | | | | | |
| EPA300.0 Fluorio | de in Liquid "As Re | eceived" | | | | | | | | | | |
| Fluoride | • | 0.126 | 0.033 | 0.100 | mg/L | | 1 | MXL2 03/31/ | 17 | 1959 | 1652638 | 1 |
| Chloride | | 30.4 | 0.335 | 1.00 | mg/L | | 5 | MXL2 04/03/ | 17 | 1920 | 1652638 | 2 |
| Metals Analysis- | ICP-MS | | | | | | | | | | | |
| 200.8/200.2 NPI | DES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ 04/07/ | 17 | 2102 | 1652449 | 3 |
| Rad Gas Flow Pr | oportional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Li | iquid "As Received" | " | | | | | | | | | | |
| Radium-228 | U | ND | 1.79 | 3.00 | pCi/L | | | AXM6 04/14/ | 17 | 1114 | 1652760 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra22 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 1.58 | 0.168 | 1.00 | pCi/L | | | MXH8 04/21/ | 17 | 0820 | 1652782 | 5 |
| The following Pr | ep Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | , | Time | e Prep Bat | ch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 03/31/17 | | 0939 | 1652448 | | | | |
| The fellowing A | nalvitical Mathaday | | and. | | | | | | | | | |

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits 81.8 (15%-125%) Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

Notes:

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

Certificate of Analysis

Report Date: April 25, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-2 Project: SCEG01416C Sample ID: 419613004 Client ID: GEEL003

| Parameter Qualifier I | Result D | DL : | RL | Units | PF | DF Analyst Date | Time Batch | Method |
|-----------------------|----------|------|----|-------|----|-----------------|------------|--------|
|-----------------------|----------|------|----|-------|----|-----------------|------------|--------|

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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

Report Date: April 25, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: Field Blank Project:
Sample ID: 419613005 Client ID:

Matrix: Water
Collect Date: 29-MAR-17 1

Collect Date: 29-MAR-17 18:10
Receive Date: 31-MAR-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time | e Batch | Method |
|-------------------|---------------------|-----------|-------|---------|----------|------|-----|---------------|------|---------|--------|
| Ion Chromatograp | ohy | | | | | | | | | | |
| EPA300.0 Fluorid | le in Liquid "As Re | eceived" | | | | | | | | | |
| Chloride | J | 0.104 | 0.067 | 0.200 | mg/L | | 1 | MXL2 03/31/17 | 2028 | 1652638 | 1 |
| Fluoride | J | 0.0379 | 0.033 | 0.100 | mg/L | | 1 | | | | |
| Metals Analysis-I | CP-MS | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ 04/07/17 | 2112 | 1652449 | 2 |
| Rad Gas Flow Pro | portional Counting | g | | | | | | | | | |
| GFPC, Ra228, Lic | quid "As Received | " | | | | | | | | | |
| Radium-228 | U | ND | 1.39 | 3.00 | pCi/L | | | AXM6 04/14/17 | 1114 | 1652760 | 3 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226 | 6, liquid "As Recei | ved" | | | | | | | | | |
| Radium-226 | U | ND | 0.264 | 1.00 | pCi/L | | | MXH8 04/21/17 | 0820 | 1652782 | 4 |
| The following Pre | p Methods were p | erformed: | | | | | | | | | |
| Method | Description | n | | Analyst | Date | Т | ime | Prep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 03/31/17 | 0 | 939 | 1652448 | | | |
| FD1 C 11 : A | 1 . 13 6 . 1 | C 1 | | | | | | | | | |

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" | | | 84.9 | (15%-125%) |

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: April 25, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-3 Sample ID: 419613006

Matrix: Ground Water Collect Date: 30-MAR-17 09:30 Receive Date: 31-MAR-17

Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF 1 | DF | Analyst Date | Time | Batch | Method |
|--------------------|---------------------|-----------|-------|---------|----------|------|-----|---------------|--------|---------|--------|
| Ion Chromatograp | hy | | | | | | | | | | |
| EPA300.0 Fluorid | e in Liquid "As Re | ceived" | | | | | | | | | |
| Chloride | • | 3.89 | 0.067 | 0.200 | mg/L | | 1 | MXL2 03/31/17 | 7 2057 | 1652638 | 1 |
| Fluoride | J | 0.0754 | 0.033 | 0.100 | mg/L | | 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 04/07/1 | 7 2115 | 1652449 | 2 |
| Rad Gas Flow Pro | portional Counting | Ţ | | | | | | | | | |
| GFPC, Ra228, Lic | uid "As Received" | 1 | | | | | | | | | |
| Radium-228 | U | ND | 1.76 | 3.00 | pCi/L | | | AXM6 04/14/17 | 7 1114 | 1652760 | 3 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Receiv | ved" | | | | | | | | | |
| Radium-226 | • | 0.685 | 0.340 | 1.00 | pCi/L | | | MXH8 04/21/17 | 7 0820 | 1652782 | 4 |
| The following Pre | p Methods were pe | erformed: | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | Т | ime | Prep Batc | h | | |
| EPA 200.2 | ICP-MS 200.2 | | | SXW1 | 03/31/17 | 09 | 939 | 1652448 | | | |

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

Test

Surrogate/Tracer Recovery Result Nominal Recovery% Acceptable Limits Barium-133 Tracer 81.5 (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

Certificate of Analysis

Project:

Client ID:

Report Date: April 25, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: Dup Sample ID: 419613007 Matrix: Ground Water

Matrix: Ground Water
Collect Date: 30-MAR-17 10:00
Receive Date: 31-MAR-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF D |)F | Analyst Date | Time | Batch | Method |
|-----------------------|------------------|-----------|-------|---------|----------|------|-----|---------------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | |
| EPA300.0 Fluoride in | n Liquid "As Re | eceived" | | | | | | | | | |
| Chloride | _ | 3.57 | 0.067 | 0.200 | mg/L | | 1 1 | MXL2 03/31/17 | 2224 | 1652638 | 1 |
| Fluoride | J | 0.0552 | 0.033 | 0.100 | mg/L | | 1 | | | | |
| Metals Analysis-ICP- | -MS | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1] | BAJ 04/07/17 | 2118 | 1652449 | 2 |
| Rad Gas Flow Propor | rtional Counting | 7 | | | | | | | | | |
| GFPC, Ra228, Liquio | d "As Received" | ' | | | | | | | | | |
| Radium-228 | U | ND | 1.66 | 3.00 | pCi/L | | | AXM6 04/14/17 | 1114 | 1652760 | 3 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226, li | quid "As Recei | ved" | | | | | | | | | |
| Radium-226 | | 0.398 | 0.209 | 1.00 | pCi/L | |] | MXH8 04/21/17 | 0820 | 1652782 | 4 |
| The following Prep N | Methods were pe | erformed: | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | Ti | me | Prep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 03/31/17 | 09 | 39 | 1652448 | | | |

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

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

81.7 (15%-125%)

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: April 25, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-4 Sample ID: 419613008

Client

Matrix: Ground Water Collect Date: 30-MAR-17 11:02 31-MAR-17 Receive Date:

Collector:

RL PF Qualifier DL Units DF Analyst Date Parameter Result Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" Chloride 3.48 0.067 0.200 mg/L 1 MXL2 03/31/17 2253 1652638 1 0.0501 0.033 0.100 Fluoride mg/L 1 Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium ND 2.00 10.0 ug/L 1.00 1 BAJ 04/07/17 2120 1652449 2 Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 ND 1.78 3.00 pCi/L AXM6 04/14/17 1114 1652760 Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 1.14 0.146 1.00 pCi/L MXH8 04/21/17 0820 1652782 The following Prep Methods were performed: Method Date Prep Batch Description Analyst Time 03/31/17 EPA 200.2 ICP-MS 200.2 PREP 1652448 SXW1 0939

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 GFPC, Ra228, Liquid "As Received" 74.5 (15% - 125%)

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

MDC: Minimum Detectable Concentration **SQL: Sample Quantitation Limit**

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Certificate of Analysis

Report Date: April 25, 2017

SCEG01416C

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-5 Sample ID: 419613009

Collector:

Matrix: Ground Water Collect Date: 30-MAR-17 12:00 31-MAR-17 Receive Date:

Client

Client ID: GEEL003

Project:

RL Qualifier DL Units PF DF Analyst Date Parameter Result Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" Chloride 7.07 0.067 0.200 mg/L 1 MXL2 03/31/17 2322 1652638 1 0.0724 0.033 0.100 Fluoride mg/L 1 Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium ND 2.00 10.0 ug/L 1.00 1 BAJ 04/07/17 2123 1652449 2 Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 ND 1.39 3.00 pCi/L AXM6 04/14/17 1114 1652760 Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 0.481 0.160 1.00 pCi/L MXH8 04/21/17 0855 1652782 The following Prep Methods were performed: Method Date Prep Batch Description Analyst Time 03/31/17 EPA 200.2 ICP-MS 200.2 PREP 1652448 SXW1 0939

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 GFPC, Ra228, Liquid "As Received" 79.3 (15% - 125%)

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

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: April 25, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-6
Sample ID: 419613010
Matrix: Ground Water

Collect Date: 30-MAR-17 12:58
Receive Date: 31-MAR-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time | Batch | Method |
|--------------------|-------------------|-----------|-------|---------|----------|------|------|---------------|------|---------|--------|
| Ion Chromatograph | y | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | ceived" | | | | | | | | | |
| Chloride | | 8.36 | 0.067 | 0.200 | mg/L | | 1 | MXL2 03/31/17 | 2351 | 1652638 | 1 |
| Fluoride | J | 0.0735 | 0.033 | 0.100 | mg/L | | 1 | | | | |
| Metals Analysis-IC | P-MS | | | | | | | | | | |
| 200.8/200.2 NPDE | S Metals "As Red | ceived" | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ 04/07/17 | 2126 | 1652449 | 2 |
| Rad Gas Flow Prop | ortional Counting | ŗ | | | | | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | ' | | | | | | | | | |
| Radium-228 | U | ND | 2.44 | 3.00 | pCi/L | | | AXM6 04/14/17 | 1116 | 1652760 | 3 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | |
| Radium-226 | _ | 0.442 | 0.154 | 1.00 | pCi/L | | | MXH8 04/21/17 | 0855 | 1652782 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гіте | Prep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 03/31/17 | (|)939 | 1652448 | | | |

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 904.0/SW846 9320 Modifi EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 75.4 (15%-125%)

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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QC Summary

Report Date: April 25, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 419613

| Parmname | NOM | Sample | Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|--|--------|--------|------|--------|-------|-------|------|--------------|------------------|
| Ion Chromatography Batch 1652638 ———— | | | | | | | | | |
| QC1203759531 419613001 DUP Chloride | | 3.41 | | 3.40 | mg/L | 0.523 | | (0%-20%) MXL | 2 03/31/17 18:04 |
| Fluoride | J | 0.0495 | J | 0.0506 | mg/L | 2.2 ^ | | (+/-0.100) | |
| QC1203759530 LCS Chloride | 5.00 | | | 5.04 | mg/L | | 101 | (90%-110%) | 03/31/17 17:06 |
| Fluoride | 2.50 | | | 2.57 | mg/L | | 103 | (90%-110%) | |
| QC1203759529 MB Chloride | | | U | ND | mg/L | | | | 03/31/17 16:37 |
| Fluoride | | | U | ND | mg/L | | | | |
| QC1203759532 419613001 PS Chloride | 5.00 | 3.41 | | 8.85 | mg/L | | 109 | (90%-110%) | 03/31/17 18:33 |
| Fluoride | 2.50 J | 0.0495 | | 2.56 | mg/L | | 100 | (90%-110%) | |
| Metals Analysis - ICPMS Batch 1652449 | | | | | | | | | |
| QC1203759201 419613001 DUP Lithium | U | ND | U | ND | ug/L | N/A | | BA | J 04/07/17 20:43 |
| QC1203759202 419613004 DUP Lithium | U | ND | U | ND | ug/L | N/A | | | 04/07/17 21:04 |
| QC1203759200 LCS Lithium | 50.0 | | | 48.4 | ug/L | | 96.9 | (80%-120%) | 04/07/17 20:35 |

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QC Summary

| | | | | | | <u> </u> | Juillillai | <u>.y</u> | | | | |
|---------------------------|-------------|-------|------|---|--------|----------|------------|-----------|------|------|-------------|----------------|
| Workorder: | 419613 | | | | | | | | | | | Page 2 of 4 |
| Parmname | | | NOM | | Sample | Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
| | 652449 | | | | | | | | | | | |
| QC120375919 Lithium | 9 MB | | | | | U | ND | ug/L | | | BAJ | 04/07/17 20:38 |
| QC120375920 Lithium | 3 419613001 | MS | 50.0 | U | ND | | 48.6 | ug/L | | 96.6 | (75%-125%) | 04/07/17 20:46 |
| QC120375920 Lithium | 4 419613004 | MS | 50.0 | U | ND | | 50.5 | ug/L | | 98.7 | (75%-125%) | 04/07/17 21:07 |
| QC120375920 Lithium | 5 419613001 | SDILT | | U | ND | U | ND | ug/L | N/A | | (0%-10%) | 04/07/17 20:49 |
| QC120375920 Lithium | 6 419613004 | SDILT | | U | ND | U | ND | ug/L | N/A | | (0%-10%) | 04/07/17 21:10 |
| Rad Gas Flow Batch 1 | 652760 | | | | | | | | | | | |
| QC120375983 Radium-228 | 2 419419008 | DUP | | U | 0.353 | U | 0.170 | pCi/L | N/A | | N/AAXM6 | 04/14/17 11:17 |
| QC120375983 Radium-228 | 3 LCS | | 20.6 | | | | 21.4 | pCi/L | | 104 | (75%-125%) | 04/14/17 11:17 |
| QC120375983 Radium-228 | 1 MB | | | | | | 1.46 | pCi/L | | | | 04/14/17 11:16 |
| Rad Ra-226 Batch 1 | 1652782 | | | | | | | | | | | |
| QC120375988 Radium-226 | 4 419419006 | DUP | | U | 0.124 | U | 0.184 | pCi/L | N/A | | N/A MXH8 | 04/21/17 08:55 |
| QC120375988 Radium-226 | 6 LCS | | 26.0 | | | | 24.0 | pCi/L | | 92.4 | (75%-125%) | 04/21/17 08:55 |

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QC Summary

| Workorder: 419613 | | | | | | | | | Page 3 of 4 |
|---|-------|-------------|-------|-------|------|------|------------|-------|----------------|
| Parmname | NOM | Sample Qual | QC | Units | RPD% | REC% | Range | Anlst | Date Time |
| Rad Ra-226 Batch 1652782 | | | | | | | | | |
| QC1203759883 MB Radium-226 | | U | 0.112 | pCi/L | | | | MXH8 | 04/21/17 08:55 |
| QC1203759885 419419006 MS Radium-226 | 130 U | 0.124 | 105 | pCi/L | | 81 | (75%-125%) | | 04/21/17 08:55 |

Notes:

The Qualifiers in this report are defined as follows:

Analyte is a Tracer compound

- Result is less than value reported <
- Result is greater than value reported >
- В The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- Ε % 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
- Analytical holding time was exceeded Η
- 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
- Metals--The Matrix spike sample recovery is not within specified control limits N
- N/A RPD or %Recovery limits do not apply.
- N1See 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: 419613

Page 4 of 4

Parmname

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

| UJ | Gamma | Spectroscopy- | IIncert | ain | ident | ification | |
|----|-------|---------------|---------|-----|-------|-----------|--|

- 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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB26507

Cope GW Well MW-16 TDS (RCRA)

Date & Time Sampled: March 29, 2017 15:00

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COG16TDS

MW-16 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed An Date & Tir | _ | Chemist |
|--|------------------|-------------------------|-------|----------------------------|-------|---------|
| Chlorides by IC- 9056A | 3.37 | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been ea | 4.67 xceeded. | 0.00 | S.U. | 3/31/17 | 10:48 | CDB |
| Sulfates by IC - 9056A | 1.31 | 0.5 | mg/L | 4/7/17 | 15:27 | EB |
| Total Dissolved Solid-SM2540C | 23 | 2.0 | mg/L | 3/31/17 | 15:06 | CDB |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB26508

Cope GW Well MW-6 TDS - RCRA

Date & Time Sampled: March 29, 2017 16:00

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COG06TDS

MW-06 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC- 9056A | 18.12 | 0.50 | mg/L | 4/7/17 15:27 | EB |
| pH by SM4500HB(2011) | 4.34 | 0.00 | S.U. | 3/31/17 10:48 | CDB |
| Holding Time of 15 minutes has been e | xceeded. | | | | |
| Sulfates by IC - 9056A | Less than | 0.5 | mg/L | 4/7/17 15:27 | EB |
| Total Dissolved Solid-SM2540C | 118 | 2.0 | mg/L | 3/31/17 15:06 | CDB |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26509

Cope Well LF-1 CCR

Date & Time Sampled: March 29, 2017 16:58
Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF1TDS

LF-1 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A Date & T | • | Chemist |
|---|------------------|-------------------------|-------|----------------------|-------|---------|
| Chlorides by IC EPA 300.0 | 12.48 | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been e | 4.84 xceeded. | 0.00 | S.U. | 3/31/17 | 10:48 | CDB |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| Total Dissolved Solid-SM2540C | 41 | 2.0 | mg/L | 3/31/17 | 15:06 | CDB |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB26510
Cope Well LF-2 CCR

Date & Time Sampled: March 29, 2017 17:57

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF2TDS

LF-2 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A Date & T | • | Chemist |
|--|----------|-------------------------|-------|----------------------|-------|---------|
| Chlorides by IC EPA 300.0 | 33.50 | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| pH by SM4500HB(2011) | 4.30 | 0.00 | S.U. | 3/31/17 | 10:48 | CDB |
| Holding Time of 15 minutes has been ex | xceeded. | | | | | |
| Sulfates by IC EPA 300.0 | 1.86 | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| Total Dissolved Solid-SM2540C | 72 | 2.0 | mg/L | 3/31/17 | 15:06 | CDB |

| Approved By: | | |
|--------------|--|--|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB26511

Cope Well Field Blank CCR

Date & Time Sampled: March 29, 2017 18:10
Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COFBTDS

Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A Date & T | • | Chemist |
|--|-----------|-------------------------|-------|-------------------------|-------|---------|
| Chlorides by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| pH by SM4500HB(2011) | 5.59 | 0.00 | S.U. | 3/31/17 | 10:48 | CDB |
| Holding Time of 15 minutes has been ex | xceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| Total Dissolved Solid-SM2540C | 4 | 2.0 | mg/L | 3/31/17 | 15:06 | CDB |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26512

Cope Well LF-3 CCR

Date & Time Sampled: March 30, 2017 09:30

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF3TDS

LF-3 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A Date & T | • | Chemist |
|---|-----------|-------------------------|-------|----------------------|-------|---------|
| Chlorides by IC EPA 300.0 | 3.75 | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 4.80 | 0.00 | S.U. | 3/31/17 | 10:48 | CDB |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| Total Dissolved Solid-SM2540C | 32 | 2.0 | mg/L | 3/31/17 | 15:06 | CDB |

| Approved By: | | |
|--------------|--|--|
| AUDIOVED DV. | | |



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB26513

Cope Well Duplicate CCR

Date & Time Sampled: March 30, 2017 10:00

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: CODUPTDS

Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Ar Date & Ti | _ | Chemist |
|---|------------------|-------------------------|-------|---------------------------|-------|---------|
| Chlorides by IC EPA 300.0 | 3.40 | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been e | 4.85 xceeded. | 0.00 | S.U. | 3/31/17 | 10:48 | CDB |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| Total Dissolved Solid-SM2540C | 30 | 2.0 | mg/L | 3/31/17 | 15:06 | CDB |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26514

Cope Well LF-4 CCR

Date & Time Sampled: March 30, 2017 11:02

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF4TDS

LF-4 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---|------------------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 3.37 | 0.50 | mg/L | 4/7/17 15:27 | EB |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been e | 4.67 xceeded. | 0.00 | S.U. | 3/31/17 10:48 | CDB |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 15:27 | EB |
| Total Dissolved Solid-SM2540C | 21 | 2.0 | mg/L | 3/31/17 15:06 | 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 25, 2018

Mike Moore C221

Sample ID: AB26515
Cope Well LF-5 CCR

Date & Time Sampled: March 30, 2017 12:00

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF5TDS

LF-5 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Ar Date & Ti | • | Chemist |
|--|-----------|-------------------------|-------|---------------------------|-------|---------|
| Chlorides by IC EPA 300.0 | 6.63 | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| pH by SM4500HB(2011) | 4.58 | 0.00 | S.U. | 3/31/17 | 10:48 | CDB |
| Holding Time of 15 minutes has been e. | xceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 | 15:27 | EB |
| Total Dissolved Solid-SM2540C | 33 | 2.0 | mg/L | 3/31/17 | 15:06 | 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 25, 2018

Mike Moore C221

Sample ID: AB26516
Cope Well LF-6 CCR

Date & Time Sampled: March 30, 2017 12:58

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF6TDS

LF-6 Login Record File: 170330004

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analy Date & Time | Sis Chemist |
|--|-----------|-------------------------|-------|--------------------------------|-------------|
| Chlorides by IC EPA 300.0 | 7.74 | 0.50 | mg/L | 4/7/17 15: | 27 EB |
| pH by SM4500HB(2011) | 4.61 | 0.00 | S.U. | 3/31/17 10: | 48 CDB |
| Holding Time of 15 minutes has been e. | xceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 4/7/17 15: | 27 EB |
| Total Dissolved Solid-SM2540C | 36 | 2.0 | mg/L | 3/31/17 15: | 06 CDB |

| Approved By: | | |
|--------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26517

Cope GW Well MW-16 Tota1 Metal (RCRA)

Date & Time Sampled: March 29, 2017 15:00

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COG16TM

MW-16 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-----------|--|---|---|---|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 10.5 | 10.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 1711 | 100.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| | Less than 10.5 Less than Less than Less than 1711 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 10.5 10.0 Less than 2.0 Less than 1000 Less than 1.0 1711 100.0 Less than 1.0 Less than 1.0 Less than 2.0 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 10.5 10.0 ppb Less than 2.0 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 | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 10.5 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1000 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 1711 100.0 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 5.0 ppb 4/4/17 13:25 |

| Approved By: | _ |
|--------------|---|
|--------------|---|



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB26518

Cope GW Well MW-6 Tota1 Metal (RCRA)

Date & Time Sampled: March 29, 2017 16:00

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COG06TM

MW-06 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-----------|--|---|--|--|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 132 | 10.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 10020 | 100.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| | Less than 132 Less than Less than Less than 10020 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 132 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 1.0 Less than 1.0 Less than 1.0 Less than 2.0 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 132 10.0 ppb Less than 2.0 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 | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 132 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1.00 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 |

| Approved By | v : | | |
|-------------|------------|--|--|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26519

Cope Well LF-1 T Metal CCR

Date & Time Sampled: March 29, 2017 16:58

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF1TM

LF-1 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-----------|--|--|--|--|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 43.3 | 10.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 2805 | 100.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| | Less than Less than 43.3 Less than Less than 2805 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 43.3 10.0 Less than 2.0 Less than 1.0 2805 100.0 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 43.3 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 & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 43.3 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1.00 ppb 4/4/17 13:25 2805 100.0 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 |

| Approved By: |
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|--------------|



