

ROY S. NELSON PLANT

2021 Annual Groundwater Monitoring and Corrective Action Report

**PREPARED IN COMPLIANCE WITH THE
EPA FINAL RULE FOR THE DISPOSAL OF
COAL COMBUSTION RESIDUALS
TITLE 40 CODE OF FEDERAL REGULATIONS PART 257**



January 2022

**CCR UNIT
WESTLAKE, LA**

**2021 ANNUAL GROUNDWATER MONITORING
AND CORRECTIVE ACTION REPORT**

**Prepared for
Entergy Services, LLC
639 Loyola Ave
Mail unit L-ENT 3D
New Orleans, LA 70113**

**Prepared By:

Pivotal Engineering LLC,
Eagle Environmental, and
TRC Solutions**

January 2022

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- A Site Map and Groundwater Flow Direction
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1.0 EXECUTIVE SUMMARY

The Coal Ash Landfill (CCR Unit) was in operation throughout 2021. For the duration of the current annual reporting period (January 2021 through December 2021), the groundwater quality was monitored under a detection monitoring program. In line with historical trends at the site, statistically significant increases of calcium were detected in wells CCR-5 and CCR-7. Entergy Louisiana LLC (Entergy) had previously performed alternate source demonstrations (ASD) demonstrating that the SSIs are the result of natural variation in the groundwater quality. For the duration of 2021, no corrective measures were initiated.

2.0 INTRODUCTION

Entergy Louisiana LLC (Entergy), operates a Coal Ash Landfill (CCR Unit) for the disposal of coal combustion residuals (CCR) at the Roy S. Nelson Plant located in Westlake, Louisiana. The CCR Unit receives CCR generated from the combustion of coal at the Nelson Plant. Management of the CCRs at the CCR Unit is performed pursuant to national criteria established in Title 40 of the Code of Federal Regulations (40 CFR) Part 257 (CCR Rule), published by the United States Environmental Protection Agency (EPA) on April 17, 2015. Entergy has installed a groundwater monitoring system at the CCR Unit that is subject to the groundwater monitoring and corrective action requirements provided under §§257.90 through 257.98 of the CCR Rule. In accordance with §257.90(e) of the CCR Rule, Entergy must prepare an annual report that provides information regarding the groundwater monitoring and corrective action program at the CCR Unit. This document is intended to provide the required information.

This report is the fifth annual groundwater monitoring report required under the CCR Rule and is the summary and analysis of results from the 2021 groundwater monitoring sampling events. The first groundwater monitoring report was completed in January 2018.

3.0 GROUNDWATER MONITORING WELL NETWORK

Entergy's groundwater monitoring system consists of 14 monitoring wells as shown in Appendix A. Pursuant to §257.91(f) of the CCR Rule, a qualified professional engineer has certified that the groundwater monitoring system has been designed and constructed to meet the requirements of this section of §257.91.

4.0 INSTALLED OR DECOMMISSIONED MONITORING WELLS DURING 2021

No monitoring wells were installed or decommissioned during 2021 at the CCR Unit.

5.0 GROUNDWATER MONITORING DATA

In accordance with §257.90(e)(3), all the monitoring data obtained under §§257.90 through 257.98 are provided in Appendix B along with a summary of 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 collected as part of detection or assessment monitoring.

6.0 STATUS SUMMARY OF THE 2021 GROUNDWATER MONITORING PROGRAM

Groundwater monitoring was performed in accordance with the detection monitoring requirements of §257.94. A summary of activities related to groundwater detection monitoring performed during 2021 is provided below:

- In accordance with §257.94(b), detection monitoring sampling was performed during March, June, September, and December 2021 for analysis of Appendix III parameters.
- Appendix IV parameters were collected in March, June, September and December 2021 to enhance the background data set for those constituents. Sample collection for Radium 226/228 was not performed as these constituents were not detected in any of the background data. As noted above, the March, June, September and December 2021 Appendix IV data were collected for background purposes and are not required by the rule since the unit is in detection monitoring.
- Statistical evaluation of the detection monitoring data was performed in accordance with the statistical method certified by a qualified Louisiana-registered professional Engineer. The certified statistical method has been posted to Entergy's CCR Rule Compliance Data and Information website.
- In 2018, Entergy completed a successful alternate source demonstration (ASD) per §257.94(e)(2) in response to statistically significant increases (SSIs) identified for calcium in well CCR-7 during the second half of 2017 detection monitoring event. The ASD, which demonstrated that the SSI is the result of natural variation in groundwater quality, was certified by a Louisiana-registered professional engineer and was placed into the facility's operating record. Based on the successful evaluation conducted and results presented in the ASD, Entergy continued with detection monitoring in accordance with §257.94.
- In 2018, Entergy completed a successful alternate source demonstration (ASD) per §257.94(e)(2) in response to statistically significant increases (SSIs) identified for calcium in well CCR-7 during the first half of 2018 detection monitoring event. The ASD, which demonstrated that the SSI is the result of natural variation in groundwater quality, was certified by a Louisiana-registered professional engineer and were placed into the facility's operating record. Based on the successful evaluation conducted and results presented in the ASD, Entergy continued with detection monitoring in accordance with §257.94.
- In 2019, Entergy completed a successful alternate source demonstration (ASD) per §257.94(e)(2) in response to statistically significant increases (SSIs) identified for calcium in wells CCR-5 and CCR-7 during the second half of 2018 detection monitoring event. The ASD, which demonstrated that the SSIs are the result of

natural variation in groundwater quality, was certified by a Louisiana-registered professional engineer and was placed into the facility's operating record. Based on the successful evaluation conducted and results presented in the ASD, Entergy continued with detection monitoring in accordance with §257.94.

- The 2021 detection monitoring sampling was performed during March, June, September, and December 2021. Results confirmed SSIs for calcium in June and December 2021 in wells CCR-5 and CCR-7. The ASDs referenced above previously demonstrated that the SSIs for calcium in wells CCR-5 and CCR-7 are the result of natural variation in groundwater quality, and the basis for the prior ASDs remain applicable.
- Groundwater flow direction in 2021 was west to east in the first continuous permeable zone beneath the landfill which is consistent with historical observations, refer to Figures 3 and 4 in Appendix A.
- Additional rate investigation activities have shown that the rate of groundwater flow in the vicinity of the CADL is 6.21×10^{-4} feet per day. The rate was determined from previous hydrogeologic investigations of the Lower Sand and from December 2021 hydraulic gradient data. The average soil porosity was determined to be 0.3725 (Geotechdata.info, 2013).
- No problems were encountered during 2021 with regard to the groundwater monitoring system. Therefore, no actions were required to modify the system.
- The facility remained in detection monitoring for the duration of 2021 because no SSIs were detected that were not addressed by the prior ASDs.

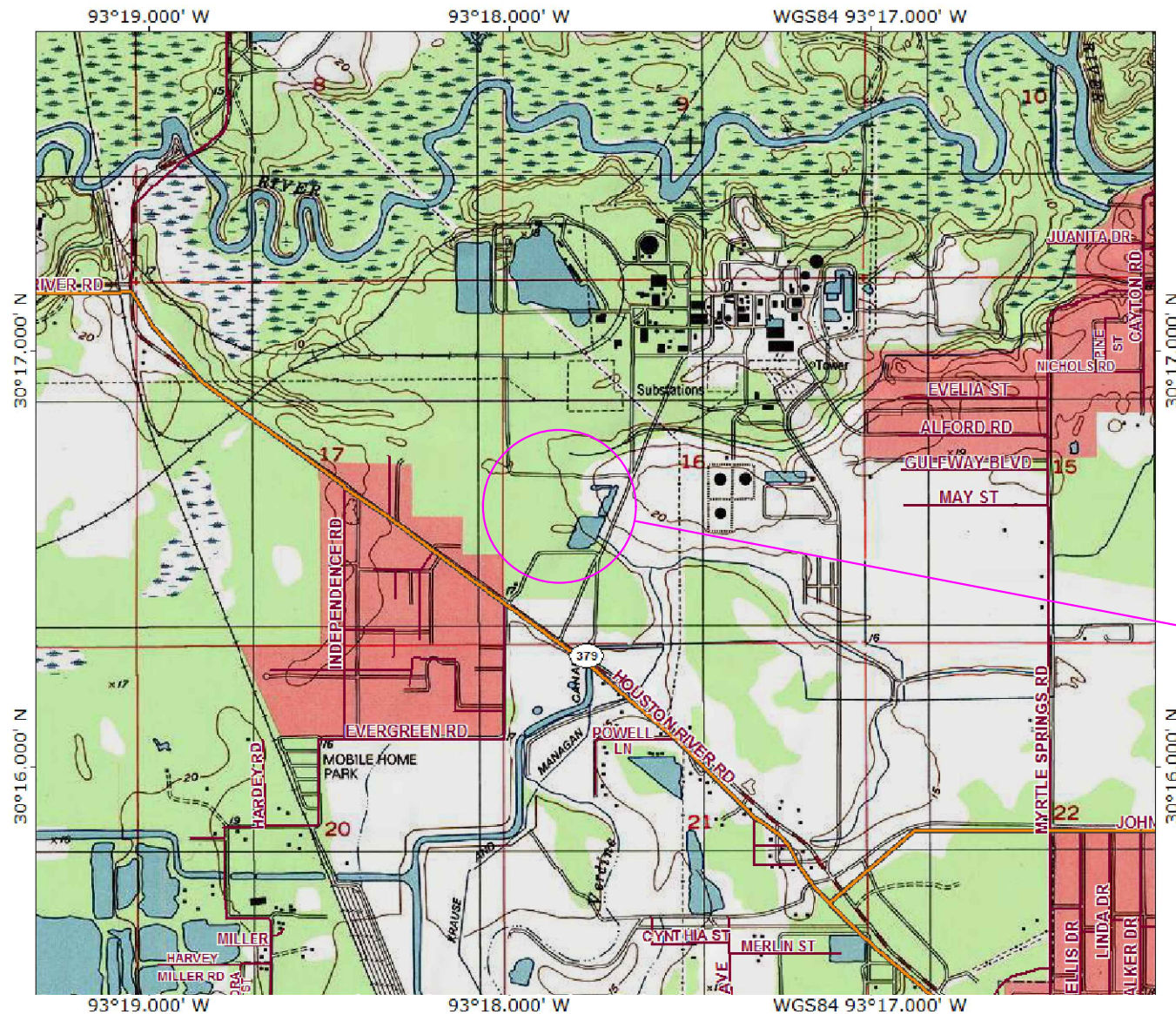
7.0 PROJECTED ACTIVITIES FOR 2022

Planned activities for the CCR Unit's groundwater monitoring program during 2022 are listed below:

- Semi-annual detection monitoring events are planned for June and December 2022

APPENDIX A

SITE MAP AND GROUNDWATER FLOW DIRECTION



SITE LOCATION

COAL ASH DISPOSAL LANDFILL SITE LOCATION MAP

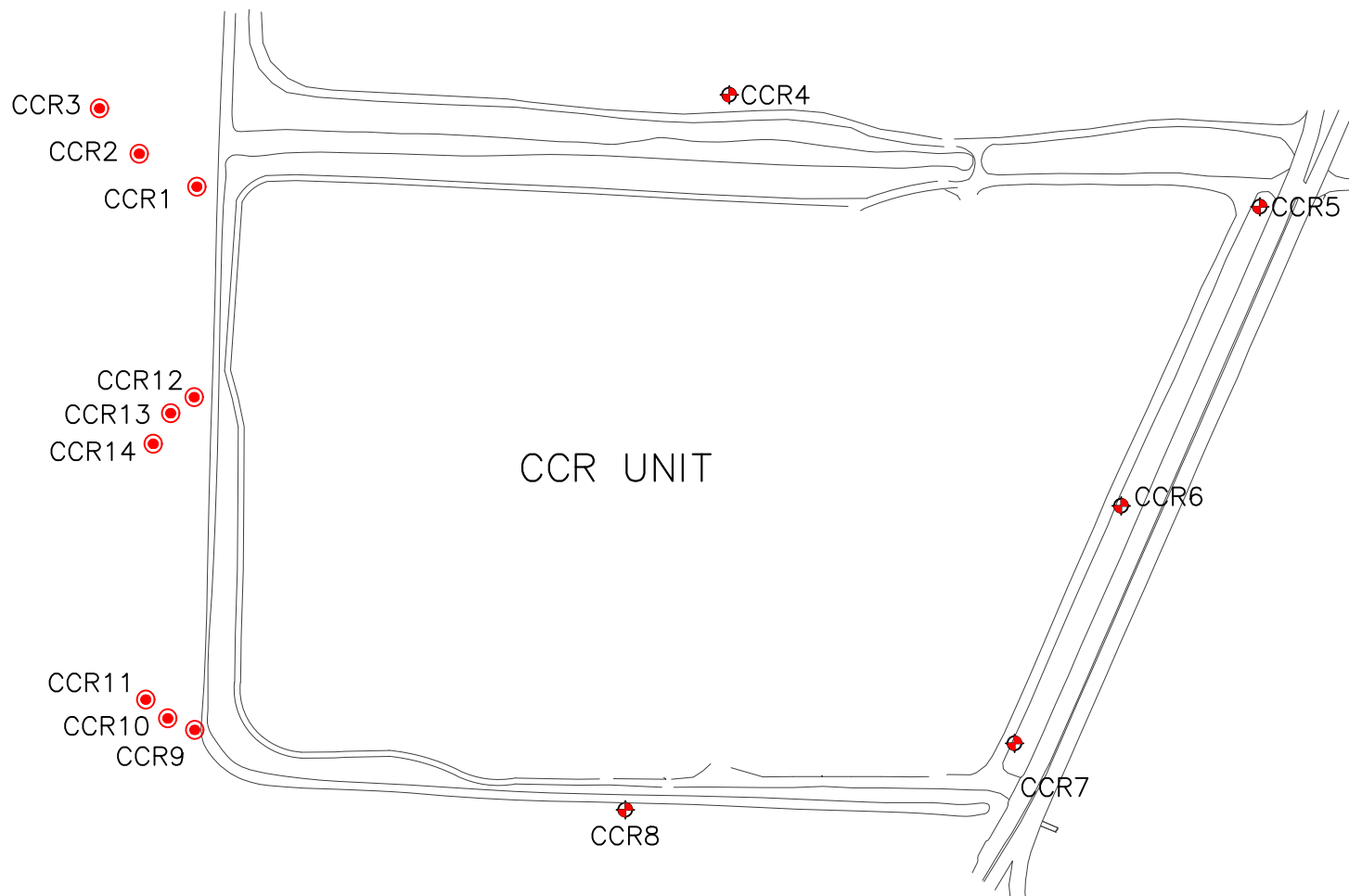
NELSON POWER GENERATING STATION
3500 HOUSTON RIVER ROAD, WESTLAKE, LOUISIANA



Pivotal Engineering LLC
 CIVIL, ELECTRICAL, ENVIRONMENTAL & MECHANICAL ENGINEERING
 1515 POYDRAS STREET, STE. 1875
 NEW ORLEANS, LA 70112
 (504) 799-3653 (504) 799-3654(FAX)