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26520

Cope Well LF-2 T Metal CCR

Date & Time Sampled: March 29, 2017 17:57

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF2TM

LF-2 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-----------|--|---|--|--|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 93.6 | 10.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 3673 | 100.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 3.0 | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| | Less than 93.6 Less than Less than Less than 3673 Less than 3.0 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 93.6 10.0 Less than 2.0 Less than 1000 Less than 1.0 3673 100.0 Less than 1.0 Less than 1.0 Less than 2.0 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 93.6 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 | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 93.6 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1.00 ppb 4/4/17 13:25 3673 100.0 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 3.0 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 |

| Approved By: |
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|--------------|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB26521

Cope Well Field Blank T Metal CCR

Date & Time Sampled: March 29, 2017 18:10

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COFBTM

Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-----------|---|---|--|---|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 10.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 100.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| | Less than | Result Limit(MRL) Less than 1.0 Less than 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 0.2 Less than 1.0 Less than 5.0 | ResultLimit(MRL)UnitsLess than1.0ppbLess than1.0ppbLess than10.0ppbLess than2.0ppbLess than1000ppbLess than1.0ppbLess than1.0ppbLess than1.0ppbLess than1.0ppbLess than1.0ppbLess than2.0ppbLess than0.2ppbLess than1.0ppbLess than1.0ppbLess than5.0ppb | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 10.0 ppb 4/4/17 08:29 Less than 1000 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 5.0 ppb 4/4/17 13:25 |

| Approved By: |
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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 25, 2018

Mike Moore C221 Sample ID: AB26522

Cope Well LF-3 T Metal CCR

Date & Time Sampled: March 30, 2017 09:30

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF3TM

LF-3 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|-----------|---|--|--|---|--|--|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| 33.4 | 10.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| 1005 | 100.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| 1.35 | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| | Less than 33.4 Less than Less than Less than 1005 Less than 1.35 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 33.4 10.0 Less than 2.0 Less than 1.0 1005 100.0 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 33.4 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 & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 33.4 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1.00 ppb 4/4/17 13:25 1005 100.0 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 1.35 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 5.0 ppb 4/4/17 13:25 | | |

| Approved By: | _ |
|--------------|---|
|--------------|---|



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

REPORT TO:

Mike Moore C221

January 25, 2018

Sample ID: AB26523

Cope Well Duplicate T Metal CCR

Date & Time Sampled: March 30, 2017 10:00

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: CODUPTM

Login Record File: 170330004

| | | | 5 | | |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| 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 | 4/4/17 13:25 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Barium by ICP-OES 200.7 | 31.4 | 10.0 | ppb | 4/4/17 08:29 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 4/4/17 08:29 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Calcium EPA 200.7 | 940 | 100.0 | ppb | 4/4/17 08:29 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Cobalt by ICP_MS 200.8 | 1.26 | 1.0 | ppb | 4/4/17 13:25 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 4/4/17 13:25 | МС |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 4/5/17 14:30 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 4/4/17 13:25 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 4/4/17 13:25 | MC |



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

_____ January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26524

Cope Well LF-4 T Metal CCR

Date & Time Sampled: March 30, 2017 11:02

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF4TM

LF-4 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|-----------|--|---|--|---|--|--|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| 13.9 | 10.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| 1147 | 100.0 | ppb | 4/4/17 08:29 | CDB | | |
| 1.0 | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| | Less than 13.9 Less than Less than Less than 1147 1.0 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 13.9 10.0 Less than 2.0 Less than 1000 Less than 1.0 1147 100.0 1.0 1.0 Less than 1.0 Less than 2.0 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 13.9 10.0 ppb Less than 2.0 ppb Less than 1000 ppb Less than 1.0 ppb 1.0 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 | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 13.9 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1.00 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 08:29 1.0 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 5.0 ppb 4/4/17 13:25 | | |



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

January 25, 2018

REPORT TO:

Mike Moore C221

Sample ID: AB26525

Cope Well LF-5 T Metal CCR

Date & Time Sampled: March 30, 2017 12:00
Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF5TM

LF-5 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
|-----------|--|--|--|--|--|--|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| 25.0 | 10.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| 2081 | 100.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB | | |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC | | |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC | | |
| | Less than 25.0 Less than Less than Less than 2081 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 25.0 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 1.0 Less than 1.0 Less than 1.0 Less than 2.0 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 25.0 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 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 & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 25.0 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1.00 ppb 4/4/17 13:25 2081 100.0 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 | | |



REPORT TO:

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

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

January 25, 2018

Mike Moore C221

Sample ID: AB26526

Cope Well LF-6 T Metal CCR

Date & Time Sampled: March 30, 2017 12:58

Date & Time Submitted: March 30, 2017 15:20

Collected by: D.ANDERSON Location Code: COLF6TM

LF-6 Login Record File: 170330004

| Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-----------|--|--|---|---|
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 22.9 | 10.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1000 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| 2433 | 100.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 2.0 | ppb | 4/4/17 08:29 | CDB |
| Less than | 0.2 | ppb | 4/5/17 14:30 | PRC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 5.0 | ppb | 4/4/17 13:25 | MC |
| Less than | 1.0 | ppb | 4/4/17 13:25 | MC |
| | Less than 22.9 Less than Less than Less than 2433 Less than Less than | Result Limit(MRL) Less than 1.0 Less than 1.0 22.9 10.0 Less than 2.0 Less than 1000 Less than 1.0 Less than 1.0 Less than 1.0 Less than 1.0 Less than 2.0 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 22.9 10.0 ppb Less than 2.0 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 | Result Limit(MRL) Units Date & Time Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 22.9 10.0 ppb 4/4/17 08:29 Less than 2.0 ppb 4/4/17 08:29 Less than 1.00 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 08:29 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 Less than 2.0 ppb 4/4/17 08:29 Less than 0.2 ppb 4/4/17 13:25 Less than 0.2 ppb 4/4/17 13:25 Less than 1.0 ppb 4/4/17 13:25 |

| Approved By: |
|--------------|
|--------------|

EPA CCR Rule Compliance Monitoring Wells

Groundwater Monitoring Data South Carolina Electric & Gas: Cope Station Class Three Landfill

Cope Station Class Three Landfill

| | | | | | 5/15-1 | 6/2017 | | | | | | | |
|--------------------|----------------------------|-------------------------------------|--------------|------------------------------|-------------------------------|------------------------------|-------------------------------|----------------|------------|--------------------|------------------|-----------|------------|
| | | Well Data | | | | | | | | | | | |
| | | | | Initial G | auging | Final G | auging | | Final Wa | ater Quality Inc | dicator Param | eters | |
| Monitoring Well ID | PVC Pipe Elevation, ft. | Ground Surface Elevation, ft. | Stickup, ft. | Depth to Groundwater, ft. | Groundwater Elevation, ft. | Depth to Groundwater, ft. | Groundwater Elevation, ft. | Temparature °C | pH S.U. | Sp. Cond. µS/cm | Turbidity NTU | ORP mV | DO mg/L |
| _F-1 | 176.41 | 173.74 | 2.67 | 6.84 | 169.57 | 7.03 | 169.38 | 22.3 | 4.4 | 81 | 6.17 | 82.0 | 7.31 |
| _F-2 | 190.08 | 187.15 | 2.93 | 24.88 | 165.20 | 25.06 | 165.02 | 22.6 | 4.0 | 164 | 6.05 | 72.4 | 6.01 |
| _F-3 | 187.19 | 184.21 | 2.98 | 23.25 | 163.94 | 24.20 | 162.99 | 23.1 | 4.2 | 33 | 5.72 | 64.8 | 3.69 |
| _F-4 | 184.20 | 181.37 | 2.83 | 23.18 | 161.02 | 23.25 | 160.95 | 22.6 | 4.1 | 44 | 7.46 | 70.8 | 4.63 |
| _F-5 | 177.95 | 175.38 | 2.57 | 20.08 | 157.87 | 20.11 | 157.84 | 22.7 | 4.1 | 61 | 5.83 | 79.8 | 5.64 |
| _F-6 | 178.57 | 175.75 | 2.82 | 19.01 | 159.56 | 19.05 | 159.52 | 22.7 | 4.1 | 61 | 5.09 | 60.1 | 5.68 |
| MW-6 | 187.95 | 185.20 | 2.75 | 12.93 | 175.02 | 12.96 | 174.99 | 17.7 | 3.8 | 184 | 6.42 | 69.0 | 6.45 |
| MW-16 | 182.52 | 179.70 | 2.82 | 8.63 | 173.89 | 8.70 | 173.82 | 17.5 | 4.2 | 42 | 5.48 | 57.8 | 6.20 |

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

Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 423295 GEL Work Order: 423295

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.

| | John Cates | |
|-------------|------------|--|
| Reviewed by | • | |

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

Certificate of Analysis

Project:

Client ID:

Analyst Comments

Report Date: June 5, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Contact:

Charleston, South Carolina 29417

Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-1

Sample ID:

423295001

Matrix:

Ground Water

16-MAY-17

Collect Date:

15-MAY-17 13:03

Receive Date: Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|------------------|----------------------|----------------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatogra | phy | | | | | | | | | | | |
| EPA300.0 Fluorio | de in Liquid "As Re | eceived" | | | | | | | | | | |
| Fluoride | J | 0.0364 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 05/26/17 | 2247 | 1665858 | 1 |
| Chloride | | 11.3 | 0.134 | 0.400 | mg/L | | 2 | MAR1 | 05/31/17 | 0101 | 1665858 | 2 |
| Metals Analysis- | 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 | 05/20/17 | 0759 | 1665785 | 3 |
| Rad Gas Flow Pr | oportional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Li | iquid "As Received" | " | | | | | | | | | | |
| Radium-228 | • | 1.28 | 0.946 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1133 | 1665894 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra22 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 0.628 | 0.257 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1025 | 1665903 | 5 |
| The following Pr | ep Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | , | Time | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 05/17/17 | (| 0652 | 160 | 65784 | | | |
| The fellowing A | nalvitical Mathada v | riana manfanna | a. | | | | | | | | | |

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits (15%-125%) Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 99.9

Notes:

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

Certificate of Analysis

Report Date: June 5, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-1 Project: SCEG01416C Sample ID: 423295001 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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:

Report Date: June 5, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: Field Blank Sample ID: 423295002

Matrix: Water

Collect Date: 15-MAY-17 13:40 Receive Date: 16-MAY-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" | | | | | | | | | | |
| Chloride | U | ND | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 05/27/17 | 0013 | 1665858 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP-l | MS | | | | | | | | | | | |
| 200.8/200.2 NPDES I | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 05/20/17 | 0811 | 1665785 | 2 |
| Rad Gas Flow Proport | ional Counting | 7 | | | | | | | | | | |
| GFPC, Ra228, Liquid | "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 1.36 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1133 | 1665894 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, liq | uid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | U | ND | 0.199 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1025 | 1665903 | 4 |
| The following Prep M | ethods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | Т | ime | Pre | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 05/17/17 | 0 | 652 | 166 | 55784 | | | |

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 90.1 (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: June 5, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Contact:

Charleston, South Carolina 29417

Project:

Robert Gardner Cope RCRA

Client Sample ID: LF-2

Sample ID:

423295003

Matrix:

Ground Water

Collect Date: Receive Date: 15-MAY-17 13:45 16-MAY-17

Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | e Batch | Method |
|-------------------|---------------------|-----------------|-------|---------|----------|---------|------|--------|----------|------|---------|--------|
| Ion Chromatograp | ohy | | | | | | | | | | | |
| EPA300.0 Fluorid | le in Liquid "As Re | eceived" | | | | | | | | | | |
| Fluoride | • | 0.121 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 05/27/17 | 0042 | 1665858 | 1 |
| Chloride | | 32.0 | 0.335 | 1.00 | mg/L | | 5 | MAR1 | 05/31/17 | 0228 | 1665858 | 2 |
| Metals Analysis-I | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 05/20/17 | 0813 | 1665785 | 3 |
| Rad Gas Flow Pro | portional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Lic | quid "As Received | " | | | | | | | | | | |
| Radium-228 | | 4.01 | 1.22 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1133 | 1665894 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 1.73 | 0.215 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1025 | 1665903 | 5 |
| The following Pre | ep Methods were p | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | 7 | Гіте | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 05/17/17 | (|)652 | 16 | 65784 | | | |
| The following Ar | nalytical Methods v | were performed: | | | | | | | | | | |
| Method | Description | 1 | | | A | Analyst | Coı | nments | S | | | |
| | | | | | | | | | | | | - |

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

Surrogate/Tracer Recovery Acceptable Limits Test Result Nominal Recovery% 95.4 (15%-125%) Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

Notes:

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

Certificate of Analysis

Report Date: June 5, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-2 Project: SCEG01416C Sample ID: 423295003 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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:

Report Date: June 5, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope RCRA

Client Sample ID: LF-3
Sample ID: 423295004
Matrix: Ground Water
Collect Pote: 15 MAY 17 14:24

Collect Date: 15-MAY-17 14:34
Receive Date: 16-MAY-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" | | | | | | | | | | |
| Chloride | • | 3.73 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 05/27/17 | 0111 | 1665858 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 05/20/17 | 0815 | 1665785 | 2 |
| Rad Gas Flow Propor | tional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Liquid | l "As Received" | " | | | | | | | | | | |
| Radium-228 | | 1.31 | 1.29 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1133 | 1665894 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lic | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | • | 0.566 | 0.167 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1025 | 1665903 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | 7 | Гіте | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 05/17/17 | (| 0652 | 160 | 55784 | | | |

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" 99.2 (15%-125%)

Notes:

Column headers are defined as follows:

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

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

Certificate of Analysis

Project:

Client ID:

Report Date: June 5, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-4 Sample ID: 423295005

Matrix: Ground Water
Collect Date: 15-MAY-17 15:17
Receive Date: 16-MAY-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|-----------------------|-------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | , | | | | | | | | | | | |
| EPA300.0 Fluoride i | n Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | • | 3.81 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 05/27/17 | 0140 | 1665858 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 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 | BAJ | 05/20/17 | 0817 | 1665785 | 2 |
| Rad Gas Flow Propo | ortional Counting | 7 | | | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 1.54 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1133 | 1665894 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | iquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | • | 0.476 | 0.350 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1025 | 1665903 | 4 |
| The following Prep I | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | 7 | Гіте | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 05/17/17 | (|)652 | 16 | 65784 | | | |

The following Analytical Methods were performed:

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

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|-----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC, Ra228, Liquid "As Received" | | | 89.2 | (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:

Report Date: June 5, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-5

Sample ID: 423295006 Matrix: Ground Water Collect Date:

Receive Date: 16-MAY-17 Collector: Client

15-MAY-17 15:56

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|-------------------|----------------|------------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | y | | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | _ | 7.47 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 05/27/17 | 0209 | 1665858 | 1 |
| Fluoride | J | 0.0369 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | P-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | S Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 05/20/17 | 0819 | 1665785 | 2 |
| Rad Gas Flow Prop | ortional Counting | 9 | | | | | | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 1.50 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1133 | 1665894 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | _ | 1.33 | 0.310 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1025 | 1665903 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 05/17/17 | (| 0652 | 16 | 65784 | | | |
| The following Ana | lytical Methods v | vere performed | 1 : | | | | | | | | | |
| | | | | | | | | | | | | |

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

3 EPA 904.0/SW846 9320 Modified EPA 903.1 Modified

Acceptable Limits Surrogate/Tracer Recovery Test Result Nominal Recovery%

Barium-133 Tracer (15%-125%) GFPC, Ra228, Liquid "As Received" 99.5

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: June 5, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: DUP Sample ID: 423295007

Matrix: Ground Water
Collect Date: 15-MAY-17 16:10
Receive Date: 16-MAY-17
Collector: Client

DUP Project: SCEG01416C 423295007 Client ID: GEEL003

RL PF Qualifier DL Units DF Analyst Date Parameter Result Time Batch Method Ion Chromatography EPA300.0 Fluoride in Liquid "As Received" Chloride 7.49 0.067 0.200 mg/L 1 MAR1 05/27/17 0335 1665858 1 0.0346 0.033 0.100 Fluoride mg/L Metals Analysis-ICP-MS 200.8/200.2 NPDES Metals "As Received" Lithium ND 2.00 10.0 ug/L 1.00 1 BAJ 05/20/17 0821 1665785 2 Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 1.27 1.13 3.00 pCi/L BXF1 06/02/17 1133 1665894 Rad Radium-226 Lucas Cell, Ra226, liquid "As Received" Radium-226 0.317 0.151 1.00 pCi/L MXH8 06/02/17 1025 1665903 The following Prep Methods were performed: Method Description Date Prep Batch Analyst Time EPA 200.2 ICP-MS 200.2 PREP 05/17/17 1665784 SXW1 0652

The following Analytical Methods were performed:

Method Description Analyst Comments
EPA 300.0

EPA 200.8 SC_NPDES
 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" 96.1 (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: June 5, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: LF-6 Sample ID: 423295008 Matrix: Ground Water

Collect Date: 15-MAY-17 16:45 Receive Date: 16-MAY-17 Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|-----------------------|------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | | |
| EPA300.0 Fluoride i | n Liquid "As Re | eceived" | | | | | | | | | | |
| Chloride | • | 8.41 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 05/27/17 | 0404 | 1665858 | 1 |
| Fluoride | J | 0.0375 | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP | -MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 05/20/17 | 0822 | 1665785 | 2 |
| Rad Gas Flow Propo | rtional Counting | 2 | | | | | | | | | | |
| GFPC, Ra228, Liqui | d "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 1.39 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1133 | 1665894 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | quid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | | 1.09 | 0.263 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1025 | 1665903 | 4 |
| The following Prep N | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Γime | Pro | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 05/17/17 | (|)652 | 166 | 55784 | | | |

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 93.1 (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: June 5, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: MW-16 Sample ID: 423295009 Matrix: Ground Water

Receive Date: 16-MAY-17 Collector: Client

Collect Date: 16-MAY-17 07:42

| 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" | | | | | | | | | | |
| Chloride | _ | 3.50 | 0.067 | 0.200 | mg/L | | 1 | MAR1 | 05/27/17 | 0433 | 1665858 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP | -MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 05/20/17 | 0824 | 1665785 | 2 |
| Rad Gas Flow Propo | rtional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liquio | d "As Received" | " | | | | | | | | | | |
| Radium-228 | U | ND | 1.25 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1135 | 1665894 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 0.848 | 0.171 | 1.00 | pCi/L | | | MXH8 | 06/02/17 | 1055 | 1665903 | 4 |
| The following Prep N | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Time | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 05/17/17 | (| 0652 | 16 | 65784 | | | |
| The following Analy | tical Methods v | were perforn | ned: | | | | | | | | | |

Analyst Comments Method Description EPA 300.0 EPA 200.8 SC_NPDES 2

3 EPA 904.0/SW846 9320 Modified EPA 903.1 Modified

Surrogate/Tracer Recovery Test

Acceptable Limits Result Nominal Recovery% Barium-133 Tracer 102 (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: June 5, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope RCRA

Client Sample ID: MW-06

Sample ID:

423295010

Matrix:

Ground Water

Collect Date:

16-MAY-17 08:38

Receive Date:

16-MAY-17

Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | ` Analy | st Date | Time | e Batch | Method |
|-------------------|---------------------|-----------------|-------|---------|----------|------|------|---------|------------|------|---------|--------|
| Ion Chromatograp | hy | | | | | | | | | | | |
| EPA300.0 Fluorid | le in Liquid "As Re | eceived" | | | | | | | | | | |
| Fluoride | J | 0.0621 | 0.033 | 0.100 | mg/L | | 1 | MAR1 | 05/27/17 | 0502 | 1665858 | 1 |
| Chloride | | 18.5 | 0.335 | 1.00 | mg/L | | 5 | MAR1 | 05/31/17 | 0257 | 1665858 | 2 |
| Metals Analysis-I | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 05/20/17 | 0826 | 1665785 | 3 |
| Rad Gas Flow Pro | portional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Lic | quid "As Received | " | | | | | | | | | | |
| Radium-228 | | 4.88 | 1.52 | 3.00 | pCi/L | | | BXF1 | 06/02/17 | 1135 | 1665894 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | _ | 2.78 | 0.210 | 1.00 | pCi/L | | | MXH8 | 3 06/02/17 | 1055 | 1665903 | 5 |
| The following Pre | p Methods were p | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гim | e Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 05/17/17 | (| 0652 | 16 | 65784 | | | |
| The following An | alytical Methods v | were performed: | | | | | | | | | | |

| Method | Description | | Analyst Co | omments | |
|-----------------|-------------------------------|--------|------------|-----------|-------------------|
| 1 | EPA 300.0 | | - | | |
| 2 | EPA 300.0 | | | | |
| 3 | EPA 200.8 SC_NPDES | | | | |
| 4 | EPA 904.0/SW846 9320 Modified | | | | |
| 5 | EPA 903.1 Modified | | | | |
| Surrogate/Trace | r Recovery Test | Recult | Nominal | Recovery% | Acceptable Limits |

Surrogate/Tracer Recovery Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 107 (15%-125%)

Notes:

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

Certificate of Analysis

Report Date: June 5, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope RCRA

Client Sample ID: MW-06 Project: SCEG01416C Sample ID: 423295010 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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: June 5, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 423295

| Parmname | NOM | Sample | Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|---|--------|--------|------|--------|-------|-------|------|---------------|----------------|
| Ion Chromatography Batch 1665858 ——— | | | | | | | | | |
| QC1203791318 423295001 DUP Chloride | | 11.3 | | 11.3 | mg/L | 0.101 | | (0%-20%) MAR1 | 05/31/17 01:30 |
| Fluoride | J | 0.0364 | J | 0.0337 | mg/L | 7.7 ^ | | (+/-0.100) | 05/26/17 23:15 |
| QC1203791317 LCS Chloride | 5.00 | | | 5.03 | mg/L | | 101 | (90%-110%) | 05/26/17 22:18 |
| Fluoride | 2.50 | | | 2.56 | mg/L | | 102 | (90%-110%) | |
| QC1203791316 MB Chloride | | | U | ND | mg/L | | | | 05/26/17 21:49 |
| Fluoride | | | U | ND | mg/L | | | | |
| QC1203791319 423295001 PS Chloride | 5.00 | 5.64 | | 11.4 | mg/L | | 115* | (90%-110%) | 05/31/17 01:59 |
| Fluoride | 2.50 J | 0.0364 | | 2.64 | mg/L | | 104 | (90%-110%) | 05/26/17 23:44 |
| Metals Analysis - ICPMS Batch 1665785 ——— | | | | | | | | | |
| QC1203791107 423295001 DUP Lithium | U | ND | U | ND | ug/L | N/A | | BAJ | 05/20/17 08:00 |
| QC1203791106 LCS Lithium | 50.0 | | | 47.7 | ug/L | | 95.3 | (80%-120%) | 05/20/17 07:57 |
| QC1203791105 MB Lithium | | | U | ND | ug/L | | | | 05/20/17 07:55 |

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QC Summary

Page 2 of 4 QC **Parmname** NOM Sample Qual Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 1665785 Batch QC1203791108 423295001 MS ND 52.1 103 BAJ 05/20/17 08:02 Lithium 50.0 U ug/L (75%-125%) QC1203791109 423295001 SDILT Lithium U ND U ND N/A (0%-10%)05/20/17 08:04 ug/L Rad Gas Flow Batch 1665894 QC1203791415 423295008 DUP Radium-228 U 0.853 U -0.211 pCi/L N/A N/A BXF1 06/02/17 11:35 QC1203791416 LCS Radium-228 20.3 20.6 pCi/L 101 (75% - 125%)06/02/17 11:35 QC1203791414 MB U Radium-228 0.584 pCi/L 06/02/17 11:35 Rad Ra-226 1665903 Batch QC1203791451 423295006 DUP Radium-226 1.33 0.865 pCi/L 42.7* (0%-20%) MXH8 06/02/17 10:55 QC1203791453 LCS Radium-226 26.0 21.2 pCi/L 81.5 (75% - 125%)06/02/17 10:55 QC1203791450 MB U Radium-226 0.145 pCi/L 06/02/17 10:55 QC1203791452 423295006 MS Radium-226 130 1.33 108 pCi/L 82.3 (75% - 125%)06/02/17 10:55

Notes:

Workorder:

423295

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: 423295 Page 3 of 4 Parmname NOM Sample Qual \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. 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. 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 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



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

May 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27053

Cope Well LF-1 CCR

Date & Time Sampled:

May 15, 2017

13:03

Date & Time Submitted: May 16, 2017

, 16, 2017 16:0

16:08

Collected by: C.SANDEL

Location Code: COLF1TDS

LF-1

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysi Date & Time | S Chemist |
|-------------------------------------|-------------|----------------------|-------|-------------------------------|-----------|
| Chlorides by IC EPA 300.0 | 10.87 | 0.50 | mg/L | 5/18/17 12:00 | ВВ |
| pH by SM4500HB(2011) | 4.79 | 0.00 | S.U. | 5/17/17 09:30 | BF |
| Holding Time of 15 minutes has beer | n exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 5/18/17 12:00 | ВВ |
| Total Dissolved Solid-SM2540C | 45 | 2.0 | mg/L | 5/18/17 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27054

Cope Well Field Blank CCR

Date & Time Sampled:

May 15, 2017

13:40

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COFBTDS

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analys Date & Time | is Chemist |
|-------------------------------------|-------------|----------------------|-------|------------------------------|------------|
| Chlorides by IC EPA 300.0 | Less than | 0.50 | mg/L | 5/18/17 12:0 |) BB |
| pH by SM4500HB(2011) | 5.51 | 0.00 | S.U. | 5/17/17 09:3 |) BF |
| Holding Time of 15 minutes has been | n exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 5/18/17 12:0 |) BB |
| Total Dissolved Solid-SM2540C | 6 | 2.0 | mg/L | 5/18/17 14:0 |) 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27055

Cope Well LF-2 CCR

Date & Time Sampled:

May 15, 2017

13:45

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COLF2TDS

LF-2

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---|----------------|----------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 28.9 | 0.50 | mg/L | 5/18/17 12:00 | ВВ |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 4.38 exceeded. | 0.00 | S.U. | 5/17/17 09:30 | BF |
| Sulfates by IC EPA 300.0 | 1.73 | 0.50 | mg/L | 5/18/17 12:00 | ՝ BB |
| Total Dissolved Solid-SM2540C | 70 | 2.0 | mg/L | 5/18/17 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27056

Cope Well LF-3 CCR

Date & Time Sampled: Date & Time Submitted: May 16, 2017

May 15, 2017 14:34

16:08

Collected by: C.SANDEL

Location Code: COLF3TDS

LF-3

Login Record File: 170517001

| Result | Reporting Limit(MRL) | Units | Completed Anal Date & Time | The state of the s |
|-----------|-------------------------------|---|---|--|
| 3.26 | 0.50 | mg/L | 5/18/17 12 | :00 BB |
| 4.93 | 0.00 | S.U. | 5/17/17 09 | :30 BF |
| exceeded. | | | | |
| Less than | 0.50 | mg/L | 5/18/17 12 | :00 BB |
| 25 | 2.0 | mg/L | 5/18/17 14 | :00 BF |
| | 3.26 4.93 exceeded. Less than | Result Limit(MRL) 3.26 0.50 4.93 0.00 exceeded. Less than | Result Limit(MRL) Units 3.26 0.50 mg/L 4.93 0.00 S.U. exceeded. Less than 0.50 mg/L | Result Limit(MRL) Units Date & Time 3.26 0.50 mg/L 5/18/17 12 4.93 0.00 S.U. 5/17/17 09 exceeded. Less than 0.50 mg/L 5/18/17 12 |

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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27057

Cope Well LF-4 CCR

Date & Time Sampled:

May 15, 2017

15:17

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COLF4TDS

LF-4

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 3.37 | 0.50 | mg/L | 5/18/17 12:00 | ВВ |
| pH by SM4500HB(2011) | 4.79 | 0.00 | S.U. | 5/17/17 09:30 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 5/18/17 12:00 | BB |
| Total Dissolved Solid-SM2540C | 28 | 2.0 | mg/L | 5/18/17 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27058

Cope Well LF-5 CCR

Date & Time Sampled:

May 15, 2017

15:56

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COLF5TDS

LF-5

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Ar | Chemist | |
|-------------------------------------|-----------|-------------------------|-------|--------------|---------|----|
| Chlorides by IC EPA 300.0 | 6.39 | 0.50 | mg/L | 5/18/17 | 12:00 | ВВ |
| pH by SM4500HB(2011) | 4.72 | 0.00 | S.U. | 5/17/17 | 09:30 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 5/18/17 | 12:00 | BB |
| Total Dissolved Solid-SM2540C | 32 | 2.0 | mg/L | 5/18/17 | 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27059

Cope Well Duplicate CCR

Date & Time Sampled: May 15, 2017 Date & Time Submitted: May 16, 2017

ay 15, 2017 16:10 ay 16, 2017 16:08

Collected by: C.SANDEL

Location Code: CODUPTDS

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-----------|---------------------------|-------|-------------|-------|---------|
| Chlorides by IC EPA 300.0 | 6.40 | 0.50 | mg/L | 5/18/17 | 12:00 | ВВ |
| pH by SM4500HB(2011) | 4.62 | 0.00 | S.U. | 5/17/17 | 09:30 | BF |
| Holding Time of 15 minutes has beer | exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 5/18/17 | 12:00 | BB |
| Total Dissolved Solid-SM2540C | 34 | 2.0 | mg/L | 5/18/17 | 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27060

Cope Well LF-6 CCR

Date & Time Sampled:

May 15, 2017

16:45

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COLF6TDS

LF-6

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-------------|----------------------|-------|-------------|-------|---------|
| Chlorides by IC EPA 300.0 | 7.13 | 0.50 | mg/L | 5/18/17 | 12:00 | BB |
| pH by SM4500HB(2011) | 4.79 | 0.00 | S.U. | 5/17/17 | 09:30 | BF |
| Holding Time of 15 minutes has been | n exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 5/18/17 | 12:00 | BB |
| Total Dissolved Solid-SM2540C | 36 | 2.0 | mg/L | 5/18/17 | 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27061

Cope GW Well MW-16 TDS (RCRA)

Date & Time Sampled:

May 16, 2017

07:42

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COG16TDS

MW-16

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analy Date & Time | |
|---|-------------------|---------------------------|-------|--------------------------------|-------|
| Chlorides by IC EPA 300.0 | 3.03 | 0.50 | mg/L | 5/18/17 12:0 | 00 BB |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 4.86 exceeded. | 0.00 | S.U. | 5/17/17 09: | 30 BF |
| Sulfates by IC EPA 300.0 | 1.16 | 0.50 | mg/L | 5/18/17 12:0 | 00 BB |
| Total Dissolved Solid-SM2540C | 24 | 2.0 | mg/L | 5/18/17 14:0 | 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 18, 2017

REPORT TO:

Mike Moore

Sample ID: AB27062

Cope GW Well MW-6 TDS - RCRA

Date & Time Sampled:

May 16, 2017

08:38

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COG06TDS

MW-06

Login Record File: 170517001

| Result | Reporting Limit(MRL) | Units | | Summer to the state of the sale. | Chemist |
|-----------|----------------------------------|---|--|--|--|
| 17.96 | 0.50 | mg/L | 5/18/17 12 | 2:00 | ВВ |
| 4.37 | 0.00 | S.U. | 5/17/17 09 |):30 | BF |
| exceeded. | | | | | |
| Less than | 0.50 | mg/L | 5/18/17 12 | 2:00 | BB |
| 103 | 2.0 | mg/L | 5/18/17 14 | 1:00 | BF |
| | 17.96 4.37 n exceeded. Less than | Result Limit(MRL) 17.96 0.50 4.37 0.00 exceeded. 0.50 | Result Limit(MRL) Units 17.96 0.50 mg/L 4.37 0.00 S.U. exceeded. Less than 0.50 mg/L | Result Limit(MRL) Units Date & Tim 17.96 0.50 mg/L 5/18/17 12 4.37 0.00 S.U. 5/17/17 09 exceeded. Less than 0.50 mg/L 5/18/17 12 | Result Limit(MRL) Units Date & Time 17.96 0.50 mg/L 5/18/17 12:00 4.37 0.00 S.U. 5/17/17 09:30 exceeded. Less than 0.50 mg/L 5/18/17 12:00 |

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 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27063

Cope Well LF-1 T Metal CCR

Date & Time Sampled:

May 15, 2017

13:03

Date & Time Submitted: May 16, 2017

2017 16:08

Collected by: C.SANDEL

Location Code: COLF1TM

LF-1

Login Record File: 170517001

| 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 | 5/19/17 | 08:10 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Barium by ICP-OES 200.7 | 41.0 | 10.0 | ppb | 5/19/17 | 16:36 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 5/19/17 | 16:36 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 5/19/17 | 16:36 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Calcium EPA 200.7 | 2664 | 100 | ppb | 5/19/17 | 16:36 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 5/19/17 | 16:36 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 5/17/17 | 15:06 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 5/19/17 | 08:10 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | 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

May 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27064

Cope Well Field Blank T Metal CCR

Date & Time Sampled:

May 15, 2017

13:40 16:08

Date & Time Submitted: May 16, 2017 Collected by: C.SANDEL Loca

Location Code: COFBTM

Login Record File: 170517001

| 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 | 5/19/17 08:10 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Barium by ICP-OES 200.7 | Less than | 10.0 | ppb | 5/19/17 16:36 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 5/19/17 16:36 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 5/19/17 16:36 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Calcium EPA 200.7 | Less than | 100 | ppb | 5/19/17 16:36 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 5/19/17 16:36 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 5/17/17 15:06 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 5/19/17 08:10 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | 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

May 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27065

Cope Well LF-2 T Metal CCR

Date & Time Sampled:

May 15, 2017

13:45

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COLF2TM

| LF-2 | Login Record File: 170517001 | | | | | |
|-------------------------------------|------------------------------|-------------------------|-------|------------------|-------|---------|
| 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 | 5/19/17 | 08:10 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Barium by ICP-OES 200.7 | 83.0 | 10.0 | ppb | 5/19/17 | 16:36 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 5/19/17 | 16:36 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 5/19/17 | 16:36 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Calcium EPA 200.7 | 3727 | 100 | ppb | 5/19/17 | 16:36 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Cobalt by ICP_MS 200.8 | 1.7 | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 5/19/17 | 16:36 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 5/17/17 | 15:06 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 5/19/17 | 08:10 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:10 | 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

May 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27066

Cope Well LF-3 T Metal CCR

Date & Time Sampled: May

May 15, 2017 14:34

Date & Time Submitted: May 16, 2017
Collected by: C.SANDEL Locati

2017 16:08 Location Code: COLF3TM

LF-3

Login Record File: 170517001

| 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 | 5/19/17 08:10 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Barium by ICP-OES 200.7 | 28.2 | 10.0 | ppb | 5/19/17 16:36 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 5/19/17 16:36 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 5/19/17 16:36 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Calcium EPA 200.7 | 934 | 100 | ppb | 5/19/17 16:36 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 5/19/17 16:36 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 5/17/17 15:06 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 5/19/17 08:10 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08:10 | 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

May 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27067

Cope Well LF-4 T Metal CCR

Date & Time Sampled: Date & Time Submitted: May 16, 2017

May 15, 2017

15:17

Login Record File: 170517001

16:08

Collected by: C.SANDEL

Location Code: COLF4TM

LF-4

Completed Analysis Reporting Chemist Units **CERTIFIED BY SCDHEC (LAB ID 32006):** Result Limit(MRL) Date & Time MC Less than 1.0 ppb 5/19/17 08:10 Antimony by ICP-MS 200.8 5/19/17 08:10 Arsenic by ICP_MS 200.8 Less than 1.0 ppb MC Barium by ICP-OES 200.7 Less than 10.0 ppb 5/19/17 16:36 **PRC** Beryllium EPA 200.7 Less than 2.0 ppb 5/19/17 16:36 PRC 1000 5/19/17 16:36 **PRC** Boron - EPA 200.7 Less than ppb 5/19/17 08:10 MC Cadmium by ICP_MS EPA 200.8 Less than 1.0 ppb **PRC** 1281 100 5/19/17 16:36 Calcium EPA 200.7 ppb 1.0 08:10 MC Chromium by ICP MS 200.8 Less than ppb 5/19/17 Less than 1.0 5/19/17 08:10 MC Cobalt by ICP_MS 200.8 ppb MC Lead by ICP-MS 200.8 Less than 1.0 ppb 5/19/17 08:10 **PRC** Less than 2.0 5/19/17 16:36 Lithium (CWA) 200.7 ppb **PRC** Mercury (CWA) by EPA 245.2 0.2 5/17/17 15:06 Less than ppb 1.0 5/19/17 08:10 MC Molybdenum - EPA 200.8 Less than ppb 5.0 ppb 5/19/17 08:10 MC Selenium by ICP-MS 200.8 Less than Thallium by ICP-MS 200.8 5/19/17 08:10 MC Less than 1.0 ppb

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 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27068

Cope Well LF-5 T Metal CCR

Date & Time Sampled:

May 15, 2017

15:56

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COLF5TM

LF-5

Login Record File: 170517001 Completed Analysis Reporting Chemist Units **CERTIFIED BY SCDHEC (LAB ID 32006):** Result Limit(MRL) Date & Time 5/19/17 08:10 MC 1.0 Antimony by ICP-MS 200.8 Less than ppb 1.0 5/19/17 08:10 MC Less than ppb Arsenic by ICP_MS 200.8 5/19/17 16:36 10.0 **PRC** 26.0 ppb Barium by ICP-OES 200.7 **PRC** 2.0 ppb 5/19/17 16:36 Less than Beryllium EPA 200.7 **PRC** Boron - EPA 200.7 Less than 1000 ppb 5/19/17 16:36 1.0 5/19/17 08:10 MC Cadmium by ICP MS EPA 200.8 Less than ppb 5/19/17 16:36 **PRC** Calcium EPA 200.7 2151 100 ppb 5/19/17 08:10 MC Chromium by ICP_MS 200.8 Less than 1.0 ppb 5/19/17 08:10 MC 1.0 Less than ppb Cobalt by ICP_MS 200.8 MC Less than 1.0 5/19/17 08:10 ppb Lead by ICP-MS 200.8 **PRC** 16:36 2.0 ppb 5/19/17 Less than Lithium (CWA) 200.7 **PRC** 5/17/17 15:06 Less than 0.2 ppb Mercury (CWA) by EPA 245.2 5/19/17 08:10 MC 1.0 Less than ppb Molybdenum - EPA 200.8 5/19/17 08:10 MC 5.0 Selenium by ICP-MS 200.8 Less than ppb MC 1.0 5/19/17 08:10 ppb Thallium by ICP-MS 200.8 Less than

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 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27069

Cope Well Duplicate T Metal CCR

Date & Time Sampled: Date & Time Submitted: May 16, 2017

May 15, 2017

16:10

Collected by: C.SANDEL

16:08 Location Code: CODUPTM

Login Record File: 170517001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Ana Date & Tim | | Chemist |
|-------------------------------------|-----------|-----------------------------|-------|-----------------------------|------|---------|
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | 3:10 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | 3:10 | MC |
| Barium by ICP-OES 200.7 | 26.7 | 10.0 | ppb | 5/19/17 16 | 3:36 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 5/19/17 16 | 5:36 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 5/19/17 16 | 36 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | 3:10 | MC |
| Calcium EPA 200.7 | 2205 | 100 | ppb | 5/19/17 16 | :36 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | 3:10 | MC |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | :10 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | :10 | MC |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 5/19/17 16 | :36 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 5/17/17 15 | :06 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | :10 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 5/19/17 08 | :10 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 08 | :10 | 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

May 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27070

Cope Well LF-6 T Metal CCR

Date & Time Sampled:

May 15, 2017

16:45

Date & Time Submitted: May 16, 2017

16:08 Location Code: COLF6TM

Collected by: C.SANDEL

Login Record File: 170517001

LF-6

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed An Date & Tin | | Chemist |
|-------------------------------------|-----------|----------------------|-------|----------------------------|------|---------|
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | МС |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | MC |
| Barium by ICP-OES 200.7 | 21.8 | 10.0 | ppb | 5/19/17 1 | 6:36 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 5/19/17 1 | 6:36 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 5/19/17 1 | 6:36 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | MC |
| Calcium EPA 200.7 | 2433 | 100 | ppb | 5/19/17 1 | 6:36 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | MC |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | MC |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 5/19/17 1 | 6:36 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 5/17/17 1 | 5:06 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 5/19/17 0 | 8:10 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 0 | 8:10 | 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

May 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27071

Cope GW Well MW-16 Tota1 Metal (RCRA)

Date & Time Sampled:

May 16, 2017

07:42

16:08

Collected by: C.SANDEL

Date & Time Submitted: May 16, 2017

Location Code: COG16TM

MW-16

Login Record File: 170517001

| 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 | 5/19/17 | 08:43 | MC |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:43 | MC |
| Barium by ICP-OES 200.7 | 11.8 | 10.0 | ppb | 5/19/17 | 16:36 | PRC |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 5/19/17 | 16:36 | PRC |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 5/19/17 | 16:36 | PRC |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:43 | MC |
| Calcium EPA 200.7 | 1783 | 100 | ppb | 5/19/17 | 16:36 | PRC |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:43 | MC |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:43 | MC |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:43 | MC |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 5/19/17 | 16:36 | PRC |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 5/19/17 | 14:25 | PRC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:43 | MC |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 5/19/17 | 08:43 | MC |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 5/19/17 | 08:43 | 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

May 22, 2017

REPORT TO:

Mike Moore

Sample ID: AB27072

Cope GW Well MW-6 Tota1 Metal (RCRA)

Date & Time Sampled:

May 16, 2017

08:38

Date & Time Submitted: May 16, 2017

16:08

Collected by: C.SANDEL

Location Code: COG06TM

MW-06

Login Record File: 170517001 Completed Analysis Reporting Chemist Result Units **CERTIFIED BY SCDHEC (LAB ID 32006):** Limit(MRL) Date & Time MC 5/19/17 08:43 1.0 ppb Antimony by ICP-MS 200.8 Less than 08:43 MC 5/19/17 1.0 Less than ppb Arsenic by ICP_MS 200.8 16:36 **PRC** 5/19/17 10.0 ppb 127 Barium by ICP-OES 200.7 5/19/17 16:36 **PRC** Less than 2.0 ppb Beryllium EPA 200.7 **PRC** 5/19/17 16:36 1000 ppb Less than Boron - EPA 200.7 5/19/17 08:43 MC 1.0 ppb Less than Cadmium by ICP_MS EPA 200.8 **PRC** 100 ppb 5/19/17 16:36 10090 Calcium EPA 200.7 MC 1.0 ppb 5/19/17 08:43 Less than Chromium by ICP_MS 200.8 MC 08:43 5/19/17 1.0 ppb Less than Cobalt by ICP_MS 200.8 MC 5/19/17 08:43 1.0 ppb Less than Lead by ICP-MS 200.8 **PRC** 5/19/17 16:36 Less than 2.0 ppb Lithium (CWA) 200.7 **PRC** 14:25 5/19/17 ppb Less than 0.2 Mercury (CWA) by EPA 245.2 MC 5/19/17 08:43 ppb 1.0 Less than Molybdenum - EPA 200.8 5/19/17 08:43 MC 5.0 ppb Less than Selenium by ICP-MS 200.8 5/19/17 08:43 MC 1.0 Less than ppb Thallium by ICP-MS 200.8

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

EPA CCR Rule Compliance Monitoring Wells

Groundwater Monitoring Data

Cope Station Class Three Landfill

South Carolina Electric & Gas: Cope Station Class Three Landfill

| | | | | | 7/27-2 | 8/2017 | | | | | | | |
|--------------------|----------------|----------------|--------------|------------------|----------------|------------------|--|-------------|------|-----------|-----------|-----|------|
| | | Well Data | | | | | | | | | | | |
| | | | | Initial G | auging | Final G | Final Water Quality Indicator Parameters | | | | | | |
| | | Ground | | | | | | | | | | | |
| | PVC Pipe | Surface | | Depth to | Groundwater | Depth to | Groundwater | Temparature | pН | Sp. Cond. | Turbidity | ORP | DO |
| Monitoring Well ID | Elevation, ft. | Elevation, ft. | Stickup, ft. | Groundwater, ft. | Elevation, ft. | Groundwater, ft. | Elevation, ft. | °C | S.U. | μS/cm | NTU | mV | mg/L |
| | | | | | | | | | | | | | |
| LF-1 | 176.41 | 173.74 | 2.67 | 9.40 | 167.01 | 9.62 | 166.79 | 23.9 | 4.2 | 111 | 5.21 | 132 | 3.49 |
| LF-2 | 190.08 | 187.15 | 2.93 | 26.86 | 163.22 | 26.99 | 163.09 | 22.3 | 4.0 | 155 | 7.82 | 240 | 1.45 |
| LF-3 | 187.19 | 184.21 | 2.98 | 25.33 | 161.86 | 26.26 | 160.93 | 22.6 | 4.2 | 39 | 5.81 | 228 | 1.68 |
| LF-4 | 184.20 | 181.37 | 2.83 | 24.86 | 159.34 | 24.93 | 159.27 | 22.1 | 4.3 | 55 | 7.15 | 177 | 4.31 |
| LF-5 | 177.95 | 175.38 | 2.57 | 21.38 | 156.57 | 21.41 | 156.54 | 22.9 | 4.2 | 68 | 5.13 | 257 | 5.22 |
| LF-6 | 178.57 | 175.75 | 2.82 | 20.40 | 158.17 | 20.42 | 158.15 | 22.7 | 4.1 | 68 | 5.12 | 245 | 5.17 |
| MW-6 | 187.95 | 185.20 | 2.75 | 15.88 | 172.07 | 15.91 | 172.04 | 18.2 | 4.1 | 194 | 5.17 | 201 | 6.59 |
| MW-16 | 182.52 | 179.70 | 2.82 | 10.60 | 171.92 | 10.65 | 171.87 | 18.0 | 4.1 | 64 | 5.27 | 136 | 6.55 |

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 429194 GEL Work Order: 429194

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.

| | John Cates | |
|-------------|------------|--|
| Reviewed by | • | |

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

Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address:

2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope Station

Client Sample ID: LF-1

Sample ID:

429194001

Matrix: Collect Date: Ground Water

Receive Date:

27-JUL-17 11:49 28-JUL-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 | 0.0624 | 0.033 | 0.100 | mg/L | | 1 | MXL2 08/05/1 | 7 0004 | 1688925 | 1 |
| Chloride | | 15.0 | 0.134 | 0.400 | mg/L | | 2 | MXL2 08/07/1 | 7 2013 | 1688925 | 2 |
| Metals Analysis-Io | CP-MS | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ 08/15/1 | 7 2249 | 1686812 | 3 |
| Rad Gas Flow Pro | portional Counting | 9 | | | | | | | | | |
| GFPC, Ra228, Lic | uid "As Received" | " | | | | | | | | | |
| Radium-228 | | 1.68 | 1.62 | 3.00 | pCi/L | | | JXC9 08/11/1 | 7 1125 | 1686864 | 4 |
| Rad Radium-226 | | | | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Recei | ved" | | | | | | | | | |
| Radium-226 | _ | 0.397 | 0.169 | 1.00 | pCi/L | | | MXH8 08/14/1 | 7 0930 | 1686859 | 5 |
| The following Pre | p Methods were po | erformed: | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гim | e Prep Bato | h | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 07/31/17 | (| 0823 | 1686811 | | | |
| FF1 6 11 1 1 | | 2 1 | | | | | | | | | |

The following Analytical Methods were performed:

| Method | Description | | Analyst Co | omments | |
|-----------------|-------------------------------|--------|------------|--------------|--------------------|
| 1 | EPA 300.0 | | - | | |
| 2 | EPA 300.0 | | | | |
| 3 | EPA 200.8 SC_NPDES | | | | |
| 4 | EPA 904.0/SW846 9320 Modified | | | | |
| 5 | EPA 903.1 Modified | | | | |
| Cuma anto/Trans | m Danassams Test | Dogult | Naminal | Dagarram (0/ | A acomtoble Limite |

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

Notes:

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

Certificate of Analysis

Report Date: August 18, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope Station

Client Sample ID: LF-1 Project: SCEG01416C Sample ID: 429194001 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: Field Blank Project:
Sample ID: 429194002 Client ID:

Matrix: Water

Collect Date: 27-JUL-17 11:55
Receive Date: 28-JUL-17
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" | | | | | | | | | | |
| Chloride | J | 0.137 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 08/05/17 | 0033 | 1688925 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | -MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2302 | 1686812 | 2 |
| Rad Gas Flow Propor | rtional Counting | 3 | | | | | | | | | | |
| GFPC, Ra228, Liquio | d "As Received" | 1 | | | | | | | | | | |
| Radium-228 | U | ND | 1.77 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1125 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, li | quid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 0.643 | 0.220 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 0930 | 1686859 | 4 |
| The following Prep M | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гimе | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 07/31/17 | (| 0823 | 168 | 86811 | | | |

The following Analytical Methods were performed:

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

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---------------------------|-----------------------------------|--------|---------|-----------|-------------------|
| Barium-133 Tracer | GFPC, Ra228, Liquid "As Received" | | | 96.5 | (15%-125%) |

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

97.7

(15%-125%)

GEEL003

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope Station

Client Sample ID: LF-2

Sample ID:

429194003

28-JUL-17

Matrix:

Ground Water

Collect Date:

27-JUL-17 12:57

GFPC, Ra228, Liquid "As Received"

Receive Date: Collector:

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analys | t Date | Time | Batch | Method |
|--------------------|--------------------|-----------|-------|---------|----------|------|------|--------|----------|------|---------|--------|
| Ion Chromatograp | hy | | | | | | | | | | | |
| EPA300.0 Fluorid | e in Liquid "As Re | eceived" | | | | | | | | | | |
| Fluoride | _ | 0.124 | 0.033 | 0.100 | mg/L | | 1 | MXL2 | 08/05/17 | 0102 | 1688925 | 1 |
| Chloride | | 27.1 | 0.335 | 1.00 | mg/L | | 5 | MXL2 | 08/07/17 | 2042 | 1688925 | 2 |
| Metals Analysis-IO | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPD | ES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2305 | 1686812 | 3 |
| Rad Gas Flow Pro | portional Counting | g | | | | | | | | | | |
| GFPC, Ra228, Liq | uid "As Received" | " | | | | | | | | | | |
| Radium-228 | | 3.76 | 1.28 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1235 | 1686864 | 4 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226 | , liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | | 1.47 | 0.303 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 0930 | 1686859 | 5 |
| The following Pre | p Methods were po | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | - | Гim | e Pre | p Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 07/31/17 | (| 0823 | 1686 | 5811 | | | |
| | | | | | | | | | | | | |

The following Analytical Methods were performed:

| Method | Description | | Analyst Co | mments | |
|------------------------|-------------------------------|--------|------------|-----------|-------------------|
| 1 | EPA 300.0 | | - | | |
| 2 | EPA 300.0 | | | | |
| 3 | EPA 200.8 SC_NPDES | | | | |
| 4 | EPA 904.0/SW846 9320 Modified | | | | |
| 5 | EPA 903.1 Modified | | | | |
| Surrogate/Tracer Recov | ery Test | Result | Nominal | Recovery% | Acceptable Limits |

Notes:

Barium-133 Tracer

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Certificate of Analysis

Report Date: August 18, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope Station

Client Sample ID: LF-2 Project: SCEG01416C Sample ID: 429194003 Client ID: GEEL003

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

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 18, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: LF-3

Collector:

Sample ID: 429194004 Matrix: Ground Water Collect Date: 27-JUL-17 13:41 Receive Date:

28-JUL-17

Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|-------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | y | | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | - | 3.42 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 08/05/17 | 0131 | 1688925 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | P-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | S Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2315 | 1686812 | 2 |
| Rad Gas Flow Prop | ortional Counting | 5 | | | | | | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 2.41 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1127 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | • | 0.626 | 0.165 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 0930 | 1686859 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | 7 | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 07/31/17 | (| 0823 | 16 | 86811 | | | |

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 EPA 903.1 Modified

Surrogate/Tracer Recovery Test

Acceptable Limits Result Nominal Recovery% Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 91.2 (15%-125%)

Notes:

Column headers are defined as follows:

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

SQL: Sample Quantitation Limit MDC: Minimum Detectable Concentration

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Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: LF-4

Sample ID: 429194005 Matrix: Ground Water

Matrix: Ground Water
Collect Date: 27-JUL-17 14:27
Receive Date: 28-JUL-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|-------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | y | | | | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | - | 3.68 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 08/05/17 | 0200 | 1688925 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | P-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | S Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2318 | 1686812 | 2 |
| Rad Gas Flow Prop | ortional Counting | 5 | | | | | | | | | | |
| GFPC, Ra228, Liqu | id "As Received" | ' | | | | | | | | | | |
| Radium-228 | | 1.66 | 1.66 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1127 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | • | 0.623 | 0.345 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 0930 | 1686859 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | 7 | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 07/31/17 | (| 0823 | 16 | 86811 | | | |

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"

97.3 (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

Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company: GEL F Address: 2040 S

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: LF-5

Sample ID: 429194006

Matrix: Ground Water
Collect Date: 27-JUL-17 15:05
Receive Date: 28-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" | | | | | | | | | | |
| Chloride | • | 7.02 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 08/05/17 | 0229 | 1688925 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | P-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | ES Metals "As Rec | eived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2321 | 1686812 | 2 |
| Rad Gas Flow Prop | ortional Counting | ; | | | | | | | | | | |
| GFPC, Ra228, Liqu | uid "As Received" | 1 | | | | | | | | | | |
| Radium-228 | U | ND | 1.82 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1127 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | • | 0.403 | 0.171 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 0930 | 1686859 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Γime | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | | | SXW1 | 07/31/17 | (| 0823 | 168 | 86811 | | | |

The following Analytical Methods were performed:

 Method
 Description
 Analyst Comments

 1
 EPA 300.0

 2
 EPA 200.8 SC_NPDES

2 EPA 200.8 SC_NPDES 3 EPA 904.0/SW846 9320 Modified

4 EPA 903.1 Modified

El A 703.1 Wodified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

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

96.6 (15%-125%)

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company: Address:

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: DUP

Sample ID: 429194007 Matrix:

Ground Water Collect Date: 27-JUL-17 15:20 Receive Date: 28-JUL-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 | ceived" | | | | | | | | | | |
| Chloride | • | 7.02 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 08/05/17 | 0257 | 1688925 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP- | MS | | | | | | | | | | | |
| 200.8/200.2 NPDES | Metals "As Red | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2324 | 1686812 | 2 |
| Rad Gas Flow Propor | tional Counting | ŗ | | | | | | | | | | |
| GFPC, Ra228, Liquid | l "As Received" | ' | | | | | | | | | | |
| Radium-228 | U | ND | 2.20 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1127 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, lic | quid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | | 0.506 | 0.194 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 0930 | 1686859 | 4 |
| The following Prep M | lethods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гimе | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | 2 PREP | | SXW1 | 07/31/17 | (| 0823 | 168 | 86811 | | | |

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" 88.9

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

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

Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner Cope Station

Client Sample ID: LF-6

429194008

Sample ID: Matrix:

Ground Water

Collect Date:

27-JUL-17 16:01

Receive Date: Collector:

28-JUL-17 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" | | | | | | | | | | |
| Chloride | • | 7.58 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 08/05/17 | 0326 | 1688925 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-I | ICP-MS | | | | | | | | | | | |
| 200.8/200.2 NPD | DES Metals "As Re | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2328 | 1686812 | 2 |
| Rad Gas Flow Pro | oportional Counting | g S | | | | | | | | | | |
| GFPC, Ra228, Li | quid "As Received" | " | | | | | | | | | | |
| Radium-228 | • | 3.82 | 2.05 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1127 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra22 | 6, liquid "As Recei | ved" | | | | | | | | | | |
| Radium-226 | U | ND | 0.346 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 0930 | 1686859 | 4 |
| The following Pre | ep Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | n | | Analyst | Date | , | Гіте | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200. | 2 PREP | | SXW1 | 07/31/17 | (| 0823 | 16 | 86811 | | | |
| TD1 - C-11 - 1 - A | 1 1 | | 1. | | | | | | | | | |

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

EPA 903.1 Modified

Acceptable Limits Surrogate/Tracer Recovery Test Result Nominal Recovery%

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 98.7 (15%-125%)

Notes:

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company:

GEL Engineering, LLC

Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Project:

Robert Gardner

Client Sample ID:

Cope Station

Sample ID:

MW-16 429194009

Matrix:

Ground Water

Collect Date:

28-JUL-17 07:49

Receive Date: Collector:

28-JUL-17 Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|---------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | ny | | | | | | | | | | | |
| EPA300.0 Fluoride | e in Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | - | 3.28 | 0.067 | 0.200 | mg/L | | 1 | MXL2 | 08/05/17 | 0453 | 1688925 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | | |
| Metals Analysis-IC | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | ES Metals "As Rec | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2331 | 1686812 | 2 |
| Rad Gas Flow Prop | portional Counting | 5 | | | | | | | | | | |
| GFPC, Ra228, Liqu | uid "As Received" | ' | | | | | | | | | | |
| Radium-228 | | 2.32 | 2.14 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1127 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | , liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | - | 0.570 | 0.210 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 1005 | 1686859 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | - | Гітє | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | | | SXW1 | 07/31/17 | (| 0823 | 168 | 86811 | | | |

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 85.9 Barium-133 Tracer (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

Certificate of Analysis

Project:

Client ID:

Report Date: August 18, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: MW-06
Sample ID: 429194010
Matrix: Ground Water
Collect Date: 28-JUL-17 08:33

Receive Date: 28-JUL-17 Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analy | st Date | Time | Batch | Method |
|--------------------|--------------------|-----------|-------|---------|----------|------|------|-------|----------|------|---------|--------|
| Ion Chromatograph | ıy | | | | | | | | | | | |
| EPA300.0 Fluoride | e in Liquid "As Re | ceived" | | | | | | | | | | |
| Chloride | • | 18.0 | 0.335 | 1.00 | mg/L | | 5 | MXL2 | 08/07/17 | 2111 | 1688925 | 1 |
| Fluoride | U | ND | 0.165 | 0.500 | mg/L | | 5 | | | | | |
| Metals Analysis-IC | CP-MS | | | | | | | | | | | |
| 200.8/200.2 NPDE | ES Metals "As Rec | ceived" | | | | | | | | | | |
| Lithium | U | ND | 2.00 | 10.0 | ug/L | 1.00 | 1 | BAJ | 08/15/17 | 2334 | 1686812 | 2 |
| Rad Gas Flow Prop | ortional Counting | Ţ | | | | | | | | | | |
| GFPC, Ra228, Liqu | uid "As Received" | 1 | | | | | | | | | | |
| Radium-228 | | 4.27 | 1.71 | 3.00 | pCi/L | | | JXC9 | 08/11/17 | 1235 | 1686864 | 3 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, | liquid "As Receiv | ved" | | | | | | | | | | |
| Radium-226 | • | 3.36 | 0.170 | 1.00 | pCi/L | | | MXH8 | 08/14/17 | 1005 | 1686859 | 4 |
| The following Prep | Methods were pe | erformed: | | | | | | | | | | |
| Method | Description | 1 | | Analyst | Date | Т | Γime | Pr | ep Batch | | | |
| EPA 200.2 | ICP-MS 200.2 | | | SXW1 | 07/31/17 | 0 | 0823 | 168 | 86811 | | | |

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

Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 99.9 (15%-125%)

Result

Nominal

Recovery%

Acceptable Limits

Notes:

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

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

QC Summary

Report Date: August 18, 2017

Page 1 of 4

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina Robert Gardner

Workorder: 429194

Contact:

| Parmname | NOM | Sample | Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|---|--------|--------|------|------|-------|------|------|---------------|------------------|
| Ion Chromatography Batch 1688925 ——— | | | | | | | | | |
| QC1203847181 429194010 DUP Chloride | | 18.0 | | 18.0 | mg/L | 0.12 | | (0%-20%) MXL2 | 2 08/07/17 21:40 |
| Fluoride | U | J ND | U | ND | mg/L | N/A | | | |
| QC1203847180 LCS Chloride | 5.00 | | | 4.68 | mg/L | | 93.6 | (90%-110%) | 08/04/17 23:35 |
| Fluoride | 2.50 | | | 2.37 | mg/L | | 94.7 | (90%-110%) | |
| QC1203847179 MB Chloride | | | U | ND | mg/L | | | | 08/04/17 23:06 |
| Fluoride | | | U | ND | mg/L | | | | |
| QC1203847182 429194010 PS Chloride | 5.00 | 3.60 | | 8.65 | mg/L | | 101 | (90%-110%) | 08/07/17 22:09 |
| Fluoride | 2.50 U | J ND | | 2.37 | mg/L | | 94.7 | (90%-110%) | |
| Metals Analysis - ICPMS Batch 1686812 ——— | | | | | | | | | |
| QC1203841959 429194001 DUP Lithium | U | J ND | U | ND | ug/L | N/A | | BA. | 08/15/17 22:53 |
| QC1203841958 LCS Lithium | 50.0 | | | 53.0 | ug/L | | 106 | (80%-120%) | 08/15/17 22:46 |
| QC1203841957 MB Lithium | | | U | ND | ug/L | | | | 08/15/17 22:43 |

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QC Summary

Workorder: 429194 Page 2 of 4 QC **Parmname** NOM Sample Qual Units RPD% REC% Range Anlst Date Time Metals Analysis - ICPMS 1686812 Batch QC1203841960 429194001 MS ND 53.8 106 Lithium 50.0 U ug/L (75%-125%) BAJ 08/15/17 22:56 QC1203841961 429194001 SDILT Lithium U ND U ND N/A (0%-10%)08/15/17 22:59 ug/L Rad Gas Flow Batch 1686864 QC1203842078 429194003 DUP Radium-228 3.76 3.71 pCi/L 1.3 (0% - 100%) JXC9 08/11/17 12:35 QC1203842079 LCS Radium-228 19.8 20.6 pCi/L 104 (75% - 125%)08/11/17 11:27 QC1203842077 MB U Radium-228 -0.0595 pCi/L 08/11/17 11:27 Rad Ra-226 1686859 Batch QC1203842066 429194001 DUP Radium-226 0.397 0.467 pCi/L 16.2 (0% - 100%) MXH8 08/14/17 10:05 QC1203842068 LCS Radium-226 26.0 22.2 pCi/L 85.5 (75% - 125%)08/14/17 10:05 QC1203842065 MB U Radium-226 0.134 pCi/L 08/14/17 10:05 QC1203842067 429194001 MS Radium-226 130 0.397 118 pCi/L 90.3 (75% - 125%)08/14/17 10:05

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: 429194 Page 3 of 4 Parmname **NOM** Sample Qual \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. 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. 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 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

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

QC Summary

Page 4 of 4

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

Workorder:

429194

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

11:49

10:45

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28016

Cope Well LF-1 CCR

Date & Time Sampled: July 27, 2017 Date & Time Submitted: July 28, 2017

Collected by: SANDEL,C Location Code: COLF1TDS

LF-1 Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|---------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 16.03 | 0.50 | mg/L | 7/30/17 03:48 | ВВ |
| pH by SM4500HB(2011) | 4.91 | 0.00 | S.U. | 7/31/17 11:53 | PRC |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 03:48 | BB |
| Total Dissolved Solid-SM2540C | 70 | 2.0 | mg/L | 7/28/17 13:00 | BF |

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



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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28018

Cope Well LF-2 CCR

Date & Time Sampled:

July 27, 2017

12:57

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COLF2TDS

LF-2

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|---|----------------|-------------------------|-------|-------------|-------|---------|
| Chlorides by IC EPA 300.0 | 28.42 | 0.50 | mg/L | 7/30/17 | 03:48 | ВВ |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 5.09 exceeded. | 0.00 | S.U. | 7/31/17 | 11:53 | PRC |
| Sulfates by IC EPA 300.0 | 2.62 | 0.50 | mg/L | 7/30/17 | 03:48 | ВВ |
| Total Dissolved Solid-SM2540C | 82 | 2.0 | mg/L | 8/1/17 | 12:10 | 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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28020

Cope Well LF-3 CCR

Date & Time Sampled: July 27, 2017

13:41 Date & Time Submitted: July 28, 2017 10:45

Collected by: SANDEL,C

Location Code: COLF3TDS

LF-3

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed . Date & | | Chemist |
|-------------------------------------|-----------|---------------------------|-------|--------------------|-------|---------|
| Chlorides by IC EPA 300.0 | 3.44 | 0.50 | mg/L | 7/30/17 | 03:48 | , BB |
| pH by SM4500HB(2011) | 4.89 | 0.00 | S.U. | 7/31/17 | 11:53 | PRC |
| Holding Time of 15 minutes has been | exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 | 03:48 | BB |
| Total Dissolved Solid-SM2540C | 29 | 2.0 | mg/L | 8/1/17 | 12:10 | 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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28022 Cope Well LF-4 CCR

Date & Time Sampled:

July 27, 2017

14:27

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COLF4TDS

LF-4

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-----------|----------------------|-------|-------------|-------|---------|
| Chlorides by IC EPA 300.0 | 3.74 | 0.50 | mg/L | 7/30/17 | 03:48 | ВВ |
| pH by SM4500HB(2011) | 4.73 | 0.00 | S.U. | 7/31/17 | 11:53 | PRC |
| Holding Time of 15 minutes has been | exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 | 03:48 | ВВ |
| Total Dissolved Solid-SM2540C | 41 | 2.0 | mg/L | 8/1/17 | 12:10 | 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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28024

Cope Well LF-5 CCR

Date & Time Sampled:

July 27, 2017

15:05

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COLF5TDS

LF-5

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-----------|----------------------|-------|-------------|-------|---------|
| Chlorides by IC EPA 300.0 | 6.99 | 0.50 | mg/L | 7/30/17 | 03:48 | BB |
| pH by SM4500HB(2011) | 4.78 | 0.00 | S.U. | 7/31/17 | 11:53 | PRC |
| Holding Time of 15 minutes has been | exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 | 03:48 | ВВ |
| Total Dissolved Solid-SM2540C | 54 | 2.0 | mg/L | 8/1/17 | 12:10 | 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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28026

Cope Well LF-5 Duplicate CCR

Date & Time Sampled:

July 27, 2017

15:20

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: CODUPTDS

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Date & | | Chemist |
|---|----------------|-------------------------|-------|------------------|-------|---------|
| Chlorides by IC EPA 300.0 | 6.98 | 0.50 | mg/L | 7/30/17 | 03:48 | ВВ |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 4.62 exceeded. | 0.00 | S.U. | 7/31/17 | 11:53 | PRC |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 | 03:48 | ВВ |
| Total Dissolved Solid-SM2540C | 45 | 2.0 | mg/L | 8/1/17 | 12:10 | 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

REPORT TO:

Mike Moore C221

August 01, 2017

Sample ID: AB28028

Cope Well LF-6 CCR

Date & Time Sampled:

July 27, 2017

16:01

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COLF6TDS

LF-6

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-----------|---------------------------|-------|-------------|-------|---------|
| Chlorides by IC EPA 300.0 | 7.49 | 0.50 | mg/L | 7/30/17 | 03:48 | BB |
| pH by SM4500HB(2011) | 4.82 | 0.00 | S.U. | 7/31/17 | 11:53 | PRC |
| Holding Time of 15 minutes has been | exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 | 03:48 | BB |
| Total Dissolved Solid-SM2540C | 52 | 2.0 | mg/L | 8/1/17 | 12:10 | BF |

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

Approved By:

, C



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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28030

Cope Well MW-16 TDS CCR

Date & Time Sampled:

July 28, 2017

07:49

Date & Time Submitted: July 28, 2017

, 28, 2017 10¹2

10:45

Collected by: SANDEL,C

Location Code: COMW16TDS

LF-6

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---|----------------|----------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 3.38 | 0.50 | mg/L | 7/30/17 03:48 | ВВ |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 4.89 exceeded. | 0.00 | S.U. | 7/31/17 11:53 | PRC |
| Sulfates by IC EPA 300.0 | 1.03 | 0.50 | mg/L | 7/30/17 03:48 | BB |
| Total Dissolved Solid-SM2540C | 43 | 2.0 | mg/L | 8/1/17 12:10 | 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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28032

Cope Well MW-06 TDS CCR

Date & Time Sampled:

July 28, 2017

08:33

Date & Time Submitted: July 28, 2017

v 28 2017 10·4

10:45

Collected by: SANDEL,C

Location Code: COMW06TDS

LF-6

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---|---------------------|----------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 19.72 | 0.50 | mg/L | 7/30/17 03:48 | ВВ |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 4.43 n exceeded. | 0.00 | S.U. | 7/31/17 11:53 | PRC |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 03:48 | ВВ |
| Total Dissolved Solid-SM2540C | 123 | 2.0 | mg/L | 8/1/17 12:10 | 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

August 01, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28034

Cope Well Field Blank CCR

Date & Time Sampled:

July 27, 2017

11:55

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COFBTDS

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed / Date & | | Chemist |
|-------------------------------------|-------------|----------------------|-------|-----------------------|-------|---------|
| Chlorides by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 | 03:48 | BB |
| pH by SM4500HB(2011) | 7.24 | 0.00 | S.U. | 7/31/17 | 11:53 | PRC |
| Holding Time of 15 minutes has beer | n exceeded. | | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 7/30/17 | 03:48 | BB |
| Total Dissolved Solid-SM2540C | 10 | 2.0 | mg/L | 8/1/17 | 12:10 | 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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28017

Cope Well LF-1 T Metal CCR

Date & Time Submitted:

July 27, 2017

11:49

Date & Time Submitted: July 28, 2017 Collected by: SANDEL,C Local

2017 10:45

Location Code: COLF1TM

LF-1

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Barium by ICP-OES 200.7 | 40.8 | 10.0 | ppb | 8/1/17 13:40 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 13:40 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Calcium EPA 200.7 | 2467 | 1000 | ppb | 8/1/17 13:40 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 14:53 | MC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 12:39 | CDB |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |