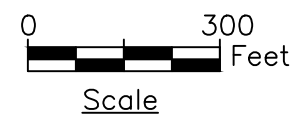
SCALE: NOT TO SCALE	DRAWN BY: Y.S.	1 FIG. NO.
DATE: JANUARY 4, 2015	CHECKED BY: T.E.	
JOB NO. 15-125		

1
FIG. NO.



Legend

- Upgradient Well Location
- ⊕ Downgradient Well Location

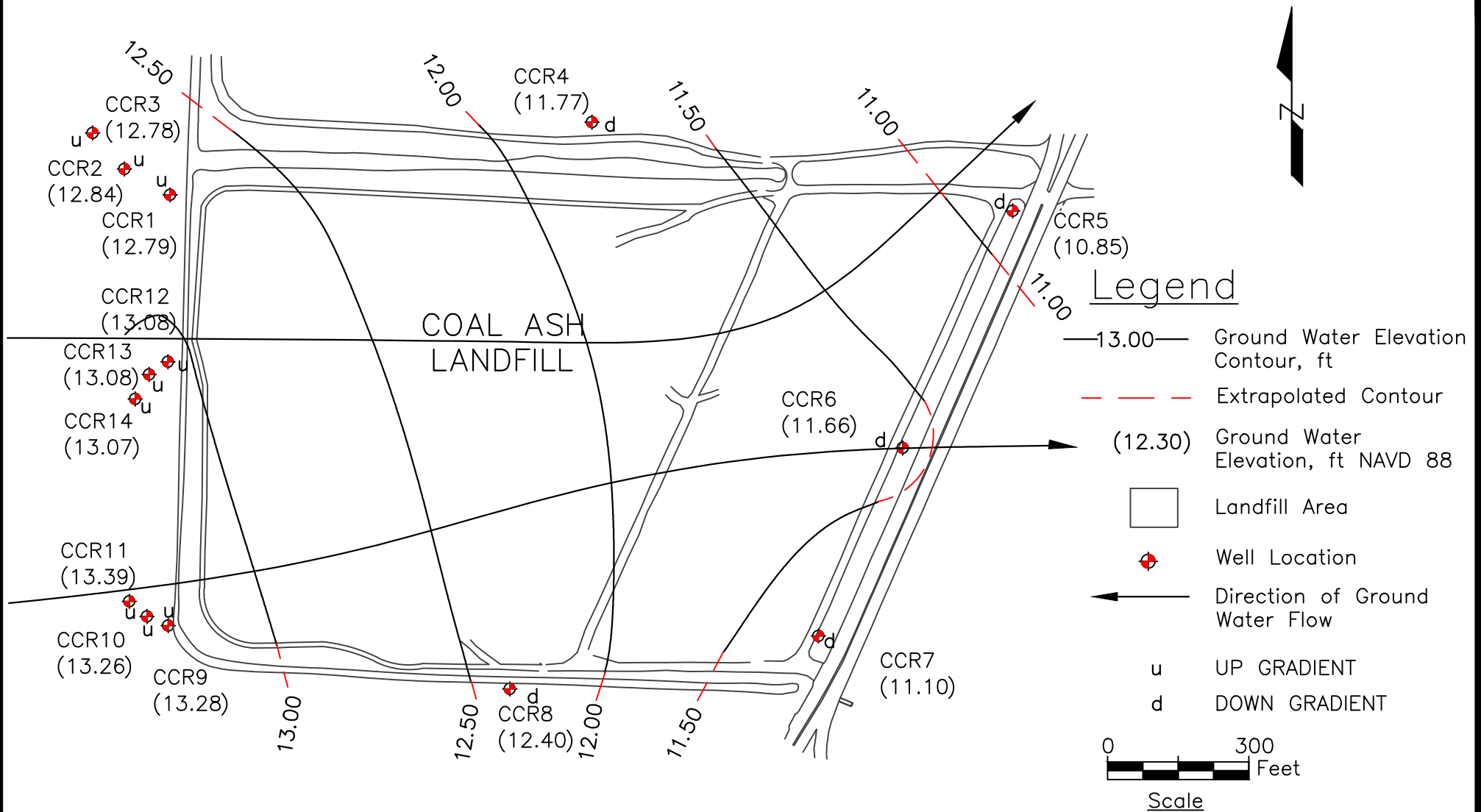


CCR UNIT SITE MAP

ENTERGY LOUISIANA, LLC
 ROY S. NELSON PLANT
 HOUSTON RIVER ROAD, WESTLAKE, LOUISIANA

DATE	DESCRIPTION REVISIONS	BY

SCALE: AS NOTED	DRAWN BY: B.S.	2 Fig. No.
DATE: JAN 06/16	CHECKED BY: T.E.	



**COAL ASH LANDFILL
POTENTIOMETRIC ELEVATION MAP
DECEMBER 2021**

ENTERGY LOUISIANA, LLC
ROY S. NELSON PLANT
HOUSTON RIVER ROAD, WESTLAKE, LOUISIANA

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engineering
A Full Service Civil, Environmental and MEP Firm

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DATE	DESCRIPTION	BY
	REVISIONS	

SCALE: AS NOTED	DRAWN BY: M.M.	4 FIG. NO.
DATE: JANUARY 19, 2021	CHECKED BY: T.E.	
JOB NO. 20-139		

APPENDIX B

SAMPLING SCHEDULE AND ANALYTICAL DATA



Detection Monitoring Sampling Dates

Entergy Louisiana LLC Nelson Coal Ash Landfill Westlake, LA

Well	CCR-1 (BG)	CCR-2 (BG)	CCR-3 (BG)	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9 (BG)	CCR-10 (BG)	CCR-11 (BG)	CCR-12 (BG)	CCR-13 (BG)	CCR-14 (BG)
Date	3/24/21	3/24/21	3/24/21	3/24/21	3/24/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21
40 CFR 257 Appendix III Parameters*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40 CFR 257 Appendix IV Parameters**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Date	6/22/21	6/22/21	6/22/21	6/23/21	6/23/21	6/23/21	6/23/21	6/23/21	6/23/21	6/23/21	6/24/2021	6/24/2021	6/24/2021	6/24/2021
40 CFR 257 Appendix III Parameters*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40 CFR 257 Appendix IV Parameters**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Date	9/15/21	9/15/21	9/15/21	9/16/21	9/16/21	9/16/21	9/16/21	9/16/21	9/16/21	9/17/21	9/17/21	9/17/21	9/17/21	9/17/21
40 CFR 257 Appendix III Parameters*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40 CFR 257 Appendix IV Parameters**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Date	12/14/21	12/14/21	12/14/21	12/14/21	12/15/21	12/15/21	12/15/21	12/15/21	12/15/21	12/15/21	12/15/21	12/16/21	12/16/21	12/16/21
40 CFR 257 Appendix III Parameters*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
40 CFR 257 Appendix IV Parameters**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*40 CFR 257 Appendix III Parameters collected on reference date and include Boron, Calcium, Chloride, Fluoride, pH, Sulfate, and Total Dissolved Solids. Laboratory reports to follow

**40 CFR 257 Appendix IV Parameters collected on reference date and include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium and Thallium

Note: Detection monitoring results for pH are located on the next table.

Radium 226 and 228 combined were not analyzed in 2021 due to 100% non-detect in previous background analytical results



Well	CCR-1 (BG)	CCR-2 (BG)	CCR-3 (BG)	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	CCR-9 (BG)	CCR-10 (BG)	CCR-11 (BG)	CCR-12 (BG)	CCR-13 (BG)	CCR-14 (BG)
Date	3/24/21	3/24/21	3/24/21	3/24/21	3/24/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21	3/25/21
pH (S.U.)	7.09	6.98	7.16	6.91	7.20	7.21	7.18	7.03	7.34	7.37	7.26	6.85	7.50	7.04
Date	6/22/21	6/22/21	6/22/21	6/23/21	6/23/21	6/23/21	6/23/21	6/23/21	6/23/21	6/23/21	6./24/2021	6./24/2021	6./24/2021	6./24/2021
pH (S.U.)	6.72	6.69	6.80	6.65	6.91	7.01	7.33	6.64	7.45	7.25	7.29	6.47	7.74	6.99
Date	9/15/21	9/15/21	9/15/21	9/16/21	9/16/21	9/16/21	9/16/21	9/16/21	9/16/21	9/17/21	9/17/21	9/17/21	9/17/21	9/17/21
pH (S.U.)	6.54	6.70	6.90	6.81	7.12	7.24	7.23	6.88	7.28	7.32	7.41	6.77	7.40	7.39
Date	12/14/21	12/14/21	12/14/21	12/14/21	12/15/21	12/15/21	12/15/21	12/15/21	12/15/21	12/15/21	12/15/21	12/16/21	12/16/21	12/16/21
pH (S.U.)	6.94	6.82	6.89	6.80	7.06	7.00	6.99	6.56	7.22	7.21	7.30	6.50	7.54	6.65

S.U. - Standard Units



Element Materials Technology Lafayette
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April 08, 2021

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: Entergy: CCR Detection Monitoring

Order No.: 21031193

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 3/26/2021 for the analyses presented in the following report.

In accordance with your instructions Element Lafayette conducted the analysis shown on the following pages on samples submitted by your company. The results related only to the items tested. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet all requirements of TNI. All relevant sampling information is on the attached Chain-of-Custody form.

Where applicable, all soil data, except for 29-B, are on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Case Narrative

WO#: 21031193
Date: 4/8/2021

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).



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Analytical Report

(consolidated)

WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 12:05:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-001 **Matrix:** AQUEOUS
Client Sample ID CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	43.0	2.50		mg/L	10	4/5/2021 1:36:22 PM
Fluoride	0.274	0.0500		mg/L	1	4/5/2021 6:39:47 PM
Sulfate	3.14	0.250		mg/L	1	4/5/2021 6:39:47 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	3/30/2021 7:34:01 PM
Calcium	26.2	0.500		mg/L	1	3/30/2021 7:34:01 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	283	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 12:55:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-002 **Matrix:** AQUEOUS
Client Sample ID CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC			E 300.0		Analyst: SGP	
Chloride	54.4	2.50		mg/L	10	4/5/2021 1:50:08 PM
Fluoride	0.329	0.0500		mg/L	1	4/5/2021 6:53:33 PM
Sulfate	1.51	0.250		mg/L	1	4/5/2021 6:53:33 PM
METALS IN WATER BY ICP, TOTALS			SW6010B		Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	3/30/2021 7:36:20 PM
Calcium	21.7	0.500		mg/L	1	3/30/2021 7:36:20 PM
TOTAL DISSOLVED SOLIDS			SM2540C		Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	241	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 1:40:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-003 **Matrix:** AQUEOUS
Client Sample ID CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	114	5.00		mg/L	20	4/5/2021 2:03:56 PM
Fluoride	0.363	0.0500		mg/L	1	4/5/2021 7:07:21 PM
Sulfate	3.64	0.250		mg/L	1	4/5/2021 7:07:21 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	3/30/2021 7:38:39 PM
Calcium	29.6	0.500		mg/L	1	3/30/2021 7:38:39 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	385	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 2:30:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	42.7	2.50		mg/L	10	4/5/2021 2:17:43 PM
Fluoride	0.227	0.0500		mg/L	1	4/5/2021 7:21:08 PM
Sulfate	11.1	0.250		mg/L	1	4/5/2021 7:21:08 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	0.109	0.100		mg/L	1	3/30/2021 7:40:58 PM
Calcium	20.0	0.500		mg/L	1	3/30/2021 7:40:58 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	262	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 3:20:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	58.7	5.00		mg/L	20	4/5/2021 2:31:31 PM
Fluoride	0.241	0.0500		mg/L	1	4/5/2021 8:02:32 PM
Sulfate	< 0.250	0.250		mg/L	1	4/5/2021 8:02:32 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	0.106	0.100		mg/L	1	3/30/2021 7:47:52 PM
Calcium	33.2	0.500		mg/L	1	3/30/2021 7:47:52 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	384	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 9:30:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-006 **Matrix:** AQUEOUS
Client Sample ID CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	86.8	2.50		mg/L	10	4/5/2021 2:45:18 PM
Fluoride	0.251	0.0500		mg/L	1	4/5/2021 8:16:20 PM
Sulfate	< 0.250	0.250		mg/L	1	4/5/2021 8:16:20 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	0.104	0.100		mg/L	1	3/30/2021 7:50:09 PM
Calcium	30.4	0.500		mg/L	1	3/30/2021 7:50:09 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	335	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 10:10:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	62.7	2.50		mg/L	10	4/5/2021 2:59:06 PM
Fluoride	0.262	0.0500		mg/L	1	4/5/2021 8:30:07 PM
Sulfate	< 0.250	0.250		mg/L	1	4/5/2021 8:30:07 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	3/30/2021 7:52:28 PM
Calcium	46.2	0.500		mg/L	1	3/30/2021 7:52:28 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	319	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 11:10:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-008 **Matrix:** AQUEOUS
Client Sample ID: CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	84.3	2.50		mg/L	10	4/5/2021 3:40:29 PM
Fluoride	0.165	0.0500		mg/L	1	4/5/2021 8:43:55 PM
Sulfate	1.44	0.250		mg/L	1	4/5/2021 8:43:55 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	3/30/2021 7:59:22 PM
Calcium	11.9	0.500		mg/L	1	3/30/2021 7:59:22 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	290	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 12:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	66.9	2.50		mg/L	10	4/5/2021 3:54:17 PM
Fluoride	0.539	0.0500		mg/L	1	4/5/2021 8:57:43 PM
Sulfate	6.40	0.250		mg/L	1	4/5/2021 8:57:43 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	3/30/2021 8:01:41 PM
Calcium	30.4	0.500		mg/L	1	3/30/2021 8:01:41 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	348	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 12:45:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-010 **Matrix:** AQUEOUS
Client Sample ID: CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	41.9	2.50		mg/L	10	4/5/2021 4:08:05 PM
Fluoride	0.581	0.0500		mg/L	1	4/5/2021 9:11:31 PM
Sulfate	8.36	0.250		mg/L	1	4/5/2021 9:11:31 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	3/30/2021 8:03:59 PM
Calcium	27.1	0.500		mg/L	1	3/30/2021 8:03:59 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	291	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 1:30:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-011 **Matrix:** AQUEOUS
Client Sample ID CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	26.5	2.50		mg/L	10	4/5/2021 4:49:25 PM
Fluoride	0.662	0.0500		mg/L	1	4/5/2021 9:25:19 PM
Sulfate	3.36	0.250		mg/L	1	4/5/2021 9:25:19 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	3/30/2021 8:06:17 PM
Calcium	28.7	0.500		mg/L	1	3/30/2021 8:06:17 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	218	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 2:35:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-012 **Matrix:** AQUEOUS
Client Sample ID CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	17.5	0.250		mg/L	1	4/5/2021 5:03:13 PM
Fluoride	0.131	0.0500		mg/L	1	4/5/2021 5:03:13 PM
Sulfate	16.9	0.250		mg/L	1	4/5/2021 5:03:13 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	3/30/2021 8:08:35 PM
Calcium	20.1	0.500		mg/L	1	3/30/2021 8:08:35 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	174	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 3:20:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-013 **Matrix:** AQUEOUS
Client Sample ID: CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	12.5	0.250		mg/L	1	4/5/2021 5:17:01 PM
Fluoride	0.252	0.0500		mg/L	1	4/5/2021 5:17:01 PM
Sulfate	2.20	0.250		mg/L	1	4/5/2021 5:17:01 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	3/30/2021 8:15:31 PM
Calcium	23.2	0.500		mg/L	1	3/30/2021 8:15:31 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	209	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 4:20:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-014 **Matrix:** AQUEOUS
Client Sample ID CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	11.4	0.250		mg/L	1	4/5/2021 5:30:48 PM
Fluoride	0.169	0.0500		mg/L	1	4/5/2021 5:30:48 PM
Sulfate	0.765	0.250		mg/L	1	4/5/2021 5:30:48 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	3/30/2021 8:24:44 PM
Calcium	17.3	0.500		mg/L	1	3/30/2021 8:24:44 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	144	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-015 **Matrix:** AQUEOUS
Client Sample ID Dup

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	63.5	5.00		mg/L	20	4/5/2021 5:44:36 PM
Fluoride	0.244	0.0500		mg/L	1	4/5/2021 9:39:07 PM
Sulfate	< 0.250	0.250		mg/L	1	4/5/2021 9:39:07 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	0.109	0.100		mg/L	1	3/30/2021 8:31:42 PM
Calcium	33.1	0.500		mg/L	1	3/30/2021 8:31:42 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	398	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21031193

Date Reported: 4/8/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 4:30:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21031193-016 **Matrix:** AQUEOUS
Client Sample ID FB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	0.420	0.250		mg/L	1	4/5/2021 5:58:24 PM
Fluoride	< 0.0500	0.0500		mg/L	1	4/5/2021 5:58:24 PM
Sulfate	< 0.250	0.250		mg/L	1	4/5/2021 5:58:24 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	3/30/2021 8:34:01 PM
Calcium	< 0.500	0.500		mg/L	1	3/30/2021 8:34:01 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	< 20.0	20.0		mg/L	1	3/29/2021 7:37:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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QC SUMMARY REPORT

WO#: 21031193

08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 39117-1

Sample ID	MB-39117	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98374			
Client ID:	PBW	Batch ID:	39117-1	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397821			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		< 0.100		0.100										
Calcium		< 0.500		0.500										

Sample ID	LCS-39117	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/28/2021	RunNo: 98374					
Client ID: LCSW	Batch ID: 39117-1	TestNo: SW6010B	Analysis Date: 3/30/2021	SeqNo: 2397822							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.489	0.100	0.5000	0	97.8	80	120				
Calcium	49.6	0.500	50.00	0	99.1	80	120				

Sample ID	LCSD-39117	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98374	
Client ID:	LCSS02	Batch ID:	39117-1	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397823	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.507	0.100	0.5000	0	101	80	120	0.4891	3.64	20	
Calcium		50.5	0.500	50.00	0	101	80	120	49.57	1.90	20	

Sample ID	21031193-007BMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/28/2021	RunNo: 98374					
Client ID: CCR-7	Batch ID: 39117-1	TestNo: SW6010B	Analysis Date: 3/30/2021	SeqNo: 2397842							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.587	0.100	0.5000	0	117	75	125				

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21031193

08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 39117-1

Sample ID	21031193-007BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98374	
Client ID:	CCR-7	Batch ID:	39117-1	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397842	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium		97.1	0.500	50.00	46.21	102	75	125				

Sample ID	21031193-007BMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 3/28/2021	RunNo: 98374					
Client ID: CCR-7	Batch ID: 39117-1	TestNo: SW6010B	Analysis Date: 3/30/2021	SeqNo: 2397843							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.595	0.100	0.5000	0	119	75	125	0.5870	1.36	20	
Calcium	97.2	0.500	50.00	46.21	102	75	125	97.11	0.0706	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21031193

08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 39118-1

Sample ID	MB-39118	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98374			
Client ID:	PBW	Batch ID:	39118-1	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397852			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		< 0.100		0.100										
Calcium		< 0.500		0.500										

Sample ID	LCS-39118	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98374	
Client ID:	LCSW	Batch ID:	39118-1	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397853	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.513	0.100	0.5000	0	103	80	120				
Calcium		50.9	0.500	50.00	0	102	80	120				

Sample ID	LCSD-39118	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98374	
Client ID:	LCSS02	Batch ID:	39118-1	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397854	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.505	0.100	0.5000	0	101	80	120	0.5134	1.71	20	
Calcium		50.5	0.500	50.00	0	101	80	120	50.87	0.658	20	

Sample ID	21031193-014BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98374	
Client ID:	CCR-14	Batch ID:	39118-1	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397856	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.546	0.100	0.5000	0	109	75	125				

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: 21031193

08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 39118-1

Sample ID	21031193-014BMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/28/2021	RunNo: 98374					
Client ID: CCR-14	Batch ID: 39118-1	TestNo: SW6010B	Analysis Date: 3/30/2021	SeqNo: 2397856							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	67.1	0.500	50.00	17.26	99.6	75	125				

Sample ID	21031193-014BMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 3/28/2021	RunNo: 98374					
Client ID: CCR-14	Batch ID: 39118-1	TestNo: SW6010B	Analysis Date: 3/30/2021	SeqNo: 2397857							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.562	0.100	0.5000	0	112	75	125	0.5461	2.81	20	
Calcium	68.9	0.500	50.00	17.26	103	75	125	67.08	2.68	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21031193
08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R98292

Sample ID	MB-R98292	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98292		
Client ID:	PBW	Batch ID:	R98292	TestNo:	SM2540C			Analysis Date:	3/29/2021	SeqNo:	2398803		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) < 20.0 20.0

Sample ID	LCS-R98292	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98292		
Client ID:	LCSW	Batch ID:	R98292	TestNo:	SM2540C			Analysis Date:	3/29/2021	SeqNo:	2398804		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 987 20.0 1,000 0 98.7 85 115

Sample ID	LCSD-R98292	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98292		
Client ID:	LCSS02	Batch ID:	R98292	TestNo:	SM2540C			Analysis Date:	3/29/2021	SeqNo:	2398805		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 974 20.0 1,000 0 97.4 85 115 987.0 1.33 10

Sample ID	21031193-007ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98292		
Client ID:	CCR-7	Batch ID:	R98292	TestNo:	SM2540C			Analysis Date:	3/29/2021	SeqNo:	2398813		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 335 20.0 319.0 4.89 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21031193

08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R98292

Sample ID	21031193-007ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98292
Client ID:	CCR-7	Batch ID:	R98292	TestNo:	SM2540C			Analysis Date:	3/29/2021	SeqNo:	2398813
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Sample ID	21031193-003ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98292
Client ID:	CCR-3	Batch ID:	R98292	TestNo:	SM2540C			Analysis Date:	3/29/2021	SeqNo:	2398823
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filterable)		350		20.0						385.0	9.52 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21031193
08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R98492

Sample ID	MBLK	SampType:	MBLK	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	98492	
Client ID:	PBW	Batch ID:	R98492	TestNo:	E 300.0			Analysis Date:	4/5/2021	SeqNo:	2400136	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250	0.250									
Fluoride		< 0.0500	0.0500									
Sulfate		< 0.250	0.250									

Sample ID	LCS	SampType:	LCS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	98492	
Client ID:	LCSW	Batch ID:	R98492	TestNo:	E 300.0			Analysis Date:	4/5/2021	SeqNo:	2400138	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.3	0.250	10.00	0	103	90	110				
Fluoride		2.07	0.0500	2.000	0	104	90	110				
Sulfate		10.8	0.250	10.00	0	108	90	110				

Sample ID	LCSD	SampType: LCSD	TestCode: 300.0		Units: mg/L		Prep Date:			RunNo: 98492		
Client ID:	LCSS02	Batch ID: R98492	TestNo: E 300.0		Analysis Date: 4/5/2021				SeqNo: 2400139			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		9.94	0.250	10.00	0	99.4	90	110	10.35	4.03	15	
Fluoride		2.01	0.0500	2.000	0	101	90	110	2.074	2.91	15	
Sulfate		9.87	0.250	10.00	0	98.7	90	110	10.84	9.33	15	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21031193

08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R98492

Sample ID	21031193-007AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 98492					
Client ID:	CCR-7	Batch ID: R98492	TestNo: E 300.0	Analysis Date: 4/5/2021	SeqNo: 2400149						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	113	2.50	50.00	62.72	101	80	120				
Fluoride	10.1	0.500	10.00	0.1482	99.8	80	120				
Sulfate	51.0	2.50	50.00	1.185	99.7	80	120				

Sample ID	21031193-007AMSD	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 98492					
Client ID:	CCR-7	Batch ID: R98492	TestNo: E 300.0	Analysis Date: 4/5/2021	SeqNo: 2400151						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	114	2.50	50.00	62.72	103	80	120	113.5	0.602	15	
Fluoride	10.3	0.500	10.00	0.1482	101	80	120	10.13	1.21	15	
Sulfate	51.7	2.50	50.00	1.185	101	80	120	51.02	1.26	15	

Sample ID	21031193-016AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 98492					
Client ID:	FB	Batch ID: R98492	TestNo: E 300.0	Analysis Date: 4/5/2021	SeqNo: 2400164						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	5.48	0.250	5.000	0.4200	101	80	120				
Fluoride	1.01	0.0500	1.000	0	101	80	120				
Sulfate	5.20	0.250	5.000	0.08127	102	80	120				

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21031193

08-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R98492

Sample ID	21031193-016AMSD	SampType: MSD	TestCode: 300.0		Units: mg/L		Prep Date:			RunNo: 98492		
Client ID:	FB	Batch ID: R98492	TestNo: E 300.0		Analysis Date: 4/5/2021				SeqNo: 2400165			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		5.49	0.250	5.000	0.4200	101	80	120	5.484	0.0551	15	
Fluoride		1.02	0.0500	1.000	0	102	80	120	1.007	0.843	15	
Sulfate		5.16	0.250	5.000	0.08127	102	80	120	5.204	0.888	15	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21031193**

RcptNo: **1**

Logged by: **Tammy Thibodeaux** **3/26/2021 7:00:00 AM**

Tammy Thibodeaux

Completed By: **Tammy Thibodeaux** **3/26/2021 8:32:21 AM**

Tammy Thibodeaux

Reviewed By: **Caitlin Duplantis** **4/7/2021 12:47:49 PM**

Caitlin Duplantis

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Drop Off Box

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.0	Good	Not Present			
2	4.7	Good	Not Present			

☒ **2417 W. Pinhook Rd, Lafayette, LA 70508**
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Fax 337-233-6540

☐ **3445 S Sheridan, Tulsa, OK 74145**
918-828-9977/800324-5757
Fax 918-828-7756

Thank-you for using Element Materials
Technology



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April 07, 2021

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: Entergy: CCR Assessment Monitoring

Order No.: 21031192

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 3/26/2021 for the analyses presented in the following report.