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



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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28019

Cope Well LF-2 T Metal CCR

Date & Time Sampled:

July 27, 2017

12:57

Date & Time Submitted: July 28, 2017

10:45 Location Code: COLF2TM

Collected by: SANDEL,C

Login Record File: 170728001

LF-2

| | Logiii Necoluli lie. 170720001 | | | | | | |
|-------------------------------------|--------------------------------|-------------------------|-------|--------------------------------|---------|--|--|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | | |
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB | | |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB | | |
| Barium by ICP-OES 200.7 | 94.8 | 10.0 | ppb | 8/1/17 13:40 | CDB | | |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB | | |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 13:40 | CDB | | |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB | | |
| Calcium EPA 200.7 | 3349 | 1000 | ppb | 8/1/17 13:40 | CDB | | |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB | | |
| Cobalt by ICP_MS 200.8 | 3.2 | 1.0 | ppb | 8/2/17 12:39 | CDB | | |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB | | |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB | | |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 14:53 | MC | | |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB | | |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 12:39 | CDB | | |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB | | |

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

| Approved By: | | Minima of Assessment and |
|---|------|--------------------------|
| • | | |



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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28021

Cope Well LF-3 T Metal CCR

Date & Time Sampled:

July 27, 2017

13:41

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COLF3TM

LF-3

Login Record File: 170728001

| 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 | 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 | 29.6 | 10.0 | ppb | 8/1/17 | 13:40 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 | 13:40 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 | 13:40 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 | 12:39 | CDB |
| Calcium EPA 200.7 | 823 | 100 | ppb | 8/1/17 | 13:40 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 | 12:39 | CDB |
| Cobalt by ICP_MS 200.8 | 1.2 | 1.0 | ppb | 8/2/17 | 12:39 | CDB |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 | 12:39 | CDB |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 | 13:40 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 | 14:53 | MC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 | 12:39 | CDB |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 | 12:39 | CDB |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 | 12:39 | CDB |

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



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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28023

Cope Well LF-4 T Metal CCR

Date & Time Sampled:

July 27, 2017 14:27

Date & Time Submitted: July 28, 2017 10:45

Collected by: SANDEL,C

Location Code: COLF4TM

LF-4

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Barium by ICP-OES 200.7 | 12.8 | 10.0 | ppb | 8/1/17 13:40 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 13:40 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Calcium EPA 200.7 | 1100 | 1000 | ppb | 8/1/17 13:40 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 14:53 | MC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 12:39 | CDB |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |

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



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

August 02, 2017

REPORT TO:

Mike Moore C221

LF-5

Sample ID: AB28025

Cope Well LF-5 T Metal CCR

Date & Time Sampled:

July 27, 2017

15:05

Date & Time Submitted: July 28, 2017

10:45 Location Code: COLF5TM

Collected by: SANDEL,C

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): Antimony by ICP-MS 200.8 | Result Less than | Reporting Limit(MRL) | Units ppb | Completed Analysis Date & Time | Chemist |
|--|------------------|-------------------------|------------------|-----------------------------------|---------|
| | | | | 8/2/17 12:39 | |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Barium by ICP-OES 200.7 | 25.4 | 10.0 | ppb | 8/1/17 13:40 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 13:40 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Calcium EPA 200.7 | 2191 | 1000 | ppb | 8/1/17 13:40 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 14:53 | MC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 12:39 | CDB |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |

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



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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28027

Cope Well LF-5 Duplicate T Metal CCR

Date & Time Sampled:

July 27, 2017

15:20

Date & Time Submitted: July 28, 2017

)17 10:45

Collected by: SANDEL,C

Location Code: CODUPTM

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Barium by ICP-OES 200.7 | 24.7 | 10.0 | ppb | 8/1/17 13:40 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 13:40 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Calcium EPA 200.7 | 2146 | 1000 | ppb | 8/1/17 13:40 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 14:53 | MC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 12:39 | CDB |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |

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



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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28029

Cope Well LF-6 T Metal CCR

Date & Time Sampled: Date & Time Submitted: July 28, 2017

July 27, 2017 16:01

Collected by: SANDEL,C

10:45 Location Code: COLF6TM

LF-6

Login Record File: 170728001

| ppb ppb | 8/2/17 | 12:39 | Chemist |
|---------|---------------------------------|--|--|
| ppb | | | CDB |
| | 8/2/17 | 12:20 | |
| daa | | 12:39 | CDB |
| 1-1 | 8/1/17 | 13:40 | CDB |
| ppb | 8/1/17 | 13:40 | CDB |
| ppb | 8/1/17 | 13:40 | CDB |
| ppb | 8/2/17 | 12:39 | CDB |
| ppb | 8/1/17 | 13:40 | CDB |
| ppb | 8/2/17 | 12:39 | CDB |
| ppb | 8/2/17 | 12:39 | CDB |
| ppb | 8/2/17 | 12:39 | CDB |
| ppb | 8/1/17 | 13:40 | CDB |
| ppb | 8/1/17 | 14:53 | MC |
| ppb | 8/2/17 | 12:39 | CDB |
| ppb | 8/2/17 | 12:39 | CDB |
| ppb | 8/2/17 | 12:39 | CDB |
| | ppb ppb ppb ppb ppb ppb ppb ppb | ppb 8/1/17 ppb 8/1/17 ppb 8/2/17 ppb 8/2/17 ppb 8/2/17 ppb 8/2/17 ppb 8/2/17 ppb 8/1/17 ppb 8/1/17 ppb 8/1/17 ppb 8/1/17 ppb 8/2/17 ppb 8/2/17 | ppb 8/1/17 13:40 ppb 8/1/17 13:40 ppb 8/2/17 12:39 ppb 8/2/17 12:39 ppb 8/2/17 12:39 ppb 8/2/17 12:39 ppb 8/1/17 13:40 ppb 8/1/17 14:53 ppb 8/2/17 12:39 ppb 8/2/17 12:39 ppb 8/2/17 12:39 ppb 8/2/17 12:39 ppb 8/2/17 12:39 |

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



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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28031

Cope Well MW-16 T Metal CCR

Date & Time Sampled:

July 28, 2017

07:49

Date & Time Submitted: July 28, 2017

28, 2017 10:45

Login Record File: 170728001

Collected by: SANDEL,C

Location Code: COMW16TM

MW-16

Reporting Completed Analysis **CERTIFIED BY SCDHEC (LAB ID 32006):** Chemist Result Units Limit(MRL) Date & Time Antimony by ICP-MS 200.8 Less than 1.0 8/2/17 12:39 CDB ppb Arsenic by ICP_MS 200.8 Less than 1.0 ppb 8/2/17 12:39 CDB Barium by ICP-OES 200.7 11.1 10.0 8/1/17 13:40 ppb CDB Beryllium EPA 200.7 Less than 2.0 8/1/17 13:40 ppb CDB Boron - EPA 200.7 1000 Less than 8/1/17 13:40 CDB ppb Less than Cadmium by ICP_MS EPA 200.8 1.0 ppb 8/2/17 12:39 CDB Calcium EPA 200.7 1969 1000 ppb 8/1/17 13:40 CDB Chromium by ICP MS 200.8 Less than 1.0 ppb 8/2/17 12:39 CDB 1.0 Cobalt by ICP_MS 200.8 Less than ppb 8/2/17 12:39 CDB Lead by ICP-MS 200.8 Less than 1.0 8/2/17 12:39 ppb CDB Lithium (CWA) 200.7 Less than 2.0 8/1/17 13:40 ppb CDB Mercury (CWA) by EPA 245.2 Less than 0.2 8/1/17 14:53 ppb MC Molybdenum - EPA 200.8 Less than 1.0 8/2/17 12:39 ppb 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 8/2/17 12:39 ppb 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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28033

Cope Well MW-06 T Metal CCR

Date & Time Sampled:

July 28, 2017

08:33

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COMW06TM

Login Record File: 170728001

MW-06

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Barium by ICP-OES 200.7 | 115 | 10.0 | ppb | 8/1/17 13:40 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 13:40 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Calcium EPA 200.7 | 10590 | 1000 | ppb | 8/1/17 13:40 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 14:53 | MC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 12:39 | CDB |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb · | 8/2/17 12:39 | CDB |

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



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

August 02, 2017

REPORT TO:

Mike Moore C221

Sample ID: AB28035

Cope Well Field Blank T Metal CCR

Date & Time Sampled:

July 27, 2017

11:55

Date & Time Submitted: July 28, 2017

10:45

Collected by: SANDEL,C

Location Code: COFBTM

Login Record File: 170728001

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Antimony by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Arsenic by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Barium by ICP-OES 200.7 | Less than | 10.0 | ppb | 8/1/17 13:40 | CDB |
| Beryllium EPA 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Boron - EPA 200.7 | Less than | 1000 | ppb | 8/1/17 13:40 | CDB |
| Cadmium by ICP_MS EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Calcium EPA 200.7 | Less than | 100 | ppb | 8/1/17 13:40 | CDB |
| Chromium by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Cobalt by ICP_MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lead by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Lithium (CWA) 200.7 | Less than | 2.0 | ppb | 8/1/17 13:40 | CDB |
| Mercury (CWA) by EPA 245.2 | Less than | 0.2 | ppb | 8/1/17 14:53 | MC |
| Molybdenum - EPA 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |
| Selenium by ICP-MS 200.8 | Less than | 5.0 | ppb | 8/2/17 12:39 | CDB |
| Thallium by ICP-MS 200.8 | Less than | 1.0 | ppb | 8/2/17 12:39 | CDB |

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

EPA CCR Rule Compliance Monitoring Wells

Groundwater Monitoring Data

Cope Station Class Three Landfill

South Carolina Electric & Gas: Cope Station Class Three Landfill

| | | | | | 9/25-2 | 6/2017 | | | | | | | |
|--------------------|----------------|----------------|--------------|------------------|----------------|------------------|----------------|--|------|-----------|-----------|-----|------|
| | | Well Data | | | | | | | | | | | |
| | | | | Initial G | auging | Final G | auging | Final Water Quality Indicator Parameters | | | | | |
| | | Ground | | | | | | | | | | | |
| | PVC Pipe | Surface | | Depth to | Groundwater | Depth to | Groundwater | Temparature | pН | Sp. Cond. | Turbidity | ORP | DO |
| Monitoring Well ID | Elevation, ft. | Elevation, ft. | Stickup, ft. | Groundwater, ft. | Elevation, ft. | Groundwater, ft. | Elevation, ft. | °C | S.U. | μS/cm | NTU | mV | mg/L |
| lie i | | | | | | | | | | | | | |
| LF-1 | 176.41 | 173.74 | 2.67 | 9.68 | 166.73 | 9.97 | 166.44 | 26.1 | 4.8 | 49 | 8.23 | 217 | 2.81 |
| LF-2 | 190.08 | 187.15 | 2.93 | 27.00 | 163.08 | 27.19 | 162.89 | 25.4 | 4.3 | 135 | 7.77 | 278 | 1.17 |
| LF-3 | 187.19 | 184.21 | 2.98 | 25.68 | 161.51 | 27.08 | 160.11 | 25.1 | 4.4 | 32 | 6.15 | 290 | 1.91 |
| LF-4 | 184.20 | 181.37 | 2.83 | 25.44 | 158.76 | 25.49 | 158.71 | 24.8 | 4.3 | 49 | 7.63 | 299 | 3.19 |
| LF-5 | 177.95 | 175.38 | 2.57 | 21.84 | 156.11 | 21.90 | 156.05 | 25.4 | 4.2 | 65 | 5.36 | 304 | 4.44 |
| LF-6 | 178.57 | 175.75 | 2.82 | 21.19 | 157.38 | 21.20 | 157.37 | 24.1 | 4.4 | 61 | 6.24 | 260 | 3.95 |
| MW-6 | 187.95 | 185.20 | 2.75 | 16.28 | 171.67 | 16.31 | 171.64 | 20.1 | 4.0 | 193 | 6.18 | 330 | 4.19 |
| MW-16 | 182.52 | 179.70 | 2.82 | 11.24 | 171.28 | 11.28 | 171.24 | 20.1 | 4.2 | 49 | 5.32 | 307 | 4.32 |

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Certificate of Analysis Report for

GEEL003 GEL Engineering, LLC Client SDG: 433625 GEL Work Order: 433625

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

Certificate of Analysis

Project:

Client ID:

Report Date: October 3, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope Station

Client Sample ID: LF-1
Sample ID: 433625001
Matrix: Ground Water

Collect Date: 25-SEP-17 13:29
Receive Date: 26-SEP-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF Analyst Date | Time Batch | Method |
|------------------|---------------------|-----------------|-------|-------|-------|--------|-----------------|--------------|--------|
| Ion Chromatograp | ohy | | | | | | | | |
| EPA300.0 Fluorid | le in Liquid "As Re | eceived" | | | | | | | |
| Chloride | _ | 8.52 | 0.067 | 0.200 | mg/L | | 1 MAR1 09/28/17 | 1346 1704602 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | |
| The following An | nalytical Methods v | were performed: | | | | | | | |
| Method | Description | l | | | 1 | Analys | st Comments | | |
| 1 | EDA 200.0 | | | | | | | | |

1 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

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

Certificate of Analysis

Report Date: October 3, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: Field Blank Project: SCEG01416C Sample ID: 433625002 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 25-SEP-17 13:15
Receive Date: 26-SEP-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF Analyst Date | Time Batch | Method |
|-------------------|--------------------|-----------------|-------|-------|-------|--------|-----------------|--------------|--------|
| Ion Chromatograph | hy | | | | | | | | |
| EPA300.0 Fluoride | e in Liquid "As Re | eceived" | | | | | | | |
| Chloride | J | 0.0933 | 0.067 | 0.200 | mg/L | | 1 MAR1 09/28/17 | 1513 1704602 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | |
| The following Ana | alytical Methods v | vere performed: | | | | | | | |
| Method | Description | | | | 1 | Analys | st Comments | | |
| 1 | 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

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

Certificate of Analysis

Report Date: October 3, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: LF-2 Project: SCEG01416C Sample ID: 433625003 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 25-SEP-17 14:05
Receive Date: 26-SEP-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF Analyst Date | Time Batch | Method |
|-------------------|--------------------|-----------------|-------|-------|-------|----|------------------|--------------|--------|
| Ion Chromatograph | ıy | | | | | | | | |
| EPA300.0 Fluoride | in Liquid "As Re | eceived" | | | | | | | |
| Fluoride | | 0.104 | 0.033 | 0.100 | mg/L | | 1 MAR1 09/28/17 | 1613 1704602 | 1 |
| Chloride | | 23.6 | 0.670 | 2.00 | mg/L | | 10 MAR1 10/02/17 | 1444 1704602 | 2 |
| The following Ana | alytical Methods v | vere performed: | | | | | | | |

Method Description Analyst Comments

1 EPA 300.0 2 EPA 300.0

Notes:

Column headers are defined as follows:

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

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

Certificate of Analysis

Project:

Client ID:

Report Date: October 3, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope Station

Client Sample ID: Dup
Sample ID: 433625004
Matrix: Ground Water
Collect Date: 25-SEP-17 14:15

Receive Date: 26-SEP-17 Collector: Client

| 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 | | 0.102 | 0.033 | 0.100 | mg/L | | 1 MAR1 09/28/17 | 1641 1704602 | 1 |
| Chloride | | 23.2 | 0.670 | 2.00 | mg/L | | 10 MAR1 10/02/17 | 1513 1704602 | 2 |
| The following Analy | tical Methods v | vere performed: | | | | | | | |

Method Description Analyst Comments

1 EPA 300.0

2 EPA 300.0 2 EPA 300.0

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Project:

Client ID:

Report Date: October 3, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope Station

Client Sample ID: LF-3
Sample ID: 433625005
Matrix: Ground Water

Collect Date: 25-SEP-17 15:00
Receive Date: 26-SEP-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" | | | | | | | |
| Chloride | | 3.38 | 0.067 | 0.200 | mg/L | | 1 MAR1 09/28/17 | 1710 1704602 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | |
| The following An | alytical Methods v | vere performed: | | | | | | | |
| Method | Description | ļ | | | 1 | Analys | st Comments | | |
| | | | | | | - | | | |

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

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Certificate of Analysis

Report Date: October 3, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner
Project: Cope Station

Client Sample ID: LF-4 Project: SCEG01416C Sample ID: 433625006 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 25-SEP-17 15:44
Receive Date: 26-SEP-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF Analyst Date | Time Batch | Method |
|-------------------|--------------------|-----------------|-------|-------|-------|--------|-----------------|--------------|--------|
| Ion Chromatograph | hy | | | | | | | | |
| EPA300.0 Fluoride | e in Liquid "As Re | eceived" | | | | | | | |
| Chloride | _ | 4.63 | 0.067 | 0.200 | mg/L | | 1 MAR1 09/28/17 | 1739 1704602 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | |
| The following Ana | alytical Methods v | were performed: | | | | | | | |
| Method | Description | 1 | | | 1 | Analys | st Comments | | |
| 1 | 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

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Certificate of Analysis

Project:

Client ID:

Report Date: October 3, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: LF-5
Sample ID: 433625007
Matrix: Ground Water
Collect Date: 25-SEP-17 16:27

Receive Date: 26-SEP-17 Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DI | Analyst Date | Time | Batch | Method |
|----------------------|-----------------|-----------------|-------|-------|-------|--------|------|---------------|------|---------|--------|
| Ion Chromatography | | | | | | | | | | | |
| EPA300.0 Fluoride is | n Liquid "As Re | eceived" | | | | | | | | | |
| Chloride | | 7.38 | 0.067 | 0.200 | mg/L | | 1 | MAR1 09/28/17 | 1905 | 1704602 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | | |
| The following Analy | tical Methods v | vere performed: | | | | | | | | | |
| Method | Description | | | | I | Analys | t Co | mments | | | |
| 1 | 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

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Certificate of Analysis

Project:

Client ID:

Report Date: October 3, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: LF-6
Sample ID: 433625008
Matrix: Ground Water

Collect Date: 26-SEP-17
Receive Date: 26-SEP-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time Batch | Method |
|----------------------|----------------|-----------------|-------|-------|-------|--------|-------|---------------|--------------|--------|
| Ion Chromatography | | | | | | | | | | |
| EPA300.0 Fluoride in | Liquid "As Re | eceived" | | | | | | | | |
| Chloride | | 7.35 | 0.067 | 0.200 | mg/L | | 1 | MAR1 09/28/17 | 1934 1704602 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | | |
| The following Analyt | ical Methods v | vere performed: | | | | | | | | |
| Method | Description | | | | I | Analys | st Co | nments | | |
| 1 | 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

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

Certificate of Analysis

Project:

Client ID:

Report Date: October 3, 2017

SCEG01416C

GEEL003

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: MW-16 Sample ID: 433625009 Matrix: Ground Water

Collect Date: 26-SEP-17 09:22 26-SEP-17 Receive Date: Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF Analyst Date | Time Batch | Method |
|------------------|---------------------|-----------------|-------|-------|-------|--------|-----------------|--------------|--------|
| Ion Chromatograp | ohy | | | | | | | | |
| EPA300.0 Fluorid | le in Liquid "As Re | eceived" | | | | | | | |
| Chloride | _ | 3.76 | 0.067 | 0.200 | mg/L | | 1 MAR1 09/28/17 | 2003 1704602 | 1 |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | | |
| The following An | nalytical Methods v | were performed: | | | | | | | |
| Method | Description | 1 | | | 1 | Analys | st Comments | | |
| 1 | EDA 200.0 | | | | | | | | |

EPA 300.0

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: October 3, 2017

Company: GEL Engineering, LLC Address: 2040 Savage Rd

Charleston, South Carolina 29417

Contact: Robert Gardner Project: Cope Station

Client Sample ID: MW-06 Project: SCEG01416C Sample ID: 433625010 Client ID: GEEL003

Matrix: Ground Water
Collect Date: 26-SEP-17 10:23
Receive Date: 26-SEP-17
Collector: Client

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time Batch | Method |
|---------------------|------------------|--------------|-------|-------|-------|----|----|---------------|--------------|--------|
| Ion Chromatography | | | | | | | | | | |
| EPA300.0 Fluoride i | n Liquid "As Re | ceived" | | | | | | | | |
| Fluoride | U | ND | 0.033 | 0.100 | mg/L | | 1 | MAR1 09/28/17 | 2032 1704602 | 1 |
| Chloride | | 17.2 | 0.335 | 1.00 | mg/L | | 5 | MAR1 10/02/17 | 1541 1704602 | 2 |
| The following Analy | ytical Methods v | vere perforr | med: | | | | | | | |

Method Description Analyst Comments

1 EPA 300.0

EPA 300.0 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 3, 2017

Page 1 of 2

GEL Engineering, LLC 2040 Savage Rd

Charleston, South Carolina

Contact: Robert Gardner

Workorder: 433625

| Parmname | NOM | Sample Qual | QC | Units | RPD% | REC% | Range Anlst | Date Time |
|--|--------|-------------|------|-------|-------|------|---------------|----------------|
| Ion Chromatography Batch 1704602 ———— | | | | | | | | |
| QC1203884646 433625001 DUP Chloride | | 8.52 | 8.49 | mg/L | 0.402 | | (0%-20%) MAR1 | 09/28/17 14:15 |
| Fluoride | U | ND U | ND | mg/L | N/A | | | |
| QC1203884645 LCS Chloride | 5.00 | | 4.57 | mg/L | | 91.4 | (90%-110%) | 09/28/17 13:17 |
| Fluoride | 2.50 | | 2.40 | mg/L | | 96.1 | (90%-110%) | |
| QC1203884644 MB Chloride | | U | ND | mg/L | | | | 09/28/17 12:48 |
| Fluoride | | U | ND | mg/L | | | | |
| QC1203884647 433625001 PS Chloride | 5.00 | 8.52 | 14.1 | mg/L | | 112* | (90%-110%) | 09/28/17 14:44 |
| Fluoride | 2.50 U | ND | 2.58 | mg/L | | 103 | (90%-110%) | |

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J Value is estimated
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit

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QC Summary

Workorder: 433625 Page 2 of 2 Pa

| Parmname | NOM | Sample Qua | al (| QC | Units | RPD% | REC% | Range | Anlst | Date | Time |
|----------|-----|------------|------|----|-------|------|------|-------|-------|------|------|
| | | | | | | | | | | | |

- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- 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

REPORT TO:

Mike Moore

September 28, 2017

Sample ID: AB28747

Cope Well LF-1 CCR

Date & Time Sampled:

September 25, 2017 13:29

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF1TDS

LF-1

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 9.06 | 0.50 | mg/L | 9/27/17 14:09 | BB |
| pH by SM4500HB(2011) | 5.94 | 0.00 | S.U. | 9/27/17 .09:00 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| Total Dissolved Solid-SM2540C | 32 | 2.0 | mg/L | 9/28/17 15:14 | 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: AB28748

Cope Well Field Blank CCR

Date & Time Sampled:

September 25, 2017 13:15

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COFBTDS

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|--|-----------|---------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | Less than | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| pH by SM4500HB(2011) | 6.59 | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Holding Time of 15 minutes has beer Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 9/27/17 14:09 | BB |
| Total Dissolved Solid-SM2540C | 4 | 2.0 | mg/L | 9/28/17 15:14 | 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: AB28749

Cope Well LF-2 CCR

Date & Time Sampled: Date & Time Submitted: September 26, 2017 12:35

September 25, 2017 14:05

Collected by: C.SANDEL

Location Code: COLF2TDS

LF-2

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|----------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 24.0 | 0.50 | mg/L | 9/27/17 14:09 | BB |
| pH by SM4500HB(2011) | 4.47 | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | 2.8 | 0.50 | mg/L | 9/27/17 14:09 | BB |
| Total Dissolved Solid-SM2540C | 61 | 2.0 | mg/L | 9/28/17 15:14 | 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

REPORT TO:

Mike Moore

September 28, 2017

Sample ID: AB28750

Cope Well Duplicate CCR

Date & Time Submitted:

September 25, 2017 14:15

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: CODUPTDS

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---|----------------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 26.3 | 0.50 | mg/L | 9/27/17 14:09 | BB |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 4.60 exceeded. | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Sulfates by IC EPA 300.0 | 2.3 | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| Total Dissolved Solid-SM2540C | 63 | 2.0 | mg/L | 9/28/17 15:14 | 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: AB28751

Cope Well LF-3 CCR

Date & Time Sampled:

September 25, 2017 15:00

Date & Time Submitted: September 26, 2017 12:35 Collected by: C.SANDEL

Location Code: COLF3TDS

LF-3

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|---|----------------|----------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 3.42 | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| pH by SM4500HB(2011) Holding Time of 15 minutes has been | 5.24 exceeded. | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| Total Dissolved Solid-SM2540C | 19 | 2.0 | mg/L | 9/28/17 15:14 | 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: AB28752

Cope Well LF-4 CCR

Date & Time Sampled:

September 25, 2017 15:44

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF4TDS

LF-4

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 4.78 | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| pH by SM4500HB(2011) | 4.84 | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| Total Dissolved Solid-SM2540C | 31 | 2.0 | mg/L | 9/28/17 15:14 | 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:

Total Dissolved Solid-SM2540C

Mike Moore

Sample ID: AB28753

Cope Well LF-5 CCR

Date & Time Sampled:

September 25, 2017 16:27 Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF5TDS

9/28/17 15:14

BF

Login Record File: 170926006

LF-5

Reporting Completed Analysis Chemist Units **CERTIFIED BY SCDHEC (LAB ID 32006):** Result Limit(MRL) **Date & Time** Chlorides by IC EPA 300.0 7.24 0.50 9/27/17 14:09 BB mg/L pH by SM4500HB(2011) 4.80 0.00 S.U. 9/27/17 09:00 BF Holding Time of 15 minutes has been exceeded. Sulfates by IC EPA 300.0 Less than 0.50 9/27/17 14:09 BB mg/L

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

34

Approved By:

2.0

mg/L



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

_____ September 28, 2017

REPORT TO:

Mike Moore

Sample ID: AB28754

Cope Well LF-6 CCR

Date & Time Sampled:

September 26, 2017 08:13

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF6TDS

LF-6

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 7.31 | 0.50 | mg/L | 9/27/17 14:09 | ВВ |
| pH by SM4500HB(2011) | 4.90 | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 9/27/17 14:09 | BB |
| Total Dissolved Solid-SM2540C | 34 | 2.0 | mg/L | 9/28/17 15:14 | 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: AB28755

Cope GW Well MW-16 TDS (RCRA)

Date & Time Sampled:

September 26, 2017 09:22

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COG16TDS

MW-16

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|---------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 3.81 | 0.50 | mg/L | 9/27/17 14:09 | BB |
| pH by SM4500HB(2011) | 5.13 | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Holding Time of 15 minutes has been | exceeded. | | | | |
| Sulfates by IC EPA 300.0 | 0.79 | 0.50 | mg/L | 9/27/17 14:09 | BB |
| Total Dissolved Solid-SM2540C | 31 | 2.0 | mg/L | 9/28/17 15:14 | 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: AB28756

Cope GW Well MW-6 TDS - RCRA

Date & Time Sampled:

September 26, 2017 10:23

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COG06TDS

MW-06

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-------------|----------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 18.3 | 0.50 | mg/L | 9/27/17 14:09 | BB |
| pH by SM4500HB(2011) | 4.54 | 0.00 | S.U. | 9/27/17 09:00 | BF |
| Holding Time of 15 minutes has beer | n exceeded. | | | | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 9/27/17 14:09 | BB |
| Total Dissolved Solid-SM2540C | 109 | 2.0 | mg/L | 9/28/17 15:14 | 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 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28757

Cope Well LF-1 T Metal CCR

Date & Time Sampled: Date & Time Submitted: September 26, 2017 12:35

September 25, 2017 13:29

Collected by: C.SANDEL

Location Code: COLF1TM

LF-1

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 1818 | 1000 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28758

Cope Well Field Blank T Metal CCR

Date & Time Sampled:

September 25, 2017 13:15 Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COFBTM

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | Less than | 100 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28759

Cope Well LF-2 T Metal CCR

Date & Time Sampled:

September 25, 2017 14:05 Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF2TM

LF-2

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 3344 | 1000 | ppb | 9/27/17 11:49 | 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

REPORT TO:

Mike Moore

September 27, 2017

Sample ID: AB28760

Cope Well Duplicate T Metal CCR

Date & Time Sampled:

September 25, 2017 14:15

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: CODUPTM

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 3355 | 1000 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28761

Cope Well LF-3 T Metal CCR

Date & Time Sampled:

September 25, 2017 15:00 Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF3TM

LF-3

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 724 | 100 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28762

Cope Well LF-4 T Metal CCR

Date & Time Sampled:

September 25, 2017 15:44 Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF4TM

LF-4

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 1576 | 1000 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28763

Cope Well LF-5 T Metal CCR

Date & Time Sampled:

September 25, 2017 16:27

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF5TM

LF-5

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 2334 | 1000 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28764

Cope Well LF-6 T Metal CCR

Date & Time Sampled:

September 26, 2017 08:13

Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COLF6TM

LF-6

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 2229 | 1000 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

Sample ID: AB28765

Cope GW Well MW-16 Tota1 Metal (RCRA)

Date & Time Sampled:

September 26, 2017 09:22 Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COG16TM

MW-16

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 2145 | 1000 | ppb | 9/27/17 11:49 | 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

September 27, 2017

REPORT TO:

Mike Moore

MW-06

Sample ID: AB28766

Cope GW Well MW-6 Tota1 Metal (RCRA)

Date & Time Sampled:

September 26, 2017 10:23 Date & Time Submitted: September 26, 2017 12:35

Collected by: C.SANDEL

Location Code: COG06TM

Login Record File: 170926006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Boron - EPA 200.7 | Less than | 1000 | ppb | 9/27/17 11:49 | CDB |
| Calcium EPA 200.7 | 9973 | 1000 | ppb | 9/27/17 11:49 | CDB |

If there are any questions concerning this sample, please contact the lab at \$\times 803 \cdot 217-9384.

Cope Station Class Three Landfill EPA CCR Rule Compliance Monitoring Wells Groundwater Monitoring Data South Carolina Electric & Gas

| | Gauging D | Date 10/12/17 | | | | | | | | | |
|------------|----------------|---------------|----------------|---------------|----------------|--|------|-------|-----------|-----|------|
| | | Initial G | auging | Final Gauging | | Final Water Quality Indicator Parameters | | | | | |
| | | Depth to | | Depth to | | | | Sp. | | | |
| Monitoring | PVC Pipe | Groundwater, | Groundwater | Groundwater, | Groundwater | Temparature | рН | Cond. | Turbidity | ORP | DO |
| Well ID | Elevation, ft. | ft. | Elevation, ft. | ft. | Elevation, ft. | ۰C | S.U. | μS/cm | NTU | mV | mg/L |
| MW-LF-01 | 176.41 | 10.47 | 165.94 | 10.7 | 165.67 | 24.9 | 4.6 | 44 | 6.95 | 193 | 4.47 |
| MW-LF-02 | 190.08 | 27.73 | 162.35 | 28.04 | 162.04 | 23.3 | 4.2 | 122 | 5.78 | 270 | 1.5 |
| MW-LF-03 | 187.19 | 26.24 | 160.95 | 27.44 | 159.75 | 24.4 | 4.4 | 31 | 6.42 | 228 | 1.91 |
| MW-LF-04 | 184.20 | 25.81 | 158.39 | 25.89 | 158.31 | 23.9 | 4.4 | 44 | 6.45 | 227 | 4.48 |
| MW-LF-05 | 177.95 | 22.10 | 155.85 | 22.14 | 155.81 | 24.6 | 4.4 | 61 | 5.16 | 224 | 61 |
| MW-LF-06 | 178.57 | 21.38 | 157.19 | 21.41 | 157.16 | 25.5 | 4.4 | 56 | 5.13 | 216 | 4.76 |
| MW-BG-06 | 187.95 | 16.68 | 171.27 | 16.75 | 171.20 | 20.1 | 4.1 | 176 | 5.82 | 229 | 5.17 |
| MW-BG-16 | 182.52 | 11.68 | 170.84 | 11.77 | 170.75 | 20.4 | 4.5 | 48 | 5.64 | 210 | 6.13 |



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

October 19, 2017

REPORT TO:

Mike Moore

Sample ID: AB29162 Cope Well LF-1 CCR

Date & Time Sampled:

October 12, 2017

80:80

Date & Time Submitted: October 12, 2017

14:48

Collected by: C.SANDEL

Location Code: COLF1TDS

LF-1

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 8.42 | 0.50 | mg/L | 10/16/17 09:00 | ВВ |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 10/16/17 09:00 | ВВ |
| Total Alkalinity by SM2320B | Less than | 1.0 | mg/L | 10/16/17 13:00 | 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

October 19, 2017

REPORT TO:

Mike Moore

Sample ID: AB29163

Cope Well LF-2 CCR

Date & Time Sampled:

October 12, 2017

08:56

Date & Time Submitted: October 12, 2017

14:48

Collected by: C.SANDEL

Location Code: COLF2TDS

Login Record File: 171012006

LF-2

| =: = | | | - | | | |
|-------------------------------------|-----------|-------------------------|-------|----------------------------|------|---------|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed An Date & Tin | | Chemist |
| Chlorides by IC EPA 300.0 | 25.1 | 0.50 | mg/L | 10/16/17 0 | 9:00 | ВВ |
| Sulfates by IC EPA 300.0 | 2.50 | 0.50 | mg/L | 10/16/17 0 | 9:00 | ВВ |
| Total Alkalinity by SM2320B | Less than | 1.0 | ma/L | 10/16/17 1 | 3:00 | 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

October 19, 2017

REPORT TO:

Mike Moore

Sample ID: AB29164

Cope Well LF-3 CCR

Date & Time Sampled:

October 12, 2017

09:43

Date & Time Submitted: October 12, 2017

14:48

Collected by: C.SANDEL

Location Code: COLF3TDS

Login Record File: 171012006

LF-3

Reporting **Completed Analysis CERTIFIED BY SCDHEC (LAB ID 32006):** Result Units Chemist Limit(MRL) Date & Time Chlorides by IC EPA 300.0 3.82 0.50 mg/L 10/16/17 09:00 BB

Sulfates by IC EPA 300.0 Less than 0.50 mg/L 10/16/17 09:00 BB Total Alkalinity by SM2320B 1.98 1.0 mg/L 10/16/17 13:00 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

October 19, 2017

REPORT TO:

Mike Moore

Sample ID: AB29165

Cope Well LF-4 CCR

Date & Time Sampled:

October 12, 2017

10:51

Date & Time Submitted: October 12, 2017

14:48

Collected by: C.SANDEL

Location Code: COLF4TDS

| LF-4 | Login Record File: 171012006 | | | | | |
|-------------------------------------|------------------------------|-------------------------|-------|--------------------------------|---------|--|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist | |
| Chlorides by IC EPA 300.0 | 4.69 | 0.50 | mg/L | 10/16/17 09:00 | ВВ | |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 10/16/17 09:00 | BB | |
| Total Alkalinity by SM2320B | Less than | 1.0 | mg/L | 10/16/17 13:00 | 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

October 19, 2017

REPORT TO:

Mike Moore

Sample ID: AB29166

Cope Well LF-5 CCR

Date & Time Sampled:

October 12, 2017 11:48

Date & Time Submitted: October 12, 2017 Collected by: C.SANDEL

14:48

Location Code: COLF5TDS

LF-5

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-----------------------------------|---------|
| Chlorides by IC EPA 300.0 | 7.45 | 0.50 | mg/L | 10/16/17 09:00 | ВВ |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 10/16/17 09:00 | ВВ |
| Total Alkalinity by SM2320B | Less than | 1.0 | mg/L | 10/16/17 13:00 | 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

October 19, 2017

REPORT TO:

Mike Moore

Sample ID: AB29167

Cope Well LF-6 CCR

Date & Time Sampled:

October 12, 2017 12:50

14:48

Date & Time Submitted: October 12, 2017 Collected by: C.SANDEL

Location Code: COLF6TDS

LF-6

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|----------------------|-------|--------------------------------|---------|
| Chlorides by IC EPA 300.0 | 7.36 | 0.50 | mg/L | 10/16/17 09:00 | BB |
| Sulfates by IC EPA 300.0 | Less than | 0.50 | mg/L | 10/16/17 09:00 | ВВ |
| Total Alkalinity by SM2320B | Less than | 1.0 | mg/L | 10/16/17 13:00 | 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

October 19, 2017

REPORT TO:

Total Alkalinity by SM2320B

Total Dissolved Solid-SM2540C

Mike Moore

Rocky Archer

Sample ID: AB29018

Cope GW Well MW-6 TDS - RCRA

Date & Time Sampled:

October 10, 2017

mg/L

mg/L

08:58

Date & Time Submitted: October 10, 2017

15:12

10/16/17 13:00

10/12/17 15:00

Chemist

BF

BF

Collected by: C.SANDEL

Location Code: COG06TDS

MW-06

Login Record File: 171010003 Reporting **Completed Analysis** Result Units **CERTIFIED BY SCDHEC (LAB ID 32006): Date & Time** Limit(MRL)

Less than

88

10/11/17 12:22 BB 17.8 0.50 ma/L Chlorides by IC- 9056A 10/11/17 12:22 BB mg/L as N 0.11 Nitrate-N by IC - 9056A 12.1 10/11/17 13:00 BF 0.00 S.U. 4.54 pH by SM4500HB(2011) Holding Time of 15 minutes has been exceeded. BB 10/11/17 12:22 0.5 mg/L Less than Sulfates by IC - 9056A

| NON-CERTIFIED PARAMETERS: | Result | Reporting Limit(MRL) | Units | Completed Ana Date & Tin | | Chemist |
|---------------------------|-----------|----------------------|-------|-----------------------------|------|---------|
| Fluoride by IC EPA 300.0 | Less than | 0.50 | mg/L | 10/11/17 1: | 2:22 | BB |

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

Approved By:

1.0

2.0



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

October 19, 2017

REPORT TO:

Mike Moore

Rocky Archer

Sample ID: AB29019

Cope GW Well MW-16 TDS (RCRA)

Date & Time Sampled:

October 10, 2017

09:44

Date & Time Submitted: October 10, 2017

15:12

Collected by: C.SANDEL

Location Code: COG16TDS

MW-16

Login Record File: 171010003

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-------------|-------------------------|-----------|-------------|----------|---------|
| Chlorides by IC- 9056A | 3.76 | 0.50 | mg/L | 10/11/17 | 12:22 | BB |
| Nitrate-N by IC - 9056A | 2.59 | 0.11 | mg/L as N | 10/11/17 | 12:22 | ВВ |
| pH by SM4500HB(2011) | 5.00 | 0.00 | S.U. | 10/11/17 | 13:00 | BF |
| Holding Time of 15 minutes has beer | n exceeded. | | | | | |
| Sulfates by IC - 9056A | 0.82 | 0.5 | mg/L | 10/11/17 | 12:22 | ВВ |
| Total Alkalinity by SM2320B | 2.48 | 1.0 | mg/L | 10/16/17 | 13:00 | BF |
| Total Dissolved Solid-SM2540C | 27 | 2.0 | mg/L | 10/12/17 | 15:00 | BF |
| | | Deporting | 1 | Completed | Δnalveie | |

| NON-CERTIFIED PARAMETERS: | Result | Reporting Limit(MRL) | Units | Completed Date & | | Chemist |
|---------------------------|-----------|-------------------------|-------|------------------|-------|---------|
| Fluoride by IC EPA 300.0 | Less than | 0.50 | mg/L | 10/11/17 | 12:22 | ВВ |

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 16, 2017

REPORT TO:

Mike Moore

Sample ID: AB29168

Cope Well LF-1 T Metal CCR

Date & Time Sampled: October 12, 2017 Date & Time Submitted: October 12, 2017

Collected by: C.SANDEL

12, 2017 14:48 Location Code: COLF1TM

80:80

LF-1

Login Record File: 171012006

| | | - | | | |
|-----------|--------------------------|---|---|--|---|
| Result | Reporting Limit(MRL) | Units | Completed A | Analysis Time | Chemist |
| 1830 | 100 | ppb | 10/16/17 | 09:19 | CDB |
| 911 | 100 | ppb | 10/16/17 | 09:19 | CDB |
| Less than | 1000 | ppb | 10/16/17 | 09:19 | CDB |
| 3250 | 1000 | ppb | 10/16/17 | 09:19 | CDB |
| | 1830 911 Less than | Result Limit(MRL) 1830 100 911 100 Less than 1000 | Result Reporting Limit(MRL) Units 1830 100 ppb 911 100 ppb Less than 1000 ppb | Result Reporting Limit(MRL) Units Completed Date & Dat | Result Reporting Limit(MRL) Units Completed Analysis Date & Time 1830 100 ppb 10/16/17 09:19 911 100 ppb 10/16/17 09:19 Less than 1000 ppb 10/16/17 09:19 |

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 16, 2017

REPORT TO:

Mike Moore

Sample ID: AB29169

Cope Well LF-2 T Metal CCR

Date & Time Sampled: October 12, 2017 08:56 Date & Time Submitted: October 12, 2017 14:48

Collected by: C.SANDEL Location Code: COLF2TM

LF-2

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed An Date & Tin | | Chemist |
|-------------------------------------|--------|---------------------------|-------|----------------------------|------|---------|
| Calcium EPA 200.7 | 3280 | 100 | ppb | 10/16/17 0 | 9:19 | CDB |
| Magnesium EPA 200.7 | 2820 | 100 | ppb | 10/16/17 0 | 9:19 | CDB |
| Potassium EPA 200.7 | 3480 | 1000 | ppb | 10/16/17 0 | 9:19 | CDB |
| Sodium EPA 200.7 | 7570 | 1000 | ppb | 10/16/17 0 | 9:19 | 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 16, 2017

REPORT TO:

Mike Moore

Sample ID: AB29170

Cope Well LF-3 T Metal CCR

Date & Time Sampled: October 12, 2017
Date & Time Submitted: October 12, 2017

Collected by: C.SANDEL

12, 2017 14:48 Location Code: COLF3TM

09:43

LF-3

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|---------|
| Calcium EPA 200.7 | 742 | 100 | ppb | 10/16/17 09:19 | CDB |
| Magnesium EPA 200.7 | 534 | 100 | ppb | 10/16/17 09:19 | CDB |
| Potassium EPA 200.7 | Less than | 1000 | ppb | 10/16/17 09:19 | CDB |
| Sodium EPA 200.7 | 1140 | 1000 | ppb | 10/16/17 09:19 | 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 16, 2017

REPORT TO:

Mike Moore

Sample ID: AB29171

Cope Well LF-4 T Metal CCR

Date & Time Sampled: October 12, 2017
Date & Time Submitted: October 12, 2017

Collected by: C.SANDEL

2017 10:51 2017 14:48

Location Code: COLF4TM

LF-4

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-----------|---------------------------|-------|-------------|-------|---------|
| Calcium EPA 200.7 | 1600 | 100 | ppb | 10/16/17 | 09:19 | CDB |
| Magnesium EPA 200.7 | 1490 | 100 | ppb | 10/16/17 | 09:19 | CDB |
| Potassium EPA 200.7 | Less than | 1000 | ppb | 10/16/17 | 09:19 | CDB |
| Sodium EPA 200.7 | 1670 | 1000 | ppb | 10/16/17 | 09:19 | CDB |
| Codiam El 7 (200.) | | | 1-1 | | | |

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 16, 2017

REPORT TO:

Mike Moore

Sample ID: AB29172

Cope Well LF-5 T Metal CCR

Date & Time Sampled:

October 12, 2017 11:48 October 12, 2017 14:48

Date & Time Submitted: October 12, 2017
Collected by: C.SANDEL Location

Location Code: COLF5TM

LF-5

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-----------|----------------------|-------|-------------|-------|---------|
| Calcium EPA 200.7 | 2350 | 100 | ppb | 10/16/17 | 09:29 | CDB |
| Magnesium EPA 200.7 | 1870 | 100 | ppb | 10/16/17 | 09:29 | CDB |
| Potassium EPA 200.7 | Less than | 1000 | ppb | 10/16/17 | 09:29 | CDB |
| Sodium EPA 200.7 | 2830 | 1000 | ppb | 10/16/17 | 09:29 | 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 16, 2017

REPORT TO:

Mike Moore

Sample ID: AB29173

Cope Well LF-6 T Metal CCR

Date & Time Sampled: October 12, 2017
Date & Time Submitted: October 12, 2017

Collected by: C.SANDEL

12, 2017 14:48 Location Code: COLF6TM

12:50

LF-6

Login Record File: 171012006

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Analysis Date & Time | | Chemist |
|-------------------------------------|-----------|-------------------------|-------|--------------------------------|-------|---------|
| Calcium EPA 200.7 | 2180 | 100 | ppb | 10/16/17 | 09:29 | CDB |
| Magnesium EPA 200.7 | 1690 | 100 | ppb | 10/16/17 | 09:29 | CDB |
| Potassium EPA 200.7 | Less than | 1000 | ppb | 10/16/17 | 09:29 | CDB |
| Sodium EPA 200.7 | 2780 | 1000 | ppb | 10/16/17 | 09:29 | 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 23, 2017

REPORT TO:

Mike Moore

Rocky Archer

Sample ID: AB29026

Cope GW Well MW-6 Tota1 Metal (RCRA)

Date & Time Sampled:

October 10, 2017

08:58

Date & Time Submitted: October 10, 2017 Collected by: C.SANDEL

15:12

Location Code: COG06TM

MW-06

Login Record File: 171010003

| 10100-00 | | | | | | |
|-------------------------------------|-----------|-------------------------|-------|-----------------------|-------|---------|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed / Date & | | Chemist |
| Antimony - 6020B (RCRA) | Less than | 5.0 | ppb | 10/16/17 | 08:15 | MC |
| Arsenic by ICP-MS 6020B | Less than | 5.0 | ppb | 10/16/17 | 08:15 | MC |
| Barium - 6010D (RCRA) | 109 | 10.0 | ppb | 10/12/17 | 14:43 | MC |
| Beryllium - 6010D (RCRA) | Less than | 2.0 | ppb | 10/12/17 | 14:43 | MC |
| Boron - 6010D (RCRA) | Less than | 1000 | ppb | 10/12/17 | 14:43 | MC |
| Cadmium by ICP-OES 6010D | Less than | 2.0 | ppb | 10/12/17 | 14:43 | MC |
| Calcium - 6010D (RCRA) | 10300 | 100 | ppb | 10/12/17 | 14:43 | MC |
| Chromium - 6010D (RCRA) | Less than | 5.0 | ppb | 10/12/17 | 14:43 | MC |
| Cobalt - 6010D (RCRA) | Less than | 5.0 | ppb | 10/12/17 | 14:43 | MC |
| Copper - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC |
| Iron - 6010D (RCRA) | Less than | 20.0 | ppb | 10/12/17 | 14:43 | MC |
| Lead - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC |
| Magnesium - 6010D (RCRA) | 8470 | 100 | ppb | 10/12/17 | 14:43 | MC |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 10/20/17 | 14:01 | PRC |
| Molybdenum - 6010D | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC |
| Nickel - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC |
| Potassium - 6010D (RCRA) | 1250 | 1000 | ppb | 10/12/17 | 14:43 | MC |
| Selenium - 6010D (RCRA) | Less than | 20.0 | ppb | 10/12/17 | 14:43 | MC |
| Sodium - 6010D (RCRA) | 3340 | 1000 | ppb | 10/12/17 | 14:43 | MC |
| | | | | | | |