In accordance with your instructions Element Lafayette conducted the analysis shown on the following pages on samples submitted by your company. The results related only to the items tested. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet all requirements of TNI. All relevant sampling information is on the attached Chain-of-Custody form.

Where applicable, all soil data, except for 29-B, are on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
2417 W. Pinhook Road
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Website: www.element.com

Case Narrative

WO#: 21031192
Date: 4/7/2021

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).



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Case Narrative

WO#: 21031192
Date: 4/7/2021

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

The Lithium (6020B) analyses were subcontracted to Pace Analytical. Their report is attached in its entirety.



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Analytical Report

(consolidated)

WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 12:05:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-001 **Matrix:** AQUEOUS
Client Sample ID CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL			SW7470A		Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 6:53:17 AM
INORGANIC ANIONS IN WATER BY IC			E 300.0		Analyst: SGP	
Fluoride	0.274	0.0500		mg/L	1	4/5/2021 6:39:47 PM
METALS IN WATER BY ICP, TOTALS			SW6010B		Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:34:01 PM
Barium	0.186	0.0100		mg/L	1	3/30/2021 7:34:01 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:34:01 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:34:01 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:34:01 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:34:01 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:34:01 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:34:01 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:34:01 PM
METALS IN WATER BY ICP-MS, TOTAL			SW6020A		Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:06:25 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:06:25 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 12:55:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-002 **Matrix:** AQUEOUS
Client Sample ID CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL			SW7470A		Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 6:55:34 AM
INORGANIC ANIONS IN WATER BY IC			E 300.0		Analyst: SGP	
Fluoride	0.329	0.0500		mg/L	1	4/5/2021 6:53:33 PM
METALS IN WATER BY ICP, TOTALS			SW6010B		Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:36:20 PM
Barium	0.158	0.0100		mg/L	1	3/30/2021 7:36:20 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:36:20 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:36:20 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:36:20 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:36:20 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:36:20 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:36:20 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:36:20 PM
METALS IN WATER BY ICP-MS, TOTAL			SW6020A		Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:09:13 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:09:13 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 1:40:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-003 **Matrix:** AQUEOUS
Client Sample ID CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 6:57:50 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.363	0.0500		mg/L	1	4/5/2021 7:07:21 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:38:39 PM
Barium	0.270	0.0100		mg/L	1	3/30/2021 7:38:39 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:38:39 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:38:39 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:38:39 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:38:39 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:38:39 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:38:39 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:38:39 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:12:01 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:12:01 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



Element Materials Technology Lafayette
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Website: www.element.com

Analytical Report

(consolidated)

WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 2:30:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:00:06 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.227	0.0500		mg/L	1	4/5/2021 7:21:08 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:40:58 PM
Barium	0.111	0.0100		mg/L	1	3/30/2021 7:40:58 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:40:58 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:40:58 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:40:58 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:40:58 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:40:58 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:40:58 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:40:58 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:14:49 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:14:49 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021 3:20:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:02:23 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.241	0.0500		mg/L	1	4/5/2021 8:02:32 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:47:52 PM
Barium	0.217	0.0100		mg/L	1	3/30/2021 7:47:52 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:47:52 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:47:52 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:47:52 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:47:52 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:47:52 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:47:52 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:47:52 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:17:36 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:17:36 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 9:30:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-006 **Matrix:** AQUEOUS
Client Sample ID CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:04:39 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.251	0.0500		mg/L	1	4/5/2021 8:16:20 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:50:09 PM
Barium	0.201	0.0100		mg/L	1	3/30/2021 7:50:09 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:50:09 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:50:09 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:50:09 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:50:09 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:50:09 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:50:09 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:50:09 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:20:24 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:20:24 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 10:10:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:06:55 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.262	0.0500		mg/L	1	4/5/2021 8:30:07 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:52:28 PM
Barium	0.225	0.0100		mg/L	1	3/30/2021 7:52:28 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:52:28 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:52:28 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:52:28 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:52:28 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:52:28 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:52:28 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:52:28 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:23:12 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:23:12 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 11:10:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-008 **Matrix:** AQUEOUS
Client Sample ID CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:22:25 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.165	0.0500		mg/L	1	4/5/2021 8:43:55 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 7:59:22 PM
Barium	0.113	0.0100		mg/L	1	3/30/2021 7:59:22 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 7:59:22 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 7:59:22 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 7:59:22 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 7:59:22 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 7:59:22 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 7:59:22 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 7:59:22 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:42:51 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:42:51 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 12:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:24:41 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.539	0.0500		mg/L	1	4/5/2021 8:57:43 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:01:41 PM
Barium	0.234	0.0100		mg/L	1	3/30/2021 8:01:41 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:01:41 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:01:41 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:01:41 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:01:41 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:01:41 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:01:41 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:01:41 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:45:39 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:45:39 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 12:45:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-010 **Matrix:** AQUEOUS
Client Sample ID CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:27:02 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.581	0.0500		mg/L	1	4/5/2021 9:11:31 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:03:59 PM
Barium	0.236	0.0100		mg/L	1	3/30/2021 8:03:59 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:03:59 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:03:59 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:03:59 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:03:59 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:03:59 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:03:59 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:03:59 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:48:27 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:48:27 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 1:30:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-011 **Matrix:** AQUEOUS
Client Sample ID CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:29:19 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.662	0.0500		mg/L	1	4/5/2021 9:25:19 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:06:17 PM
Barium	0.153	0.0100		mg/L	1	3/30/2021 8:06:17 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:06:17 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:06:17 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:06:17 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:06:17 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:06:17 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:06:17 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:06:17 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:51:15 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:51:15 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 2:35:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-012 **Matrix:** AQUEOUS
Client Sample ID CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL		SW7470A			Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:31:36 AM
INORGANIC ANIONS IN WATER BY IC		E 300.0			Analyst: SGP	
Fluoride	0.131	0.0500		mg/L	1	4/5/2021 5:03:13 PM
METALS IN WATER BY ICP, TOTALS		SW6010B			Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:08:35 PM
Barium	0.187	0.0100		mg/L	1	3/30/2021 8:08:35 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:08:35 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:08:35 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:08:35 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:08:35 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:08:35 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:08:35 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:08:35 PM
METALS IN WATER BY ICP-MS, TOTAL		SW6020A			Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:54:03 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:54:03 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 3:20:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-013 **Matrix:** AQUEOUS
Client Sample ID CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:33:53 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.252	0.0500		mg/L	1	4/5/2021 5:17:01 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:15:31 PM
Barium	0.0911	0.0100		mg/L	1	3/30/2021 8:15:31 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:15:31 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:15:31 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:15:31 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:15:31 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:15:31 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:15:31 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:15:31 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 12:56:50 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 12:56:50 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Website: www.element.com

Analytical Report

(consolidated)

WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 4:20:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-014 **Matrix:** AQUEOUS
Client Sample ID CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:36:09 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.169	0.0500		mg/L	1	4/5/2021 5:30:48 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:24:44 PM
Barium	0.0724	0.0100		mg/L	1	3/30/2021 8:24:44 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:24:44 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:24:44 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:24:44 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:24:44 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:24:44 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:24:44 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:24:44 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 1:16:29 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 1:16:29 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/24/2021
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-015 **Matrix:** AQUEOUS
Client Sample ID Dup

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL			SW7470A		Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:43:37 AM
INORGANIC ANIONS IN WATER BY IC			E 300.0		Analyst: SGP	
Fluoride	0.244	0.0500		mg/L	1	4/5/2021 9:39:07 PM
METALS IN WATER BY ICP, TOTALS			SW6010B		Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:31:42 PM
Barium	0.216	0.0100		mg/L	1	3/30/2021 8:31:42 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:31:42 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:31:42 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:31:42 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:31:42 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:31:42 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:31:42 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:31:42 PM
METALS IN WATER BY ICP-MS, TOTAL			SW6020A		Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 1:27:41 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 1:27:41 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21031192

Date Reported: 4/7/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 3/25/2021 4:30:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21031192-016 **Matrix:** AQUEOUS
Client Sample ID FB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL		SW7470A			Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	3/30/2021 7:45:53 AM
INORGANIC ANIONS IN WATER BY IC		E 300.0			Analyst: SGP	
Fluoride	< 0.0500	0.0500		mg/L	1	4/5/2021 5:58:24 PM
METALS IN WATER BY ICP, TOTALS		SW6010B			Analyst: STS	
Arsenic	< 0.0100	0.0100		mg/L	1	3/30/2021 8:34:01 PM
Barium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:34:01 PM
Beryllium	< 0.00100	0.00100		mg/L	1	3/30/2021 8:34:01 PM
Cadmium	< 0.00500	0.00500		mg/L	1	3/30/2021 8:34:01 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/30/2021 8:34:01 PM
Cobalt	< 0.0100	0.0100		mg/L	1	3/30/2021 8:34:01 PM
Lead	< 0.0100	0.0100		mg/L	1	3/30/2021 8:34:01 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	3/30/2021 8:34:01 PM
Selenium	< 0.0200	0.0200		mg/L	1	3/30/2021 8:34:01 PM
METALS IN WATER BY ICP-MS, TOTAL		SW6020A			Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	3/30/2021 1:30:29 PM
Thallium	< 0.250	0.250		µg/L	1	3/30/2021 1:30:29 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: 39117

Sample ID	MB-39117	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370	
Client ID:	PBW	Batch ID:	39117	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397664	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		< 0.0100	0.0100									
Barium		< 0.0100	0.0100									
Beryllium		< 0.00100	0.00100									
Cadmium		< 0.00500	0.00500									
Chromium		< 0.0100	0.0100									
Cobalt		< 0.0100	0.0100									
Lead		< 0.0100	0.0100									
Molybdenum		< 0.0100	0.0100									
Selenium		< 0.0200	0.0200									

Sample ID	LCS-39117	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370	
Client ID:	LCSW	Batch ID:	39117	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397665	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.495	0.0100	0.5000	0	98.9	80	120				
Barium		0.495	0.0100	0.5000	0	99.0	80	120				
Beryllium		0.500	0.00100	0.5000	0	100	80	120				
Cadmium		0.491	0.00500	0.5000	0	98.2	80	120				
Chromium		0.488	0.0100	0.5000	0	97.6	80	120				
Cobalt		0.493	0.0100	0.5000	0	98.7	80	120				
Lead		0.481	0.0100	0.5000	0	96.2	80	120				
Molybdenum		0.485	0.0100	0.5000	0	97.0	80	120				
Selenium		0.482	0.0200	0.5000	0	96.3	80	120				

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 39117

Sample ID	LCSD-39117	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370
Client ID:	LCSS02	Batch ID:	39117	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397666
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.512	0.0100	0.5000	0	102	80	120	0.4946	3.53	20	
Barium	0.511	0.0100	0.5000	0	102	80	120	0.4951	3.20	20	
Beryllium	0.521	0.00100	0.5000	0	104	80	120	0.4998	4.16	20	
Cadmium	0.506	0.00500	0.5000	0	101	80	120	0.4912	3.03	20	
Chromium	0.504	0.0100	0.5000	0	101	80	120	0.4880	3.25	20	
Cobalt	0.510	0.0100	0.5000	0	102	80	120	0.4935	3.34	20	
Lead	0.500	0.0100	0.5000	0	99.9	80	120	0.4812	3.78	20	
Molybdenum	0.503	0.0100	0.5000	0	101	80	120	0.4849	3.65	20	
Selenium	0.490	0.0200	0.5000	0	98.0	80	120	0.4817	1.74	20	

Sample ID	21031192-007BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370
Client ID:	CCR-7	Batch ID:	39117	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397685
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.507	0.0100	0.5000	0	101	75	125				
Barium	0.727	0.0100	0.5000	0.2247	100	75	125				
Beryllium	0.510	0.00100	0.5000	0	102	75	125				
Cadmium	0.499	0.00500	0.5000	0	99.8	75	125				
Chromium	0.498	0.0100	0.5000	0	99.5	75	125				
Cobalt	0.501	0.0100	0.5000	0	100	75	125				
Lead	0.489	0.0100	0.5000	0	97.8	75	125				
Molybdenum	0.491	0.0100	0.5000	0	98.3	75	125				
Selenium	0.482	0.0200	0.5000	0	96.4	75	125				