Sample ID: AB29026

October 23, 2017

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed A | | Chemist |
|-------------------------------------|-----------|-------------------------|-------|-------------|-------|---------|
| Zinc - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 | 14:43 | 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 23, 2017

REPORT TO:

Mike Moore Rocky Archer Sample ID: AB29027

Cope GW Well MW-16 Tota1 Metal (RCRA)

Date & Time Sampled: Oct

October 10, 2017 09:44

Date & Time Submitted: October 10, 2017 15:12

Collected by: C.SANDEL Location Code: COG16TM

Login Boord File: 171010003

| MW-16 | | Login Record File: 171010003 | | | | | | |
|-------------------------------------|-----------|------------------------------|-------|------------------|-------|---------|--|--|
| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed Date & | | Chemist | | |
| Antimony - 6020B (RCRA) | Less than | 5.0 | ppb | 10/16/17 | 08:15 | MC | | |
| Arsenic by ICP-MS 6020B | Less than | 5.0 | ppb | 10/16/17 | 08:15 | MC | | |
| Barium - 6010D (RCRA) | 13.2 | 10.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Beryllium - 6010D (RCRA) | Less than | 2.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Boron - 6010D (RCRA) | Less than | 1000 | ppb | 10/12/17 | 14:43 | MC | | |
| Cadmium by ICP-OES 6010D | Less than | 2.0 | ′ppb | 10/12/17 | 14:43 | MC | | |
| Calcium - 6010D (RCRA) | 2360 | 100 | ppb | 10/12/17 | 14:43 | MC | | |
| Chromium - 6010D (RCRA) | Less than | 5.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Cobalt - 6010D (RCRA) | Less than | 5.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Copper - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Iron - 6010D (RCRA) | Less than | 20.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Lead - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Magnesium - 6010D (RCRA) | 1480 | 100 | ppb | 10/12/17 | 14:43 | MC | | |
| Mercury - 7470A (RCRA) | Less than | 0.2 | ppb | 10/20/17 | 14:01 | PRC | | |
| Molybdenum - 6010D | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Nickel - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Potassium - 6010D (RCRA) | 1390 | 1000 | ppb | 10/12/17 | 14:43 | MC | | |
| Selenium - 6010D (RCRA) | Less than | 20.0 | ppb | 10/12/17 | 14:43 | MC | | |
| Sodium - 6010D (RCRA) | 1580 | 1000 | ppb | 10/12/17 | 14:43 | MC | | |



Sample ID: AB29027

October 23, 2017

| CERTIFIED BY SCDHEC (LAB ID 32006): | Result | Reporting Limit(MRL) | Units | Completed An Date & Tir | | Chemist |
|-------------------------------------|-----------|----------------------|-------|-------------------------|------|---------|
| Zinc - 6010D (RCRA) | Less than | 10.0 | ppb | 10/12/17 1 | 4:43 | MC |

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

Run Id: **Location Id:** MW-LF-02 **Double Quantification Rule** Compliance Test: Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc SSI Trend **Testing** Result Boron, total mg/L < 1.000 07/27/2017 AB28019 n Boron, total mg/L 09/25/2017 AB28759 < 1.000 n 2 Run Id: **Location Id:** MW-LF-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 **Testing** Result SSI Trend Calcium, Total mg/L 1 of 2 3.350 07/27/2017 AB28019 10.600 n Calcium, Total mg/L 09/25/2017 AB28759 1 of 2 10.600 3.344 n Calcium, Total mg/L 10.600 3.280 10/12/2017 SCANA MW LF (1 of 2 n Run Id: 3 **Location Id:** MW-LF-02 **Compliance Test:** Parametric Prediction Interval on Background <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc SSI Trend **Testing** Result Chloride, tot mg/L 07/28/2017 AB28018 1 of 2 23.43 28.42 Downward y 1 of 2 23.43 Chloride, tot mg/L 09/25/2017 AB28749 24.00 Downward y Chloride, tot mg/L 10/12/2017 SCANA MW LF (1 of 2 23.43 25.10 Downward y

Run Id:

Cope Station

Detection Monitoring Summary

Run Id: **Location Id:** MW-LF-02 Parametric Prediction Interval on Background **Compliance Test:** Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc SSI Result Trend **Testing** Field pH S.U. 07/28/2017 1 of 2 5.372 FLD20170727 4.000 n/n Field pH S.U. 09/25/2017 FLD20170925 1 of 2 5.372 4.300 n/n Run Id: 5 **Location Id:** MW-LF-02 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 Fluoride, total mg/L 07/27/2017 429194003 1 of 2 0.140 0.124 n 1 of 2 Fluoride, total mg/L 09/25/2017 433625003 0.140 0.104 n 6 Run Id: MW-LF-02 **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 2.620 Sulfate, tot mg/L 07/27/2017 AB28018 2.720 n Sulfate, tot mg/L 09/25/2017 AB28749 1 of 2 2.720 2.800 None у Sulfate, tot mg/L 10/12/2017 SCANA_MW_LF_(1 of 2 2.720 2.500 n

Location Id: MW-LF-02

Detection Monitoring Summary

Run Id: 7 **Location Id:** MW-LF-02 Parametric Prediction Interval on Background **Compliance Test:** Post-Hoc Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible **Testing** SSI Result Trend Total Dissolved Solids mg/L 1 of 2 135.412 82.000 07/28/2017 AB28018 n Total Dissolved Solids mg/L 09/25/2017 AB28749 1 of 2 135.412 61.000 n Run Id: 8 **Location Id:** MW-LF-03 **Compliance Test: Double Quantification Rule** <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Boron, total mg/L 07/27/2017 AB28021 < 1.000 n Boron, total mg/L 09/25/2017 AB28761 < 1.000 n 9 Run Id: **Location Id:** MW-LF-03 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 Calcium, Total mg/L 1 of 2 0.823 07/27/2017 AB28021 10.600 n Calcium, Total mg/L 09/25/2017 AB28761 1 of 2 10.600 0.724 n 10 Run Id:

Location Id: MW-LF-03

Detection Monitoring Summary

Run Id: 10 **Location Id:** MW-LF-03 Parametric Prediction Interval on Background **Compliance Test:** Sample Date Post-Hoc Parameter Lab Id Re Upper Limit Compliance Exceedance Possible SSI **Testing** Result Trend Chloride, tot mg/L 07/28/2017 1 of 2 23.43 AB28020 3.44 n Chloride, tot mg/L 09/25/2017 AB28751 1 of 2 23.43 3.42 n Run Id: 11 **Location Id:** MW-LF-03 **Compliance Test:** Parametric Prediction Interval on Background Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Field pH S.U. 07/28/2017 FLD20170727 1 of 2 5.372 4.200 n/n Field pH S.U. 1 of 2 4.400 09/25/2017 FLD20170925 5.372 n/n Run Id: 12 **Location Id:** MW-LF-03 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 Fluoride, total mg/L 1 of 2 < 0.100 07/27/2017 429194004 0.140 n Fluoride, total mg/L 09/25/2017 433625005 1 of 2 0.140 < 0.100 n 13 Run Id:

Location Id: MW-LF-03

Detection Monitoring Summary

Run Id: 13 **Location Id:** MW-LF-03 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 Sulfate, tot mg/L 07/27/2017 1 of 2 < 0.500 AB28020 2.720 n Sulfate, tot mg/L 09/25/2017 AB28751 1 of 2 2.720 < 0.500 n Run Id: 14 **Location Id:** MW-LF-03 **Compliance Test:** Parametric Prediction Interval on Background Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Total Dissolved Solids mg/L 07/28/2017 AB28020 1 of 2 135.412 29.000 n 1 of 2 Total Dissolved Solids mg/L 09/25/2017 AB28751 135.412 19.000 n Run Id: 15 **Location Id:** MW-LF-04 **Double Quantification Rule Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter Result SSI Trend Testing Boron, total mg/L < 1.000 07/27/2017 AB28023 n Boron, total mg/L 09/25/2017 AB28762 < 1.000 n 16 Run Id:

Location Id: MW-LF-04

Detection Monitoring Summary

Run Id: 16 **Location Id:** MW-LF-04 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 Calcium, Total mg/L 1 of 2 10.600 07/27/2017 AB28023 1.100 n Calcium, Total mg/L 09/25/2017 AB28762 1 of 2 10.600 1.576 n Run Id: 17 **Location Id:** MW-LF-04 **Compliance Test:** Parametric Prediction Interval on Background <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Chloride, tot mg/L 07/28/2017 AB28022 1 of 2 23.43 3.74 n Chloride, tot mg/L 1 of 2 09/25/2017 AB28752 23.43 4.78 n Run Id: 18 **Location Id:** MW-LF-04 Parametric Prediction Interval on Background **Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter Result SSI Trend Testing Field pH S.U. 1 of 2 4.300 07/28/2017 FLD20170727 5.372 n/n Field pH S.U. 09/25/2017 FLD20170925 1 of 2 5.372 4.300 n/n 19 Run Id:

Location Id: MW-LF-04

Detection Monitoring Summary

Run Id: 19 **Location Id:** MW-LF-04 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 1 of 2 0.140 < 0.100 Fluoride, total mg/L 07/27/2017 429194005 n Fluoride, total mg/L 09/25/2017 433625006 1 of 2 0.140 < 0.100 n Run Id: 20 **Location Id:** MW-LF-04 Non-Parametric Prediction Interval on Background Useing largest background data value. <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Sulfate, tot mg/L 07/27/2017 AB28022 1 of 2 2.720 < 0.500 n 1 of 2 Sulfate, tot mg/L 09/25/2017 AB28752 2.720 < 0.500 n 21 Run Id: MW-LF-04 **Location Id:** Parametric Prediction Interval on Background **Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter SSI Trend Testing Result 1 of 2 41.000 Total Dissolved Solids mg/L 07/28/2017 AB28022 135.412 n Total Dissolved Solids mg/L 09/25/2017 AB28752 1 of 2 135.412 31.000 n 22 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-LF-05

Location Id:

Detection Monitoring Summary

Run Id: 22 **Location Id:** MW-LF-05 **Double Quantification Rule Compliance Test:** Post-Hoc Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible SSI Result Trend Testing 07/27/2017 < 1.000 Boron, total mg/L AB28025 n Boron, total mg/L 09/25/2017 AB28763 < 1.000 n Run Id: 23 **Location Id:** MW-LF-05 Compliance Test: Non-Parametric Prediction Interval on Background Useing largest background data value. <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Calcium, Total mg/L 07/27/2017 AB28025 1 of 2 10.600 2.190 n 1 of 2 Calcium, Total mg/L 09/25/2017 AB28763 10.600 2.334 n Run Id: 24 **Location Id:** MW-LF-05 Parametric Prediction Interval on Background **Compliance Test:** Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Parameter Result SSI Trend Testing Chloride, tot mg/L 1 of 2 07/28/2017 AB28024 23.43 6.99 n Chloride, tot mg/L 09/25/2017 AB28753 1 of 2 23.43 7.24 n 25 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-LF-05

Location Id:

Detection Monitoring Summary

Run Id: 25 **Location Id:** MW-LF-05 Parametric Prediction Interval on Background **Compliance Test:** Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc SSI **Testing** Result Trend Field pH S.U. 07/28/2017 1 of 2 5.372 FLD20170727 4.200 n/n Field pH S.U. 09/25/2017 FLD20170925 1 of 2 5.372 4.200 n/n Run Id: 26 **Location Id:** MW-LF-05 Non-Parametric Prediction Interval on Background Useing largest background data value. <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Fluoride, total mg/L 07/27/2017 429194006 1 of 2 0.140 < 0.100 n 1 of 2 Fluoride, total mg/L 09/25/2017 433625007 0.140 < 0.100 n 27 Run Id: MW-LF-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 SSI Trend Testing Result 1 of 2 Sulfate, tot mg/L 07/27/2017 AB28024 2.720 < 0.500 n Sulfate, tot mg/L 09/25/2017 AB28753 1 of 2 2.720 < 0.500 n 28 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-LF-05

Location Id:

Detection Monitoring Summary

Run Id: 28 **Location Id:** MW-LF-05 Parametric Prediction Interval on Background **Compliance Test:** Post-Hoc Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible **Testing** SSI Result Trend 1 of 2 135.412 Total Dissolved Solids mg/L 07/28/2017 AB28024 54.000 n Total Dissolved Solids mg/L 09/25/2017 AB28753 1 of 2 135.412 34.000 n Run Id: 29 **Location Id:** MW-LF-06 **Compliance Test: Double Quantification Rule** <u>Parameter</u> Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Boron, total mg/L 07/27/2017 AB28029 < 1.000 n Boron, total mg/L 09/26/2017 AB28764 < 1.000 n 30 Run Id: MW-LF-06 **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 Calcium, Total mg/L 1 of 2 2.310 07/27/2017 AB28029 10.600 n Calcium, Total mg/L 09/26/2017 AB28764 1 of 2 10.600 2.229 n 31 Run Id:

Location Id: MW-LF-06

Detection Monitoring Summary

Run Id: 31 **Location Id:** MW-LF-06 Parametric Prediction Interval on Background **Compliance Test:** Sample Date Post-Hoc Parameter Lab Id Re Upper Limit Compliance Exceedance Possible SSI **Testing** Result Trend Chloride, tot mg/L 07/28/2017 1 of 2 23.43 AB28028 7.49 n Chloride, tot mg/L 09/26/2017 AB28754 1 of 2 23.43 7.31 n Run Id: 32 **Location Id:** MW-LF-06 **Compliance Test:** Parametric Prediction Interval on Background Parameter Sample Date Lab Id Re Upper Limit Compliance Exceedance Possible Post-Hoc Testing Result SSI Trend Field pH S.U. 07/28/2017 FLD20170727 1 of 2 5.372 4.100 n/n Field pH S.U. 4.400 09/26/2017 FLD20170926 1 of 2 5.372 n/n Run Id: 33 **Location Id:** MW-LF-06 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 <u>Parameter</u> Result SSI Trend Testing Fluoride, total mg/L 1 of 2 07/27/2017 429194008 0.140 < 0.100 n Fluoride, total mg/L 09/26/2017 433625008 1 of 2 0.140 < 0.100 n 34 Run Id:

Location Id: MW-LF-06

Detection Monitoring Summary

<u>Run Id:</u> 34

Location Id: MW-LF-06

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 |
|-------------------|-------------|---------------|-------------------|-------------|-----------------------|------------|-----------------|------------------|
| Sulfate, tot mg/L | 07/27/2017 | AB28028 | Testing 1 of 2 | 2.720 | <u>Result</u> < 0.500 | n | <u>SSI</u> | <u>Trend</u> |
| Sulfate, tot mg/L | 09/26/2017 | AB28754 | 1 of 2 | 2.720 | < 0.500 | n | | |

<u>Run Id:</u> 35

Location Id: MW-LF-06

Compliance Test: Parametric Prediction Interval on Background

| <u>Parameter</u> | Sample Date | <u>Lab Id</u> | <u>Re</u> | Upper Limit | Compliance Result | Exceedance | Possible SSI | Post-Hoc |
|-----------------------------|-------------|---------------|----------------|-------------|----------------------|------------|-----------------|------------------|
| Total Dissolved Solids mg/L | 07/28/2017 | AB28028 | Testing 1 of 2 | 135.412 | 52.000 | n | <u>551</u> | <u>Trend</u> |
| Total Dissolved Solids mg/L | 09/26/2017 | AB28754 | 1 of 2 | 135.412 | 34.000 | n | | |

Location Id: MW-LF-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> |
|-------------|-----------------|-----------------|----------------|------------|-----------|------------|-------------------|
| 07/27/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Υ | N |
| 08/03/2017 | 1.000 | 0.052 | 0.044 | 1.000 | 0.000 | Υ | N |
| 09/25/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Υ | N |
| | | | | | | | |

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

Parameter: Boron, total

Method: Double Quantification Rule

Percent ND: 100

| | | | Detection Lmit | <u>PQL</u> | <u>RL</u> | Non Detect | <u>Exceedance</u> |
|------------|-------|-------|----------------|------------|-----------|------------|-------------------|
| 07/27/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Υ | N |
| 09/25/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Υ | N |

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

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> |
|-------------|-----------------|-----------------|----------------|------------|-----------|------------|-------------------|
| 07/27/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Υ | N |
| 09/25/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Y | N |

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

Parameter: Boron, total

Method: Double Quantification Rule

Percent ND: 100

| 07/27/2017 1.000 0.044 0.044 1.000 0.000 Y N 09/25/2017 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> |
|--|-------------|-----------------|-----------------|----------------|------------|-----------|------------|-------------------|
| 09/25/2017 1.000 0.044 0.044 1.000 0.000 Y N | 07/27/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Υ | N |
| | 09/25/2017 | 1.000 | 0.044 | 0.044 | 1.000 | 0.000 | Υ | N |

All Backgound Results Non-Detect

Location Id: MW-LF-06 Run Id: 29

Parameter: Boron, total

Method: Double Quantification Rule

Percent ND: 100

ND Approach: > 50% to <= 100 % Substitute PQL

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

All Backgound Results Non-Detect

| Number Of Locations: | 5 | 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: MW-BG-06,MW-BG-16,MW-LF-01

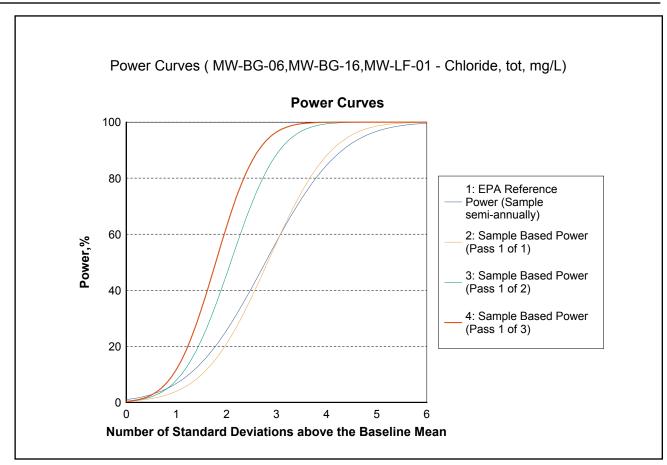
Insufficient Background: 0
DOR Tests: 1

| Parameter Name: | Chloride, tot, mg/L | Background Date Range: | 05/11/2016 to 09/26/2017 |
|-------------------------|---------------------|---------------------------------------|--|
| Alpha Per Test FPR: | 0.00174 | Option for LT Pts: | 0% to <= 15% Substitute $\frac{1}{2}$ PQL |
| Total Pts | 21 | Kappa for Selected Verification Plan: | 1.879 |
| LT Pts | 0 | Mean | 11.462 |
| %LT Pts | 0 | StdDev | 6.367 |
| Normal/Log Normal | y/n | <u>In Mean</u> | 2.241 |
| <u>Log Transformed:</u> | n | <u>In StdDev</u> | 0.695 |

| Parameter Name: | Field pH, S.U. | Background Date Range: | 05/11/2016 to 09/26/2017 |
|-------------------------|----------------|---------------------------------------|--|
| Alpha Per Test FPR: | 0.00174 | Option for LT Pts: | 0% to <= 15% Substitute $\frac{1}{2}$ PQL |
| <u>Total Pts</u> | 21 | Kappa for Selected Verification Plan: | 2.069 |
| LT Pts | 0 | Mean | 4.4238 |
| <u>%LT Pts</u> | 0 | StdDev | 0.4582 |
| Normal/Log Normal | y/y | <u>ln Mean</u> | 1.4821 |
| <u>Log Transformed:</u> | n | In StdDev | 0.0999 |
| | | | |

| Parameter Name: | Total Dissolved Solids, mg/L | <u> Background Date Range.</u> | 05/11/2016 to 09/26/2017 |
|---------------------|------------------------------|---------------------------------------|--------------------------------------|
| Alpha Per Test FPR: | 0.00174 | Option for LT Pts: | 0% to \leq 15% Substitute ½ PQL |
| Total Pts | 21 | Kappa for Selected Verification Plan: | 1.879 |
| LT Pts | 0 | Mean | 61.5714 |
| %LT Pts | 0 | StdDev | 39.2970 |
| Normal/Log Normal | y/y | <u>In Mean</u> | 3.8973 |
| Log Transformed: | n | <u>ln StdDev</u> | 0.7138 |
| | | | |

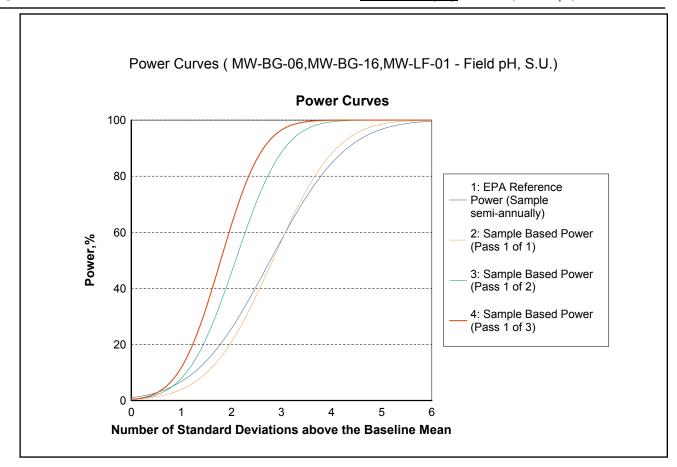
| Number Of Locations: | 5 | Annual Site Wide False Positive Rate (SWFPR): 0.10 |
|-----------------------|-----------|--|
| Number Of Parameters: | 7 | Sample Events per Year: 2 |
| Sampling Plan: | Interwell | <u>Verification Sampling:</u> Pass 1 of 2 (one resample) |



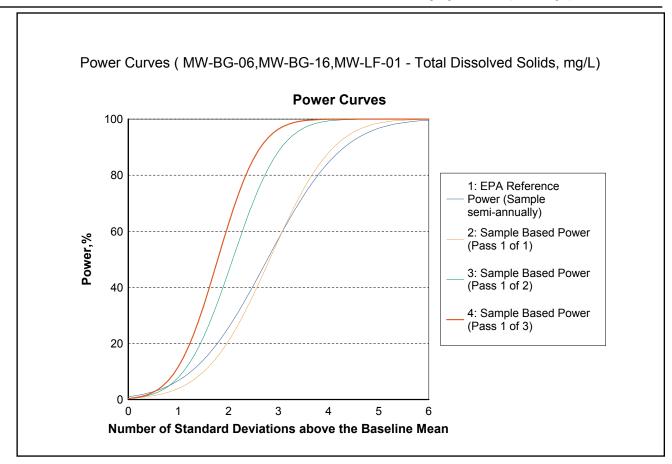
 Number Of Locations:
 5
 Annual Site Wide False Positive Rate (SWFPR):
 0.10

 Number Of Parameters:
 7
 Sample Events per Year:
 2

 Sampling Plan:
 Interwell
 Verification Sampling:
 Pass 1 of 2 (one resample)



| Number Of Locations: | 5 | 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) |



User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 09/26/2017

 Compliance Date Range:
 07/26/2017 to 09/26/2017

Compliance Locations: MW-LF-02,MW-LF-03,MW-LF-04,MW-LF-05,MW-LF-06

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Location MW-LF-02

Run Id: 3

Parameter Name: Chloride, tot, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | Upper Limit | Upper Limit |
|-------------|-----------------|-------------|-------------|
| 7/28/2017 | 28.42 | 23.43 | y |
| 8/3/2017 | 20.54 | 23.43 | n |
| 9/25/2017 | 24.00 | 23.43 | y |

Run Id: 4

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

| | | | Result > | | Result < |
|-------------|-----------------|-------------|-------------|-------------|-------------|
| Sample Date | Analysis Result | Upper Limit | Upper Limit | Lower Limit | Lower Limit |
| 7/28/2017 | 4.000 | 5.372 | n | 3.476 | n |
| 9/25/2017 | 4.300 | 5.372 | n | 3.476 | n |

Run Id: 7

<u>Parameter Name:</u> Total Dissolved Solids, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | Upper Limit | <u>Upper Limit</u> |
|-------------|-----------------|-------------|--------------------|
| 7/28/2017 | 82.000 | 135.412 | n |
| 8/3/2017 | 53.000 | 135.412 | n |
| 9/25/2017 | 61.000 | 135.412 | n |

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 09/26/2017

 Compliance Date Range:
 07/26/2017 to 09/26/2017

Compliance Locations: MW-LF-02,MW-LF-03,MW-LF-04,MW-LF-05,MW-LF-06

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Location MW-LF-03

Run Id: 10

Parameter Name: Chloride, tot, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | <u>Upper Limit</u> | Upper Limi |
|-------------|-----------------|--------------------|------------|
| 7/28/2017 | 3.44 | 23.43 | n |
| 9/25/2017 | 3.42 | 23.43 | n |

Run Id: 11

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

| | | | Result > | | Result < |
|-------------|-----------------|-------------|-------------|-------------|-------------|
| Sample Date | Analysis Result | Upper Limit | Upper Limit | Lower Limit | Lower Limit |
| 7/28/2017 | 4.200 | 5.372 | n | 3.476 | n |
| 9/25/2017 | 4.400 | 5.372 | n | 3.476 | n |

Run Id: 14

Parameter Name: Total Dissolved Solids, mg/L

 $\underline{Option\ for\ LT\ Pts\ (Compliance\ Data} \qquad \underline{:} \quad 0\%\ to <= 15\%\ Substitute\ PQL$

Result >

| Sample Date | Analysis Result | Upper Limit | Upper Limit |
|-------------|-----------------|-------------|-------------|
| 7/28/2017 | 29.000 | 135.412 | n |
| 9/25/2017 | 19.000 | 135.412 | n |

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 09/26/2017

 Compliance Date Range:
 07/26/2017 to 09/26/2017

Compliance Locations: MW-LF-02,MW-LF-03,MW-LF-04,MW-LF-05,MW-LF-06

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Location MW-LF-04

Run Id: 17

Parameter Name: Chloride, tot, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | Upper Limit | Upper Limit |
|-------------|-----------------|-------------|-------------|
| 7/28/2017 | 3.74 | 23.43 | n |
| 9/25/2017 | 4.78 | 23.43 | n |

Run Id: 18

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

| | | | Result > | | Result < |
|-------------|-----------------|-------------|-------------|-------------|-------------|
| Sample Date | Analysis Result | Upper Limit | Upper Limit | Lower Limit | Lower Limit |
| 7/28/2017 | 4.300 | 5.372 | n | 3.476 | n |
| 9/25/2017 | 4.300 | 5.372 | n | 3.476 | n |

Run Id: 21

Parameter Name: Total Dissolved Solids, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | Upper Limit | Upper Limit |
|-------------|-----------------|-------------|-------------|
| 7/28/2017 | 41.000 | 135.412 | n |
| 9/25/2017 | 31.000 | 135.412 | n |

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 09/26/2017

 Compliance Date Range:
 07/26/2017 to 09/26/2017

Compliance Locations: MW-LF-02,MW-LF-03,MW-LF-04,MW-LF-05,MW-LF-06

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Location MW-LF-05

Run Id: 24

Parameter Name: Chloride, tot, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | <u>Upper Limit</u> | Upper Limit |
|-------------|-----------------|--------------------|-------------|
| 7/28/2017 | 6.99 | 23.43 | n |
| 9/25/2017 | 7.24 | 23.43 | n |

Run Id: 25

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

| | | | Result > | | Result < |
|-------------|-----------------|-------------|-------------|-------------|-------------|
| Sample Date | Analysis Result | Upper Limit | Upper Limit | Lower Limit | Lower Limit |
| 7/28/2017 | 4.200 | 5.372 | n | 3.476 | n |
| 9/25/2017 | 4.200 | 5.372 | n | 3.476 | n |

Run Id: 28

Parameter Name: Total Dissolved Solids, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | <u>Upper Limit</u> | Upper Limit |
|-------------|-----------------|--------------------|-------------|
| 7/28/2017 | 54.000 | 135.412 | n |
| 9/25/2017 | 34.000 | 135.412 | n |

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 09/26/2017

 Compliance Date Range:
 07/26/2017 to 09/26/2017

Compliance Locations: MW-LF-02,MW-LF-03,MW-LF-04,MW-LF-05,MW-LF-06

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Location MW-LF-06

Run Id: 31

Parameter Name: Chloride, tot, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | Upper Limit | Upper Limit |
|-------------|-----------------|-------------|-------------|
| 7/28/2017 | 7.49 | 23.43 | n |
| 9/26/2017 | 7.31 | 23.43 | n |

Run Id: 32

Parameter Name: Field pH, S.U.

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

| | | | Result > | | Result < |
|-------------|-----------------|-------------|-------------|-------------|-------------|
| Sample Date | Analysis Result | Upper Limit | Upper Limit | Lower Limit | Lower Limit |
| 7/28/2017 | 4.100 | 5.372 | n | 3.476 | n |
| 9/26/2017 | 4.400 | 5.372 | n | 3.476 | n |

Run Id: 35

Parameter Name: Total Dissolved Solids, mg/L

Option for LT Pts (Compliance Data : 0% to <= 15% Substitute PQL

Result >

| Sample Date | Analysis Result | <u>Upper Limit</u> | Upper Limit |
|-------------|-----------------|--------------------|-------------|
| 7/28/2017 | 52.000 | 135.412 | n |
| 9/26/2017 | 34.000 | 135.412 | n |

User Supplied Information

Sided: 1

 Background Date Range:
 05/11/2016 to 09/26/2017

 Compliance Date Range:
 07/26/2017 to 09/26/2017

Compliance Locations: MW-LF-02,MW-LF-03,MW-LF-04,MW-LF-05,MW-LF-06

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

User Supplied Information

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples:

Run Id: 2

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Background

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 10.600

Sample Sample Greater than Location Date Result PU (Upper) MW-LF-02 07/27/2017 3.350 n MW-LF-02 08/03/2017 5.547 n MW-LF-02 09/25/2017 3.344 n

Run Id: 5

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Background

Background

Background

Background

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 0.140

Sample Sample Greater than PU (Upper) Location Date Result MW-LF-02 07/27/2017 0.124 n MW-LF-02 < 0.500 08/03/2017 MW-LF-02 0.104 09/25/2017 n

User Supplied Information

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples: 1

Run Id: 6

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 2.720

Sample Sample Greater than Location Date Result PU (Upper) 07/27/2017 MW-LF-02 2.620 n MW-LF-02 08/03/2017 2.361 n MW-LF-02 09/25/2017 2.800 y

Run Id: 9

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Parameter Code Parameter Name Units Sample Count

 Parameter Code 00916
 Parameter Name Calcium, Total
 Units ug/L
 Sample Count ug/L
 Option for LT Pts.

 21
 0% to <= 15% Substitute PQL</td>

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 10.600

 Location
 Date
 Result
 PU (Upper)

 MW-LF-03
 07/27/2017
 0.823
 n

 MW-LF-03
 09/25/2017
 0.724
 n

User Supplied Information

Background

Background

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples:

Run Id: 12

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 0.140

 Sample
 Sample
 Greater than

 Location
 Date
 Result
 PU (Upper)

 MW-LF-03
 07/27/2017
 <0.100</td>
 n

 MW-LF-03
 09/25/2017
 <0.100</td>
 n

Run Id: 13

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 2.720

 Location
 Date
 Result
 PU (Upper)

 MW-LF-03
 07/27/2017
 <0.500</td>
 n

 MW-LF-03
 09/25/2017
 <0.500</td>
 n

User Supplied Information

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples:

Run Id: 16

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

PQL

Background

Background

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 10.600

 Location
 Date
 Result
 PU (Upper)

 MW-LF-04
 07/27/2017
 1.100
 n

 MW-LF-04
 09/25/2017
 1.576
 n

Run Id: 19

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 0.140

 Location
 Date
 Result
 PU (Upper)

 MW-LF-04
 07/27/2017
 <0.100</td>
 n

 MW-LF-04
 09/25/2017
 <0.100</td>
 n

User Supplied Information

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples: 1

Run Id: 20

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Parameter Code
00945Parameter Name
Sulfate, totUnits
mg/LSample Count
21Option for LT Pts.
> 15% to <= 50% Substitute</th>

Background

Background

PQL

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 2.720

 Sample
 Sample
 Greater than

 Location
 Date
 Result
 PU (Upper)

 MW-LF-04
 07/27/2017
 <0.500</td>
 n

 MW-LF-04
 09/25/2017
 <0.500</td>
 n

Run Id: 23

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

 Parameter Code 00916
 Parameter Name Calcium, Total
 Units ug/L
 Sample Count ug/L
 Option for LT Pts. 0% to <= 15% Substitute POL</th>

One-Sided Upper PU (Upper) Value:

One-Sided Upper Confidence Level, %

98.10 10.600

 Location
 Date
 Result
 PU (Upper)

 MW-LF-05
 07/27/2017
 2.190
 n

 MW-LF-05
 09/25/2017
 2.334
 n

User Supplied Information

Background

Background

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples:

Run Id: 26

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 0.140

 Location
 Date
 Result
 PU (Upper)

 MW-LF-05
 07/27/2017
 <0.100</td>
 n

 MW-LF-05
 09/25/2017
 <0.100</td>
 n

Run Id: 27

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 2.720

 Location
 Date
 Result
 PU (Upper)

 MW-LF-05
 07/27/2017
 <0.500</td>
 n

 MW-LF-05
 09/25/2017
 <0.500</td>
 n

User Supplied Information

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples:

Run Id: 30

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Background

Background

PQL

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 10.600

Sample Sample Greater than Location Date Result PU (Upper)

MW-LF-06 07/27/2017 2.310 n

MW-LF-06 09/26/2017 2.229 n

Run Id: 33

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Substitute PQL
One-Sided Upper
PU (Upper) Value:

Confidence Level, %

98.10 0.140

 Sample
 Sample
 Greater than

 Location
 Date
 Result
 PU (Upper)

 MW-LF-06
 07/27/2017
 <0.100</td>
 n

MW-LF-06 09/26/2017 <0.100 n

User Supplied Information

 Background Date Range:
 05/11/2016
 to 09/26/2017

 Compliance Date Range:
 07/26/2017
 to 9/26/2017

No. of Verification Resamples:

Run Id: 34

Background Locations: MW-BG-06,MW-BG-16,MW-LF-01

Parameter Code
00945Parameter Name
Sulfate, totUnits
mg/LSample Count
21Option for LT Pts.
> 15% to <= 50% Substitute</th>

Background

PQL

One-Sided Upper PU (Upper) Value:

Confidence Level, %

98.10 2.720

 Sample
 Sample
 Greater than

 Location
 Date
 Result
 PU (Upper)

 MW-LF-06
 07/27/2017
 <0.500</td>
 n

 MW-LF-06
 09/26/2017
 <0.500</td>
 n

| Location ID: MW-LF-02 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | Parameter Code: Parameter: Units: | 01022 Boron, total mg/L |
|---|---|-------------------------------|
| Option for LT Points: > 50% to <= 100 % Substitute PQL | Percent of ND: | 100 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 0.000 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 0.000 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.000 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.000 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 2

00916 Location ID: MW-LF-02 **Parameter Code:** Parameter: Calcium, Total **Confidence Level: Units:** ug/L Date Range: 05/12/2016 to 09/25/2017 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: -0.037 ug/L per year Lower Confidence Limit of Slope, M1: -1.144 ug/L per year Upper Confidence Limit of Slope, M2+1: 0.740 ug/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic: 0.000 Z test: 1.645 None

| Location ID: MW-LF-02 | Parameter Code: | 00940 |
|---|-----------------|---------------|
| Confidence Level: 0.95 | Parameter: | Chloride, tot |
| Date Range: 05/12/2016 to 09/25/2017 | Units: | mg/L |
| Option for LT Points: 0% to <= 15% Substitute PQL | Percent of ND: | 0 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | -8.89 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -15.53 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | -2.34 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -1.79 | |
| Z test: | 1.64 | |
| At the 1.0 % Confidence Level (One-Sided Test): | Downward | |

| Location ID: MW-LF-02 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: 0% to <= 15% Substitute PQL | Parameter Code: Parameter: Units: | 00400 Field pH S.U. |
|--|---|---------------------------|
| | Percent of ND: | 0 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | -0.124 | S.U. per year |
| Lower Confidence Limit of Slope, M1: | -0.886 | S.U. per year |
| Upper Confidence Limit of Slope, M2+1: | 0.763 | S.U. per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -0.316 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 5

| Location ID: MW-LF-02 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: > 15% to <= 50% Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 00951 Fluoride, total mg/L 20 |
|---|--|--|
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | -0.006 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -0.034 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.041 | 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-LF-02 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | 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: | -0.079 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -1.517 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 1.423 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -0.179 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 7

Location ID: MW-LF-02 Parameter Code: 00515

Confidence Level: 0.95 Parameter: Total Dissolved Solids

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:3.805mg/L per yearLower Confidence Limit of Slope, M1:-19.154mg/L per yearUpper Confidence Limit of Slope, M2+1:29.980mg/L per year

Non-parametric Mann-Kendall Test for Trend

S Statistic: 0.179

Z test: 1.645

At the 1.0 % Confidence Level (One-Sided Test):

| Location ID: MW-LF-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL | Parameter Code: Parameter: Units: | 01022 Boron, total mg/L |
|---|---|-------------------------------|
| | Percent of ND: | 100 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 0.000 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 0.000 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.000 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.000 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

| Location ID: MW-LF-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | Parameter Code: Parameter: Units: | 00916 Calcium, Total 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: | -0.585 | ug/L per year |
| Lower Confidence Limit of Slope, M1: | -0.976 | ug/L per year |
| Upper Confidence Limit of Slope, M2+1: | -0.077 | ug/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -2.189 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | Downward | |

| Location ID: MW-LF-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: 0% to <= 15% Substitute PQL | Parameter Code: Parameter: Units: | 00940 Chloride, tot mg/L 0 |
|--|---|-------------------------------------|
| | Percent of ND: | |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 0.09 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -0.39 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.30 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.31 | |
| Z test: | 1.64 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

| Location ID: MW-LF-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | 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: | -0.222 | S.U. per year |
| Lower Confidence Limit of Slope, M1: | -1.152 | S.U. per year |
| Upper Confidence Limit of Slope, M2+1: | 0.240 | S.U. per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -0.316 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 12

| Location ID: MW-LF-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | Parameter Code: Parameter: Units: | 00951 Fluoride, total mg/L |
|---|---|----------------------------------|
| Option for LT Points: > 50% to <= 100 % Substitute PQL | Percent of ND: | 100 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 0.000 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 0.000 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.000 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.000 | |
| Z test: | 1.645 | |

None

At the 1.0 % Confidence Level (One-Sided Test):

| Location ID: MW-LF-03 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | Parameter Code: Parameter: Units: | 00945 Sulfate, tot mg/L |
|---|---|-------------------------------|
| Option for LT Points: > 50% to <= 100 % Substitute PQL | Percent of ND: | 89 |
| 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: | -0.765 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.402 | 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 | |

Post Hoc Trend Analysis Run Id: 14

00515 Location ID: MW-LF-03 **Parameter Code:** Parameter: **Total Dissolved Solids Confidence Level: Units:** mg/L Date Range: 05/12/2016 to 09/25/2017 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: 3.304 mg/L per year Lower Confidence Limit of Slope, M1: -3.850 mg/L per year Upper Confidence Limit of Slope, M2+1: 11.508 mg/L per year Non-parametric Mann-Kendall Test for Trend S Statistic: 0.527 Z test: 1.645

None

At the 1.0 % Confidence Level (One-Sided Test):

| Location ID: MW-LF-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 01022 Boron, 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 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 16

| Location ID: MW-LF-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | Parameter Code: Parameter: Units: | 00916 Calcium, Total 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: | 0.113 | ug/L per year |
| Lower Confidence Limit of Slope, M1: | -0.351 | ug/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.441 | ug/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.521 | |
| Z test: | 1.645 | |

None

At the 1.0 % Confidence Level (One-Sided Test):

| Location ID: MW-LF-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: 0% to <= 15% Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 00940 Chloride, tot |
|--|--|------------------------|
| | | mg/L 0 |
| | | |
| Median Slope: | 0.70 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -0.25 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 1.76 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 1.47 | |
| Z test: | 1.64 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

| Location ID: MW-LF-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | 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: | 0.000 | S.U. per year |
| Lower Confidence Limit of Slope, M1: | -0.623 | S.U. per year |
| Upper Confidence Limit of Slope, M2+1: | 0.434 | S.U. per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -0.107 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 19

Location ID: MW-LF-04 00951 **Parameter Code:** Parameter: Fluoride, total **Confidence Level: Units:** mg/L Date Range: 05/12/2016 to 09/25/2017 > 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

| Location ID: MW-LF-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 00945 Sulfate, tot mg/L 78 |
|---|--|-------------------------------------|
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | -0.047 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -0.425 | 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: | -1.160 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 21

| Location ID: MW-LF-04 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 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: | 18.552 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 2.470 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 28.914 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 1.887 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | Upward | |

| Location ID: MW-LF-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 01022 Boron, 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 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

| Location ID: MW-LF-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | Parameter Code: Parameter: Units: | 00916 Calcium, Total 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: | 0.328 | ug/L per year |
| Lower Confidence Limit of Slope, M1: | 0.200 | ug/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.569 | 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-LF-05 Confidence Level: 0.95 | Parameter Code: Parameter: Units: Percent of ND: | 00940 Chloride, tot mg/L 0 |
|---|--|-------------------------------------|
| Date Range: 05/12/2016 to 09/25/2017 | | |
| Option for LT Points: 0% to <= 15% Substitute PQL | | |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 1.51 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 1.25 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 1.81 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 3.44 | |
| Z test: | 1.64 | |
| At the 1.0 % Confidence Level (One-Sided Test): | Upward | |

| Location ID: MW-LF-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | 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: | -0.567 | S.U. per year |
| Lower Confidence Limit of Slope, M1: | -0.689 | S.U. per year |
| Upper Confidence Limit of Slope, M2+1: | 0.326 | S.U. per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -0.629 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 26

| Location ID: MW-LF-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 | Parameter Code: Parameter: Units: | 00951 Fluoride, total mg/L |
|---|---|----------------------------------|
| Option for LT Points: > 50% to <= 100 % Substitute PQL | Percent of ND: | 100 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 0.000 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 0.000 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.000 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.000 | |
| Z test: | 1.645 | |

None

| Location ID: MW-LF-05 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/25/2017 Option for LT Points: > 50% to <= 100 % Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 00945 Sulfate, tot 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: | 0.571 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 1.347 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 28

00515 Location ID: MW-LF-05 **Parameter Code:** Parameter: **Total Dissolved Solids Confidence Level: Units:** mg/L Date Range: 05/12/2016 to 09/25/2017 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: 10.607 mg/L per year Lower Confidence Limit of Slope, M1: 4.829 mg/L per year Upper Confidence Limit of Slope, M2+1: 26.296 mg/L per year Non-parametric Mann-Kendall Test for Trend S Statistic: 2.189

1.645

Upward

Z test:

| Location ID: MW-LF-06 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/26/2017 | Parameter Code: Parameter: Units: | 01022 Boron, total mg/L |
|---|---|-------------------------------|
| Option for LT Points: > 50% to <= 100 % Substitute PQL | Percent of ND: | 100 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 0.000 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 0.000 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.000 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.000 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

| Location ID: MW-LF-06 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/26/2017 Option for LT Points: 0% to <= 15% Substitute PQL | Parameter Code: Parameter: Units: | 00916 Calcium, Total ug/L 0 |
|--|---|--------------------------------------|
| | Percent of ND: | |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | -0.371 | ug/L per year |
| Lower Confidence Limit of Slope, M1: | -0.542 | ug/L per year |
| Upper Confidence Limit of Slope, M2+1: | -0.137 | ug/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -2.189 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | Downward | |

| Location ID: MW-LF-06 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/26/2017 Option for LT Points: 0% to <= 15% Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 00940 Chloride, tot mg/L 0 | | | |
|--|--|-------------------------------------|---|-------|---------------|
| | | | Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| | | | Median Slope: | -0.37 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -0.75 | mg/L per year | | | |
| Upper Confidence Limit of Slope, M2+1: | -0.10 | mg/L per year | | | |
| Non-parametric Mann-Kendall Test for Trend | | | | | |
| S Statistic: | -1.98 | | | | |
| Z test: | 1.64 | | | | |
| At the 1.0 % Confidence Level (One-Sided Test): | Downward | | | | |

| Location ID: MW-LF-06 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/26/2017 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: | -0.190 | S.U. per year |
| Lower Confidence Limit of Slope, M1: | -0.579 | S.U. per year |
| Upper Confidence Limit of Slope, M2+1: | 0.181 | S.U. per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -0.636 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

| Location ID: MW-LF-06 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/26/2017 | Parameter Code: Parameter: Units: | 00951 Fluoride, total mg/L |
|---|---|----------------------------------|
| Option for LT Points: > 50% to <= 100 % Substitute PQL | Percent of ND: | 100 |
| Theil-Sen Non-parametric estimate of the slope (One-Sided Test) | | |
| Median Slope: | 0.000 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | 0.000 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 0.000 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 0.000 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

| Location ID: MW-LF-06 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/26/2017 Option for LT Points: >50% to <= 100 % Substitute PQL | Parameter Code: Parameter: Units: Percent of ND: | 00945 Sulfate, tot 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: | 0.571 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | 1.347 | |
| Z test: | 1.645 | |
| At the 1.0 % Confidence Level (One-Sided Test): | None | |

Post Hoc Trend Analysis Run Id: 35

| Location ID: MW-LF-06 Confidence Level: 0.95 Date Range: 05/12/2016 to 09/26/2017 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: | -1.309 | mg/L per year |
| Lower Confidence Limit of Slope, M1: | -8.789 | mg/L per year |
| Upper Confidence Limit of Slope, M2+1: | 14.470 | mg/L per year |
| Non-parametric Mann-Kendall Test for Trend | | |
| S Statistic: | -0.210 | |
| Z test: | 1.645 | |

None