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: 39117

Sample ID	21031192-007BMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370
Client ID:	CCR-7	Batch ID:	39117	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397686
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.515	0.0100	0.5000	0	103	75	125	0.5068	1.66	20	
Barium	0.730	0.0100	0.5000	0.2247	101	75	125	0.7269	0.387	20	
Beryllium	0.515	0.00100	0.5000	0	103	75	125	0.5099	0.923	20	
Cadmium	0.506	0.00500	0.5000	0	101	75	125	0.4989	1.44	20	
Chromium	0.504	0.0100	0.5000	0	101	75	125	0.4977	1.22	20	
Cobalt	0.504	0.0100	0.5000	0	101	75	125	0.5006	0.631	20	
Lead	0.491	0.0100	0.5000	0	98.2	75	125	0.4892	0.384	20	
Molybdenum	0.497	0.0100	0.5000	0	99.4	75	125	0.4913	1.14	20	
Selenium	0.493	0.0200	0.5000	0	98.7	75	125	0.4822	2.31	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified



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QC SUMMARY REPORT

WO#: 21031192
07-Apr-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 39118

Sample ID	MB-39118	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370	
Client ID:	PBW	Batch ID:	39118	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397695	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		< 0.0100	0.0100									
Barium		< 0.0100	0.0100									
Beryllium		< 0.00100	0.00100									
Cadmium		< 0.00500	0.00500									
Chromium		< 0.0100	0.0100									
Cobalt		< 0.0100	0.0100									
Lead		< 0.0100	0.0100									
Molybdenum		< 0.0100	0.0100									
Selenium		< 0.0200	0.0200									

Sample ID	LCS-39118	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/28/2021	RunNo: 98370					
Client ID:	LCSW	Batch ID: 39118	TestNo: SW6010B		Analysis Date: 3/30/2021	SeqNo: 2397696					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.510	0.0100	0.5000	0	102	80	120				
Barium	0.513	0.0100	0.5000	0	103	80	120				
Beryllium	0.519	0.00100	0.5000	0	104	80	120				
Cadmium	0.507	0.00500	0.5000	0	101	80	120				
Chromium	0.507	0.0100	0.5000	0	101	80	120				
Cobalt	0.511	0.0100	0.5000	0	102	80	120				
Lead	0.503	0.0100	0.5000	0	101	80	120				
Molybdenum	0.503	0.0100	0.5000	0	101	80	120				
Selenium	0.504	0.0200	0.5000	0	101	80	120				

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 39118

Sample ID	LCSD-39118	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370
Client ID:	LCSS02	Batch ID:	39118	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397697
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.505	0.0100	0.5000	0	101	80	120	0.5104	1.13	20	
Barium	0.509	0.0100	0.5000	0	102	80	120	0.5127	0.732	20	
Beryllium	0.513	0.00100	0.5000	0	103	80	120	0.5188	1.16	20	
Cadmium	0.504	0.00500	0.5000	0	101	80	120	0.5069	0.655	20	
Chromium	0.503	0.0100	0.5000	0	101	80	120	0.5072	0.812	20	
Cobalt	0.510	0.0100	0.5000	0	102	80	120	0.5114	0.351	20	
Lead	0.496	0.0100	0.5000	0	99.3	80	120	0.5032	1.37	20	
Molybdenum	0.498	0.0100	0.5000	0	99.6	80	120	0.5028	0.913	20	
Selenium	0.498	0.0200	0.5000	0	99.5	80	120	0.5037	1.20	20	

Sample ID	21031192-014BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370
Client ID:	CCR-14	Batch ID:	39118	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397699
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.515	0.0100	0.5000	0	103	75	125				
Barium	0.582	0.0100	0.5000	0.07242	102	75	125				
Beryllium	0.516	0.00100	0.5000	0	103	75	125				
Cadmium	0.504	0.00500	0.5000	0	101	75	125				
Chromium	0.507	0.0100	0.5000	0	101	75	125				
Cobalt	0.507	0.0100	0.5000	0	101	75	125				
Lead	0.497	0.0100	0.5000	0	99.4	75	125				
Molybdenum	0.497	0.0100	0.5000	0	99.5	75	125				
Selenium	0.480	0.0200	0.5000	0	95.9	75	125				

Qualifiers: H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: 39118

Sample ID	21031192-014BMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	3/28/2021	RunNo:	98370
Client ID:	CCR-14	Batch ID:	39118	TestNo:	SW6010B			Analysis Date:	3/30/2021	SeqNo:	2397700
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.521	0.0100	0.5000	0	104	75	125	0.5150	1.12	20	
Barium	0.591	0.0100	0.5000	0.07242	104	75	125	0.5822	1.50	20	
Beryllium	0.524	0.00100	0.5000	0	105	75	125	0.5162	1.52	20	
Cadmium	0.509	0.00500	0.5000	0	102	75	125	0.5040	0.991	20	
Chromium	0.513	0.0100	0.5000	0	103	75	125	0.5069	1.12	20	
Cobalt	0.514	0.0100	0.5000	0	103	75	125	0.5073	1.31	20	
Lead	0.501	0.0100	0.5000	0	100	75	125	0.4971	0.793	20	
Molybdenum	0.502	0.0100	0.5000	0	100	75	125	0.4974	0.893	20	
Selenium	0.492	0.0200	0.5000	0	98.4	75	125	0.4797	2.48	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: 39119

Sample ID	MB-39119	SampType:	MBLK	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362			
Client ID:	PBW	Batch ID:	39119	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397116			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		< 0.250		0.250										
Thallium		< 0.250		0.250										

Sample ID	LCS-39119	SampType:	LCS	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362			
Client ID:	LCSW	Batch ID:	39119	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397117			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		500		5.00	500.0	0		100	80	120				
Thallium		502		5.00	500.0	0		100	80	120				

Sample ID	LCSD-39119	SampType:	LCSD	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362			
Client ID:	LCSS02	Batch ID:	39119	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397118			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		511		5.00	500.0	0		102	80	120	500.2	2.21	20	
Thallium		519		5.00	500.0	0		104	80	120	501.8	3.44	20	

Sample ID	21031192-007BMS	SampType: MS	TestCode: 6020A_W	Units: µg/L	Prep Date: 3/28/2021	RunNo: 98362					
Client ID: CCR-7	Batch ID: 39119	TestNo: SW6020A	Analysis Date: 3/30/2021	SeqNo: 2397140							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	505	5.00	500.0	0	101	75	125				

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: 39119

Sample ID	21031192-007BMS	SampType: MS	TestCode: 6020A_W	Units: µg/L	Prep Date: 3/28/2021	RunNo: 98362					
Client ID: CCR-7	Batch ID: 39119	TestNo: SW6020A	Analysis Date: 3/30/2021	SeqNo: 2397140							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	491	5.00	500.0	0	98.2	75	125				

Sample ID	21031192-007BMSD	SampType: MSD	TestCode: 6020A_W	Units: µg/L	Prep Date: 3/28/2021	RunNo: 98362					
Client ID: CCR-7	Batch ID: 39119	TestNo: SW6020A	Analysis Date: 3/30/2021	SeqNo: 2397141							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	510	5.00	500.0	0	102	75	125	505.4	0.930	20	
Thallium	500	5.00	500.0	0	100	75	125	491.0	1.89	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: 39120

Sample ID	MB-39120	SampType:	MBLK	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362			
Client ID:	PBW	Batch ID:	39120	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397148			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		< 0.250		0.250										
Thallium		< 0.250		0.250										

Sample ID	LCS-39120	SampType:	LCS	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362			
Client ID:	LCSW	Batch ID:	39120	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397149			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		507		5.00	500.0	0		101	80	120				
Thallium		502		5.00	500.0	0		100	80	120				

Sample ID	LCSD-39120	SampType:	LCSD	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362			
Client ID:	LCSS02	Batch ID:	39120	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397153			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		516		5.00	500.0	0		103	80	120	507.3	1.70	20	
Thallium		507		5.00	500.0	0		101	80	120	502.4	0.908	20	

Sample ID	21031192-014BMS	SampType: MS	TestCode: 6020A_W	Units: µg/L	Prep Date: 3/28/2021	RunNo: 98362					
Client ID: CCR-14	Batch ID: 39120	TestNo: SW6020A	Analysis Date: 3/30/2021	SeqNo: 2397156							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	509	5.00	500.0	0.01879	102	75	125				

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192
07-Apr-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 39120

Sample ID	21031192-014BMS	SampType:	MS	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362
Client ID:	CCR-14	Batch ID:	39120	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397156
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Thallium		506		5.00	500.0	0.03394	101	75	125		

Sample ID	21031192-014BMSD	SampType:	MSD	TestCode:	6020A_W	Units:	µg/L	Prep Date:	3/28/2021	RunNo:	98362
Client ID:	CCR-14	Batch ID:	39120	TestNo:	SW6020A			Analysis Date:	3/30/2021	SeqNo:	2397157
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Antimony		500		5.00	500.0	0.01879	99.9	75	125	509.1	1.88 20
Thallium		500		5.00	500.0	0.03394	100	75	125	506.4	1.28 20

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192
07-Apr-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 39123

Sample ID	MB-39123	SampType:	MBLK	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	3/29/2021	RunNo:	98333		
Client ID:	PBW	Batch ID:	39123	TestNo:	SW7470A			Analysis Date:	3/30/2021	SeqNo:	2396502		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.000200 0.000200

Sample ID	LCS-39123	SampType:	LCS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	3/29/2021	RunNo:	98333		
Client ID:	LCSW	Batch ID:	39123	TestNo:	SW7470A			Analysis Date:	3/30/2021	SeqNo:	2396503		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.0103 0.000200 0.01000 0 103 80 120

Sample ID	LCSD-39123	SampType:	LCSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	3/29/2021	RunNo:	98333		
Client ID:	LCSS02	Batch ID:	39123	TestNo:	SW7470A			Analysis Date:	3/30/2021	SeqNo:	2396504		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.0103 0.000200 0.01000 0 103 80 120 0.01035 0.744 20

Sample ID	21031192-007BMS	SampType: MS	TestCode: HG_W_7470	Units: mg/L	Prep Date: 3/29/2021	RunNo: 98333					
Client ID: CCR-7	Batch ID: 39123	TestNo: SW7470A	Analysis Date: 3/30/2021	SeqNo: 2396515							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.0101 0.000200 0.01000 0 101 75 125

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: 39123

Sample ID	21031192-007BMSD	SampType: MSD	TestCode: HG_W_7470	Units: mg/L	Prep Date: 3/29/2021	RunNo: 98333					
Client ID: CCR-7	Batch ID: 39123	TestNo: SW7470A	Analysis Date: 3/30/2021	SeqNo: 2396516							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0101	0.000200	0.01000	0	101	75	125	0.01013	0.0408	20	

Qualifiers:

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S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as s



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QC SUMMARY REPORT

WO#: 21031192
07-Apr-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: R98490

Sample ID	MBLK	SampType:	MBLK	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	98490	
Client ID:	PBW	Batch ID:	R98490	TestNo:	E 300.0			Analysis Date:	4/5/2021	SeqNo:	2400084	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		< 0.0500	0.0500									

Sample ID	LCS	SampType:	LCS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	98490	
Client ID:	LCSW	Batch ID:	R98490	TestNo:	E 300.0			Analysis Date:	4/5/2021	SeqNo:	2400085	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		2.07	0.0500	2.000	0	104	90	110				

Sample ID	LCSD	SampType:	LCSD	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	98490	
Client ID:	LCSS02	Batch ID:	R98490	TestNo:	E 300.0			Analysis Date:	4/5/2021	SeqNo:	2400086	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		2.01	0.0500	2.000	0	101	90	110	2.074	2.91	15	

Sample ID	21031192-007AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 98490					
Client ID:	CCR-7	Batch ID: R98490	TestNo: E 300.0	Analysis Date: 4/5/2021	SeqNo: 2400094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	10.1	0.500	10.00	0.1482	99.8	80	120				

Qualifiers:

H Holding times for preparation or analysis exceeded
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RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified



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QC SUMMARY REPORT

WO#: 21031192

07-Apr-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

BatchID: R98490

Sample ID	21031192-007AMSD	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 98490					
Client ID:	CCR-7	Batch ID: R98490	TestNo: E 300.0	Analysis Date: 4/5/2021	SeqNo: 2400095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	10.3	0.500	10.00	0.1482	101	80	120	10.13	1.21	15	

Sample ID	21031192-016AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 98490					
Client ID: FB	Batch ID: R98490	TestNo: E 300.0	Analysis Date: 4/5/2021	SeqNo: 2400107							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.01	0.0500	1.000	0	101	80	120				

Sample ID	21031192-016AMSD	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 98490					
Client ID: FB	Batch ID: R98490	TestNo: E 300.0	Analysis Date: 4/5/2021	SeqNo: 2400108							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.02	0.0500	1.000	0	102	80	120	1.007	0.843	15	

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

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RL Reporting Limit
U Analyte not detected

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W Sample container temperature is out of limit as s



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Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21031192**

RcptNo: **1**

Logged by: **Tammy Thibodeaux** **3/26/2021 7:00:00 AM**

Tammy Thibodeaux

Completed By: **Tammy Thibodeaux** **3/26/2021 8:12:14 AM**

Tammy Thibodeaux

Reviewed By: **Caitlin Duplantis** **4/7/2021 12:47:32 PM**

Caitlin Duplantis

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Drop Off Box

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.0	Good	Not Present			
2	4.7	Good	Not Present			



LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 04/05/2021

Report # 221032919



Project 21031192

<i>Deliver To</i>	<i>Additional Recipients</i>
Annie Reedy Element Materials Technology 2417 W Pinhook Rd Lafayette, LA 70508 800-737-2378	Kelli Foreman, Element Materials Technology Caitlin Duplantis, Element Materials Technology Cristina Thibeaux, Element Materials Technology Rhonda David, Element Materials Technology Buffy Bryant, Element Materials Technology



Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % difference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 221032919

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: Element Materials Technology **Report:** 221032919

Pace Analytical Gulf Coast received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

LAB ID	Client ID	Matrix	Collect Date	Receive Date
22103291901	CCR-1	Water	03/24/2021 12:05	03/29/2021 09:35
22103291902	CCR-2	Water	03/24/2021 12:55	03/29/2021 09:35
22103291903	CCR-3	Water	03/24/2021 13:40	03/29/2021 09:35
22103291904	CCR-4	Water	03/24/2021 14:30	03/29/2021 09:35
22103291905	CCR-5	Water	03/24/2021 15:20	03/29/2021 09:35
22103291906	CCR-6	Water	03/25/2021 09:30	03/29/2021 09:35
22103291907	CCR-7	Water	03/25/2021 10:10	03/29/2021 09:35
22103291908	CCR-8	Water	03/25/2021 11:10	03/29/2021 09:35
22103291909	CCR-9	Water	03/25/2021 12:00	03/29/2021 09:35
22103291910	CCR-10	Water	03/25/2021 12:45	03/29/2021 09:35
22103291911	CCR-11	Water	03/25/2021 13:30	03/29/2021 09:35
22103291912	CCR-12	Water	03/25/2021 14:35	03/29/2021 09:35
22103291913	CCR-13	Water	03/25/2021 15:20	03/29/2021 09:35
22103291914	CCR-14	Water	03/25/2021 16:20	03/29/2021 09:35
22103291915	Dup	Water	03/24/2021 00:01	03/29/2021 09:35
22103291916	FB	Water	03/25/2021 16:30	03/29/2021 09:35



Report#: 221032919
Project ID: 21031192

Report Date: 04/05/2021

Sample Results

CCR-1

Collect Date 03/24/2021 12:05

LAB ID 22103291901

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 16:30	LWZ	707603

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	23.5	5.00	ug/L

CCR-2

Collect Date 03/24/2021 12:55

LAB ID 22103291902

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 16:35	LWZ	707603

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	23.1	5.00	ug/L

CCR-3

Collect Date 03/24/2021 13:40

LAB ID 22103291903

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 16:39	LWZ	707603

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	26.5	5.00	ug/L

CCR-4

Collect Date 03/24/2021 14:30

LAB ID 22103291904

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 16:44	LWZ	707603

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	18.0	5.00	ug/L

CCR-5

Collect Date 03/24/2021 15:20

LAB ID 22103291905

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 16:48	LWZ	707603

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	21.1	5.00	ug/L

Page 40 of 49



Report#: 221032919
Project ID: 21031192

Report Date: 04/05/2021

Sample Results

CCR-6

Collect Date 03/25/2021 09:30

LAB ID 22103291906

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 16:53	LWZ	707603

CAS# 7439-93-2	Parameter Lithium	Result 12.9	LOQ 5.00	Units ug/L
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CCR-7

Collect Date 03/25/2021 10:10

LAB ID 22103291907

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 16:58	LWZ	707603

CAS# 7439-93-2	Parameter Lithium	Result 11.5	LOQ 5.00	Units ug/L
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CCR-8

Collect Date 03/25/2021 11:10

LAB ID 22103291908

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:02	LWZ	707603

CAS# 7439-93-2	Parameter Lithium	Result 40.1	LOQ 5.00	Units ug/L
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CCR-9

Collect Date 03/25/2021 12:00

LAB ID 22103291909

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:07	LWZ	707603

CAS# 7439-93-2	Parameter Lithium	Result 12.7	LOQ 5.00	Units ug/L
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CCR-10

Collect Date 03/25/2021 12:45

LAB ID 22103291910

Receive Date 03/29/2021 09:35

Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:11	LWZ	707603

CAS# 7439-93-2	Parameter Lithium	Result 10.6	LOQ 5.00	Units ug/L
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Report#: 221032919
Project ID: 21031192

Report Date: 04/05/2021

Sample Results

CCR-11

Collect Date 03/25/2021 13:30 LAB ID 22103291911
Receive Date 03/29/2021 09:35 Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:25	LWZ	707603

CAS# 7439-93-2 Parameter Lithium Result 7.88 LOQ 5.00 Units ug/L

CCR-12

Collect Date 03/25/2021 14:35 LAB ID 22103291912
Receive Date 03/29/2021 09:35 Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:29	LWZ	707603

CAS# 7439-93-2 Parameter Lithium Result 25.6 LOQ 5.00 Units ug/L

CCR-13

Collect Date 03/25/2021 15:20 LAB ID 22103291913
Receive Date 03/29/2021 09:35 Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:34	LWZ	707603

CAS# 7439-93-2 Parameter Lithium Result 37.1 LOQ 5.00 Units ug/L

CCR-14

Collect Date 03/25/2021 16:20 LAB ID 22103291914
Receive Date 03/29/2021 09:35 Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:38	LWZ	707603

CAS# 7439-93-2 Parameter Lithium Result 15.9 LOQ 5.00 Units ug/L

Dup

Collect Date 03/24/2021 00:01 LAB ID 22103291915
Receive Date 03/29/2021 09:35 Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:43	LWZ	707603

CAS# 7439-93-2 Parameter Lithium Result 21.1 LOQ 5.00 Units ug/L

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Report#: 221032919
Project ID: 21031192

Report Date: 04/05/2021

Sample Results

FB	Collect Date	03/25/2021 16:30	LAB ID	22103291916
	Receive Date	03/29/2021 09:35	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
03/30/2021 07:15	707116	EPA 3010A	1	04/02/2021 17:48	LWZ	707603

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	ND	5.00	ug/L

Inorganics QC Summary

Analytical Batch 707603	Client ID LAB ID	MB707116 2162385	LCS707116 2162387					LCSD707116 2162386				
Prep Batch 707116	Sample Type Prep Date	MB 03/30/21 07:15	LCS 03/30/21 07:15					LCSD 03/30/21 07:15				
Prep Method EPA 3010A	Analysis Date Matrix	04/02/21 16:17 Water	04/02/21 16:26 Water					04/02/21 16:21 Water				
EPA 6020B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Lithium	7439-93-2	ND	5.00	250	246	98	80 - 120	250	232	93	6	20



CHAIN OF CUSTODY RECORD

Omega COCID 10234

PAGE: 1

OF: 2

ADDRESS

Element Materials Technology
Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483
FAX: (337) 233-6540
Website: www.element.com

SUB CONTRACTOR: GCAL	COMPANY: Pace Analytical (FKA GCAL)	SPECIAL INSTRUCTIONS / COMMENTS: ELA 036068 PO Testing for Li
ADDRESS: 7979 Innovation Park Drive		
CITY, STATE, ZIP: Baton Rouge, LA 70820		
PHONE: (225) 769-4900 FAX: (225) 767-5717 EMAIL:		
ACCOUNT #:		

Client ID: 4462 - Element Materials Technology

SDG: 221032919

PM: JLM



ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description.
1	21031192-001C 6020_W_SUB (SW6020A)	CCR-1	250HDPEHNO3	Aqueous	3/24/2021 12:05:00 PM	1	1
2	21031192-002C 6020_W_SUB (SW6020A)	CCR-2	250HDPEHNO3	Aqueous	3/24/2021 12:55:00 PM	1	2
3	21031192-003C 6020_W_SUB (SW6020A)	CCR-3	250HDPEHNO3	Aqueous	3/24/2021 1:40:00 PM	1	3
4	21031192-004C 6020_W_SUB (SW6020A)	CCR-4	250HDPEHNO3	Aqueous	3/24/2021 2:30:00 PM	1	4
5	21031192-005C 6020_W_SUB (SW6020A)	CCR-5	250HDPEHNO3	Aqueous	3/24/2021 3:20:00 PM	1	5
6	21031192-006C 6020_W_SUB (SW6020A)	CCR-6	250HDPEHNO3	Aqueous	3/25/2021 9:30:00 AM	1	6
7	21031192-007C 6020_W_SUB (SW6020A)	CCR-7	250HDPEHNO3	Aqueous	3/25/2021 10:10:00 AM	3	7
8	21031192-008C 6020_W_SUB (SW6020A)	CCR-8	250HDPEHNO3	Aqueous	3/25/2021 11:10:00 AM	1	8
9	21031192-009C 6020_W_SUB (SW6020A)	CCR-9	250HDPEHNO3	Aqueous	3/25/2021 12:00:00 PM	1	9

Relinquished By: <i>[Signature]</i>	Date: 3/29/2021	Time: 7:02 AM	Received By: <i>[Signature]</i>	Date: 3/29/21	Time: 8:02
Relinquished By: <i>[Signature]</i>	Date: 3/29/21	Time: 0935	Received By: <i>[Signature]</i>	Date: 3/29/21	Time: 0935
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TAT: Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐			REPORT TRANSMITTAL DESIRED: ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE		
Note: RUSH requests will incur surcharges!			FOR LAB USE ONLY Temp of samples <u>1.5</u> °C Attempt to Cool? <u>60</u> °C Comments: <u>E84</u> <u>60</u> °C		



CHAIN OF CUSTODY RECORD

Omega COCID 10234

PAGE: 2

OF: 2

ADDRESS

Element Materials Technology
Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483
FAX: (337) 233-6540
Website: www.element.com

SUB CONTRACTOR: GCAL		COMPANY: Pace Analytical (FKA GCAL)		SPECIAL INSTRUCTIONS / COMMENTS:			
ADDRESS: 7979 Innovation Park Drive		ELA 036068 PO Testing for Li					
CITY, STATE, ZIP: Baton Rouge, LA 70820							
PHONE: (225) 769-4900 FAX: (225) 767-5717 EMAIL:							
ACCOUNT #:							
ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description.
10	21031192-010C 6020_W_SUB (SW6020A)	CCR-10	250HDPEHNO3	Aqueous	3/25/2021 12:45:00 PM	1	10
11	21031192-011C 6020_W_SUB (SW6020A)	CCR-11	250HDPEHNO3	Aqueous	3/25/2021 1:30:00 PM	1	11
12	21031192-012C 6020_W_SUB (SW6020A)	CCR-12	250HDPEHNO3	Aqueous	3/25/2021 2:35:00 PM	1	12
13	21031192-013C 6020_W_SUB (SW6020A)	CCR-13	250HDPEHNO3	Aqueous	3/25/2021 3:20:00 PM	1	13
14	21031192-014C 6020_W_SUB (SW6020A)	CCR-14	250HDPEHNO3	Aqueous	3/25/2021 4:20:00 PM	1	14
15	21031192-015C 6020_W_SUB (SW6020A)	Dup	250HDPEHNO3	Aqueous	3/24/2021	1	15
16	21031192-016C 6020_W_SUB (SW6020A)	FB	250HDPEHNO3	Aqueous	3/25/2021 4:30:00 PM	1	16

Client ID: 4462 - Element Materials Technology

SDG: 221032919

PM: JLM



Relinquished By: <i>[Signature]</i>	Date: 3/29/2021	Time: 7:02 AM	Received By: <i>[Signature]</i>	Date: 3/29/21	Time: 07:02
Relinquished By: <i>[Signature]</i>	Date: 3/29/21	Time: 09:35	Received By: <i>[Signature]</i>	Date: 3/29/21	Time: 09:35
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TAT: Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐					
Note: RUSH requests will incur surcharges!					
REPORT TRANSMITTAL DESIRED: ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE					
FOR LAB USE ONLY Temp of samples: 1.5 °C Attempt to Cool? ☐ Comments: E34 WCPM					



SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 221032919			CHECKLIST		YES	NO
Client PM JLM 4462 - Element Materials Technology	Transport Method CUST		Samples received with proper thermal preservation?	☒	☐	
			Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☒	☐	
Profile Number 271810	Received By Jenkins, Mark A.		COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☒	☐	
			All containers received in good condition and within hold time?	☒	☐	
Line Item(s) 1 - Water	Receive Date(s) 03/29/21		All sample labels and containers received match the chain of custody?	☒	☐	
			Preservative added to any containers?	☐	☒	
			If received, was headspace for VOC water containers < 6mm?	☒	☐	
			Samples collected in containers provided by Pace Gulf Coast?	☒	☐	
COOLERS			DISCREPANCIES	LAB PRESERVATIONS		
Airbill	Thermometer ID: E34	Temp °C	None	None		
		1.5				
NOTES						



- ☐ 2203 S. Madison St., Muncie, IN 47302
765-747-9000/800-874-3563 Fax 765-747-0228
- ☐ 629 Washington St., Suite 300, Columbus, IN 47201
812-375-0531 Fax 812-375-0531
- ☐ 5738 Industrial Rd., Fort Wayne, IN 46825
219-471-7000 Fax 219-471-7777

- ☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
337-235-0483/800-737-2378
Fax 337-233-6540
- ☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-9977/800324-5757
Fax 918-828-7756

Page 1 of 2

Chain of Custody Record

Laboratory Number 21031192

Client Name: Pivotal Engineering LLC			Project: CCR Assessment Monitoring			Preserv. HCl HNO ₃ H ₂ SO ₄ NaOH Na ₂ S ₂ O ₃	Number / Type of Container	Matrix Code	Test Requested										Comments / Remarks		
Contact Name: Terry Elnaggar			Quote #: 5346						300: Fluoride	*6010/**6020 metals	***6020 Sub	7470 Mercury									
Phone/Fax: (504) 799-3653			Sampler's Signature: <u>[Signature]</u>																		
Collection Date Time		Grab	Comp	Sample Identification / Description																	
3/24/21 12:05		X		C	C	R - 1	None/ HNO ₃	3 Plastic	Aq	X	X	X	X						*6010 Metals: Ba, Be, Cd, Cr, Co, Pb, Mo, Se		
3/24/21 12:55		X		C	C	R - 2	None/ HNO ₃	3 Plastic	Aq	X	X	X	X								
3/24/21 13:40		X		C	C	R - 3	None/ HNO ₃	3 Plastic	Aq	X	X	X	X						**6020 Metals: As, Sb, Ti		
3/24/21 14:30		X		C	C	R - 4	None/ HNO ₃	3 Plastic	Aq	X	X	X	X								
3/24/21 15:20		X		C	C	R - 5	None/ HNO ₃	3 Plastic	Aq	X	X	X	X						***6020 Sub Metal: Li		
3/25/21 9:30		X		C	C	R - 6	None/ HNO ₃	3 Plastic	Aq	X	X	X	X								
3/25/21 10:10		X		C	C	R - 7	None/ HNO ₃	3 Plastic	Aq	X	X	X	X								
3/25/21 11:10		X		C	C	R - 8	None/ HNO ₃	3 Plastic	Aq	X	X	X	X								
3/25/21 12:00		X		C	C	R - 9	None/ HNO ₃	3 Plastic	Aq	X	X	X	X								
3/25/21 1245		X		C	C	R - 10	None/ HNO ₃	3 Plastic	Aq	X	X	X	X						UPS / FedEx Airborne / Element Hand / Mail		

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

P.O. Number

Relinquished by: (Signature) <u>[Signature]</u>		Received by: (Signature) <u>[Signature]</u>		Date <u>3/25/21</u>	Time <u>5:30 pm</u>	Relinquished by: (Signature) <u>[Signature]</u>		Received by: (Signature) <u>[Signature]</u>		Date <u>3/26/21</u>	Time <u>0900</u>
Relinquished by: (Signature)		Received by: (Signature)		Date	Time	Relinquished by: (Signature)		Received by Laboratory: (Signature)		Date	Time
Matrix Codes DW = Drinking Water AQ = Aqueous LIQ = Liquid GW = Ground Water O = Oil SLD = Solid VW = Waste Water SO = Soil SL = Sludge		Container Types G = Glass P = Plastic V = Vial		Shipping Conditions ☒ Iced <u>5.0</u> Temp. <u>47</u> ☐ Ambient		Requested TAT ☐ 24-Hr. ☐ 72-Hr. ☐ 48-Hr. ☒ Standard ☐ Other		Thank-you for using Element Materials Technology			



- ☐ 2203 S. Madison St., Muncie, IN 47302
765-747-9000/800-874-3563 Fax 765-747-0228
- ☐ 629 Washington St., Suite 300, Columbus, IN 47201
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- ☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-9977/800324-5757
Fax 918-828-7756

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Chain of Custody Record

Laboratory Number 21031192

Client Name: Pivotal Engineering LLC		Project: CCR Assessment Monitoring		Preserv. HCl HNO ₃ H ₂ SO ₄ NaOH Na ₂ S ₂ O ₃	Number / Type of Container	Matrix Code	Test Requested										Comments / Remarks
Contact Name: Terry Elnaggar		Quote #: 5346					300: Fluoride	*6010/**6020 metals	***6020 Sub	7470 Mercury							
Phone/Fax: (504) 799-3653		Sampler's Signature: <u>[Signature]</u>															
Collection Date Time		Grab	Comp	Sample Identification / Description													
3/25/21 1330		X		C C R - 1 1		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					*6010 Metals: Ba, Be, Cd, Cr, Co, Pb, Mo, Se
3/25/21 1435		X		C C R - 1 2		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					
3/25/21 1520		X		C C R - 1 3		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					**6020 Metals: As, Sb, Ti
3/25/21 1620		X		C C R - 1 4		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					
3/25/21 1010		X		M S (CCR- <u>7</u>)		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					***6020 Sub Metal: Li
3/25/21 1040		X		M S D (CCR- <u>7</u>)		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					
3/24/21 —		X		D U P		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					
3/25/21 1630		X		F B 1		None/ HNO ₃	3 Plastic	Aq	X	X	X	X					
																	UPS / FedEx Airborne / Element Hand / Mail

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

P.O. Number

Relinquished by: (Signature) <u>[Signature]</u>		Received by: (Signature) <u>[Signature]</u>		Date Time 3/25/21 5:30pm	Relinquished by: (Signature) <u>[Signature]</u>		Received by: (Signature) <u>[Signature]</u>		Date Time
Relinquished by: (Signature)		Received by: (Signature)		Date Time	Relinquished by: (Signature) <u>[Signature]</u>		Received by Laboratory: (Signature) <u>[Signature]</u>		Date Time
Matrix Codes DW = Drinking Water AQ = Aqueous LIQ = Liquid GW = Ground Water O = Oil SLD = Solid WW = Waste Water SO = Soil SL = Sludge		Container Types G = Glass P = Plastic V = Vial		Shipping Conditions ☒ Iced 50 Temp. 47 ☐ Ambient 47 IR		Requested TAT ☐ 24-Hr. ☐ 72-Hr. ☐ 48-Hr. ☒ Standard ☐ Other		Thank-you for using Element Materials Technology	



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

July 13, 2021

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: Entergy: CCR Detection Monitoring

Order No.: 21061256

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 6/24/2021 for the analyses presented in the following report.

In accordance with your instructions, Element Lafayette either conducted or subcontracted these analyses. Subcontracted analyses will be identified in the accompanying case narrative. All relevant sampling information can be found on the attached Chain-of-Custody form. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet the applicable requirements of TNI. Reported results relate only to the items tested.

Where applicable, all soil data, except for 29-B, are reported on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Case Narrative

WO#: 21061256
Date: 7/13/2021

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).



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Analytical Report

(consolidated)

WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/22/2021 12:50:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-001 **Matrix:** AQUEOUS
Client Sample ID CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	45.7	2.50		mg/L	10	6/30/2021 9:09:02 AM
Fluoride	1.24	0.500		mg/L	10	6/30/2021 9:09:02 AM
Sulfate	37.7	2.50		mg/L	10	6/30/2021 9:09:02 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 4:43:05 PM
Calcium	23.4	0.500		mg/L	1	6/29/2021 4:43:05 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	273	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/22/2021 2:10:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-002 **Matrix:** AQUEOUS
Client Sample ID CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	55.5	2.50		mg/L	10	6/30/2021 9:22:36 AM
Fluoride	0.659	0.500		mg/L	10	6/30/2021 9:22:36 AM
Sulfate	7.80	2.50		mg/L	10	6/30/2021 9:22:36 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 4:45:24 PM
Calcium	19.2	0.500		mg/L	1	6/29/2021 4:45:24 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	253	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/22/2021 3:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-003 **Matrix:** AQUEOUS
Client Sample ID CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	115	2.50		mg/L	10	6/30/2021 9:36:23 AM
Fluoride	0.352	0.0500		mg/L	1	6/30/2021 3:06:22 PM
Sulfate	3.60	0.250		mg/L	1	6/30/2021 3:06:22 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 4:47:43 PM
Calcium	26.2	0.500		mg/L	1	6/29/2021 4:47:43 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	364	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 8:40:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	41.9	2.50		mg/L	10	6/30/2021 9:50:11 AM
Fluoride	0.249	0.0500		mg/L	1	6/30/2021 3:20:13 PM
Sulfate	10.3	0.250		mg/L	1	6/30/2021 3:20:13 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	6/29/2021 4:50:02 PM
Calcium	17.4	0.500		mg/L	1	6/29/2021 4:50:02 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	257	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 9:50:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	51.1	5.00		mg/L	20	6/30/2021 10:03:58 AM
Fluoride	0.278	0.0500		mg/L	1	6/30/2021 3:34:01 PM
Sulfate	< 0.250	0.250		mg/L	1	6/30/2021 3:34:01 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 4:52:20 PM
Calcium	29.9	0.500		mg/L	1	6/29/2021 4:52:20 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	395	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 10:40:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-006 **Matrix:** AQUEOUS
Client Sample ID CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	83.9	2.50		mg/L	10	6/30/2021 10:17:46 AM
Fluoride	0.295	0.0500		mg/L	1	6/30/2021 3:47:48 PM
Sulfate	< 0.250	0.250		mg/L	1	6/30/2021 3:47:48 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 4:54:39 PM
Calcium	27.3	0.500		mg/L	1	6/29/2021 4:54:39 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	308	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 11:40:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	72.7	2.50		mg/L	10	6/30/2021 10:31:34 AM
Fluoride	0.307	0.0500		mg/L	1	6/30/2021 4:01:36 PM
Sulfate	< 0.250	0.250		mg/L	1	6/30/2021 4:01:36 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 4:56:57 PM
Calcium	41.6	0.500		mg/L	1	6/29/2021 4:56:57 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	327	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 12:30:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-008 **Matrix:** AQUEOUS
Client Sample ID CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	78.6	2.50		mg/L	10	6/30/2021 10:45:22 AM
Fluoride	0.183	0.0500		mg/L	1	6/30/2021 4:15:22 PM
Sulfate	1.25	0.250		mg/L	1	6/30/2021 4:15:22 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:03:54 PM
Calcium	10.5	0.500		mg/L	1	6/29/2021 5:03:54 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	273	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 2:15:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	63.9	2.50		mg/L	10	6/30/2021 10:59:09 AM
Fluoride	0.762	0.500		mg/L	10	6/30/2021 10:59:09 AM
Sulfate	7.11	2.50		mg/L	10	6/30/2021 10:59:09 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:06:13 PM
Calcium	28.4	0.500		mg/L	1	6/29/2021 5:06:13 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	333	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 3:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-010 **Matrix:** AQUEOUS
Client Sample ID CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	38.5	2.50		mg/L	10	6/30/2021 11:12:57 AM
Fluoride	0.794	0.500		mg/L	10	6/30/2021 11:12:57 AM
Sulfate	7.41	2.50		mg/L	10	6/30/2021 11:12:57 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:08:32 PM
Calcium	23.9	0.500		mg/L	1	6/29/2021 5:08:32 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	312	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 8:00:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-011 **Matrix:** AQUEOUS
Client Sample ID CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	22.8	2.50		mg/L	10	6/30/2021 11:54:19 AM
Fluoride	0.925	0.500		mg/L	10	6/30/2021 11:54:19 AM
Sulfate	3.99	2.50		mg/L	10	6/30/2021 11:54:19 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:10:50 PM
Calcium	25.0	0.500		mg/L	1	6/29/2021 5:10:50 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	222	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 8:50:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-012 **Matrix:** AQUEOUS
Client Sample ID CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	15.2	1.25		mg/L	5	6/30/2021 12:08:07 PM
Fluoride	0.163	0.0500		mg/L	1	6/30/2021 4:29:11 PM
Sulfate	14.5	1.25		mg/L	5	6/30/2021 12:08:07 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:13:08 PM
Calcium	18.0	0.500		mg/L	1	6/29/2021 5:13:08 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	162	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 1:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-013 **Matrix:** AQUEOUS
Client Sample ID CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	2.31	0.250		mg/L	1	6/30/2021 12:21:54 PM
Fluoride	0.0701	0.0500		mg/L	1	6/30/2021 12:21:54 PM
Sulfate	0.392	0.250		mg/L	1	6/30/2021 12:21:54 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:15:27 PM
Calcium	17.8	0.500		mg/L	1	6/29/2021 5:15:27 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	141	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 1:40:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-014 **Matrix:** AQUEOUS
Client Sample ID CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	10.1	1.25		mg/L	5	6/30/2021 12:35:43 PM
Fluoride	0.307	0.250		mg/L	5	6/30/2021 12:35:43 PM
Sulfate	1.35	1.25		mg/L	5	6/30/2021 12:35:43 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:17:46 PM
Calcium	15.0	0.500		mg/L	1	6/29/2021 5:17:46 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	125	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-015 **Matrix:** AQUEOUS
Client Sample ID DUP

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	16.5	1.25		mg/L	5	6/30/2021 1:17:03 PM
Fluoride	0.163	0.0500		mg/L	1	6/30/2021 4:42:58 PM
Sulfate	18.1	1.25		mg/L	5	6/30/2021 1:17:03 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:24:43 PM
Calcium	17.3	0.500		mg/L	1	6/29/2021 5:24:43 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	151	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061256

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 2:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21061256-016 **Matrix:** AQUEOUS
Client Sample ID FB1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	< 0.250	0.250		mg/L	1	6/30/2021 1:30:51 PM
Fluoride	< 0.0500	0.0500		mg/L	1	6/30/2021 1:30:51 PM
Sulfate	< 0.250	0.250		mg/L	1	6/30/2021 1:30:51 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	6/29/2021 5:31:38 PM
Calcium	< 0.500	0.500		mg/L	1	6/29/2021 5:31:38 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	< 20.0	20.0		mg/L	1	6/28/2021 9:25:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: 21061256
13-Jul-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 40168A

Sample ID	MB-40168	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100764			
Client ID:	PBW	Batch ID:	40168A	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459606			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		< 0.100		0.100										
Calcium		< 0.500		0.500										

Sample ID	LCS-40168	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100764	
Client ID:	LCSW	Batch ID:	40168A	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459607	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.470	0.100	0.5000	0	93.9	80	120				
Calcium		46.2	0.500	50.00	0	92.4	80	120				

Sample ID	LCSD-40168	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100764	
Client ID:	LCSS02	Batch ID:	40168A	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459608	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.472	0.100	0.5000	0	94.4	80	120	0.4696	0.558	20	
Calcium		45.7	0.500	50.00	0	91.4	80	120	46.20	1.13	20	

Sample ID	21061256-014BMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 6/28/2021	RunNo: 100764					
Client ID: CCR-14	Batch ID: 40168A	TestNo: SW6010B	Analysis Date: 6/29/2021	SeqNo: 2459625							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.508	0.100	0.5000	0	102	75	125				

Qualifiers:
H Holding times for preparation or analysis exceeded
RL Reporting Limit
W Sample container temperature is out of limit as specified at testcode

M Matrix Interference
SDL Sample detection limit

ND Not Detected at the Reporting Limit
U Analyte not detected



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Website: www.element.com

QC SUMMARY REPORT

WO#: 21061256
13-Jul-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 40168A

Sample ID	21061256-014BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100764	
Client ID:	CCR-14	Batch ID:	40168A	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459625	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium		59.7	0.500	50.00	15.02	89.4	75	125				

Sample ID	21061256-014BMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 6/28/2021	RunNo: 100764					
Client ID: CCR-14	Batch ID: 40168A	TestNo: SW6010B	Analysis Date: 6/29/2021	SeqNo: 2459626							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.504	0.100	0.5000	0	101	75	125	0.5084	0.816	20	
Calcium	60.2	0.500	50.00	15.02	90.4	75	125	59.74	0.819	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
W Sample container temperature is out of limit as specified at testcode

M Matrix Interference
SDL Sample detection limit

ND Not Detected at the Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21061256
13-Jul-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R100664

Sample ID	MB-R100664	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	100664		
Client ID:	PBW	Batch ID:	R100664	TestNo:	SM2540C			Analysis Date:	6/28/2021	SeqNo:	2459127		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) < 20.0 20.0

Sample ID	LCS-R100664	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	100664		
Client ID:	LCSW	Batch ID:	R100664	TestNo:	SM2540C			Analysis Date:	6/28/2021	SeqNo:	2459128		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 993 20.0 1,000 0 99.3 85 115

Sample ID	LCSD-R100664	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	100664		
Client ID:	LCSS02	Batch ID:	R100664	TestNo:	SM2540C			Analysis Date:	6/28/2021	SeqNo:	2459130		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 991 20.0 1,000 0 99.1 85 115 993.0 0.202 10

Sample ID	21061256-014ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	100664		
Client ID:	CCR-14	Batch ID:	R100664	TestNo:	SM2540C			Analysis Date:	6/28/2021	SeqNo:	2459150		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 131 20.0 125.0 4.69 10

Qualifiers:
H Holding times for preparation or analysis exceeded
RL Reporting Limit
W Sample container temperature is out of limit as specified at testcode

M Matrix Interference
SDL Sample detection limit

ND Not Detected at the Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21061256
13-Jul-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R100664

Sample ID	21061256-014ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	100664
Client ID:	CCR-14	Batch ID:	R100664	TestNo:	SM2540C			Analysis Date:	6/28/2021	SeqNo:	2459150
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Sample ID	21061256-003ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	100664
Client ID:	CCR-3	Batch ID:	R100664	TestNo:	SM2540C			Analysis Date:	6/28/2021	SeqNo:	2459154
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filterable)		366		20.0						364.0	0.548 10

Qualifiers:
H Holding times for preparation or analysis exceeded
RL Reporting Limit
W Sample container temperature is out of limit as specified at testcode

M Matrix Interference
SDL Sample detection limit

ND Not Detected at the Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21061256
13-Jul-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R100784

Sample ID	MBLK	SampType:	MBLK	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	100784	
Client ID:	PBW	Batch ID:	R100784	TestNo:	E 300.0			Analysis Date:	6/30/2021	SeqNo:	2460406	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250	0.250									
Fluoride		< 0.0500	0.0500									
Sulfate		< 0.250	0.250									

Sample ID	LCS	SampType:	LCS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	100784	
Client ID:	LCSW	Batch ID:	R100784	TestNo:	E 300.0			Analysis Date:	6/30/2021	SeqNo:	2460407	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.3	0.250	10.00	0	103	90	110				
Fluoride		2.11	0.0500	2.000	0	106	90	110				
Sulfate		10.3	0.250	10.00	0	103	90	110				

Sample ID	LCSD	SampType:	LCSD	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	100784	
Client ID:	LCSS02	Batch ID:	R100784	TestNo:	E 300.0			Analysis Date:	6/30/2021	SeqNo:	2460408	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.3	0.250	10.00	0	103	90	110	10.31	0.0788	15	
Fluoride		2.18	0.0500	2.000	0	109	90	110	2.112	3.04	15	
Sulfate		10.3	0.250	10.00	0	103	90	110	10.32	0.0841	15	

Qualifiers:
H Holding times for preparation or analysis exceeded
RL Reporting Limit
W Sample container temperature is out of limit as specified at testcode

M Matrix Interference
SDL Sample detection limit

ND Not Detected at the Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21061256
13-Jul-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R100784

Sample ID	21061256-014AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 100784					
Client ID:	CCR-14	Batch ID: R100784	TestNo: E 300.0	Analysis Date: 6/30/2021	SeqNo: 2460425						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	37.8	1.25	25.00	10.08	111	80	120				
Fluoride	5.44	0.250	5.000	0.3067	103	80	120				
Sulfate	27.3	1.25	25.00	1.351	104	80	120				

Sample ID	21061256-014AMSD	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 100784					
Client ID:	CCR-14	Batch ID: R100784	TestNo: E 300.0	Analysis Date: 6/30/2021	SeqNo: 2460426						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	38.0	1.25	25.00	10.08	112	80	120	37.82	0.477	15	
Fluoride	5.63	0.250	5.000	0.3067	107	80	120	5.438	3.52	15	
Sulfate	27.3	1.25	25.00	1.351	104	80	120	27.29	0.208	15	

Qualifiers:
H Holding times for preparation or analysis exceeded
RL Reporting Limit
W Sample container temperature is out of limit as specified at testcode

M Matrix Interference
SDL Sample detection limit

ND Not Detected at the Reporting Limit
U Analyte not detected



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Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21061256**

RcptNo: **1**

Logged by: **Danielle Hollier** **6/24/2021 5:00:00 PM**

Completed By: **Danielle Hollier** **6/25/2021 8:43:46 AM**

Reviewed By: **Caitlin Duplantis** **7/9/2021 4:15:18 PM**

Danielle Hollier
Danielle Hollier
Caitlin Duplantis

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

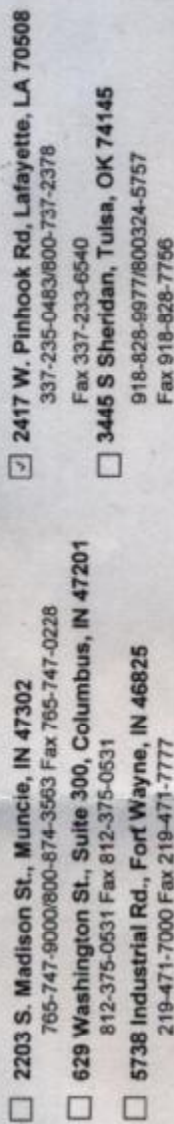
17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Not Present			



Laboratory Number 21061256

Client Name: Pivotal Engineering LLC						Project: CCR Detection Monitoring										
Contact Name: Terry Elnaggar						Quote #: 6786										
Phone/Fax: (504) 799-3653						Sampler's Signature: [Signature]										
Sample Identification / Description						Collection		Grab	Comp	Sample Identification / Description		Number / Type of Container	Matrix Code	TDS	Preserv.	
						Date	Time			HCl HNO ₃ H ₂ SO ₄	NaOH Na ₂ S ₂ O ₃					
						6/22/12	12:50	X		C C R - 1	None/ HNO ₃ 2 Plastic	Aq	X	X	X	*5010 Metals: B, Ca
						↓	14:10	X		C C R - 2	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						↓	1500	X		C C R - 3	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						6/23/12	840	X		C C R - 4	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						↓	950	X		C C R - 5	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						↓	1040	X		C C R - 6	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						↓	1140	X		C C R - 7	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						↓	1230	X		C C R - 8	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						↓	1415	X		C C R - 9	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
						↓	1500	X		C C R - 10	None/ HNO ₃ 2 Plastic	Aq	X	X	X	
Comments / Remarks																
UPS / FedEx Airborne / Element Hand / Mail																

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

Relinquished by: (Signature)	Received by: (Signature)	Date	Time	Refiniquished by: (Signature)	Requested TAT
[Signature]	[Signature]	6/22/12	15:00	[Signature]	☐ 24-Hr. ☐ 48-Hr. ☒ Standard Other _____
Relinquished by: (Signature)	Received by: (Signature)	Date	Time	Refiniquished by: (Signature)	Shipping Conditions
[Signature]	[Signature]	6/22/12	15:00	[Signature]	☒ Iced Temp <u>2.3</u> ☐ Ambient <u>58</u>

Matrix Codes

DW = Drinking Water AQ = Aqueous LQ = Liquid

GW = Ground Water O = Oil SLD = Solid

WW = Waste Water SO = Soil SL = Sludge

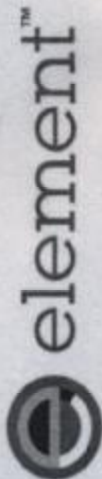
Container Types

G = Glass

P = Plastic

V = Vial

Thank-you for using Element Materials Technology



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- ☐ 629 Washington St., Suite 300, Columbus, IN 47201
812-375-0531 Fax 812-375-0531
- ☐ 5738 Industrial Rd., Fort Wayne, IN 46825
219-471-7000 Fax 219-471-7777

- ☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
337-235-0483/800-737-2378
Fax 337-233-6540
- ☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-9977/800324-5757
Fax 918-828-7756

Chain of Custody Record

Page 2 of 2		Laboratory Number 21061256									
Client Name: Pivotal Engineering LLC		Project: CCR Detection Monitoring									
Contact Name: Terry Elnaggar		Quote #: 6786									
Phone/Fax: (504) 799-3653		Sampler's Signature: <i>Terry Elnaggar</i>									
Collection Date	Time	Comp	Grab	Sample Identification / Description	Preserv.	Number / Type of Container	Matrix Code	TDS	300: Cl, F, SO4	6010 metals	Comments / Remarks
6/24/10	800		X	C C R - 1 1	None/ HNO3	2 Plastic	Aq	X	X	X	6010 Metals: B, Ca
850			X	C C R - 1 2	None/ HNO3	2 Plastic	Aq	X	X	X	
1300			X	C C R - 1 3	None/ HNO3	2 Plastic	Aq	X	X	X	
1340			X	C C R - 1 4	None/ HNO3	2 Plastic	Aq	X	X	X	
1350			X	M S (CCR- 14)	None/ HNO3	2 Plastic	Aq	X	X	X	
1355			X	M S D (CCR- 14)	None/ HNO3	2 Plastic	Aq	X	X	X	6010 Metals: B, Ca
1400			X	D U P	None/ HNO3	2 Plastic	Aq	X	X	X	
1400			X	F B 1	None/ HNO3	2 Plastic	Aq	X	X	X	
All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.											
Relinquished by: (Signature) <i>Terry Elnaggar</i>		Received by: (Signature)		Date 6/24/10 Time 5:00 PM		Relinquished by: (Signature)		Received by: (Signature)		Date 6/24/10 Time 7:00 PM	
Relinquished by: (Signature)		Received by: (Signature)		Date 6/24/10 Time 7:00 PM		Relinquished by: (Signature)		Received by: (Signature)		Date 6/24/10 Time 7:00 PM	
Matrix Codes DW = Drinking Water AQ = Aqueous GW = Ground Water O = Oil WW = Waste Water SO = Soil		Container Types G = Glass P = Plastic V = Vial		Shipping Conditions ☒ Iced Temp 72°F ☐ Ambient 42°F		Requested TAI ☐ 24-Hr. ☐ 48-Hr. ☒ Standard ☐ Other		Thank-you for using Element Materials Technology			



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Website: www.element.com

July 13, 2021

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: Entergy: CCR Assessment Monitoring

Order No.: 21061255

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 6/24/2021 for the analyses presented in the following report.

In accordance with your instructions, Element Lafayette either conducted or subcontracted these analyses. Subcontracted analyses will be identified in the accompanying case narrative. All relevant sampling information can be found on the attached Chain-of-Custody form. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet the applicable requirements of TNI. Reported results relate only to the items tested.

Where applicable, all soil data, except for 29-B, are reported on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Case Narrative

WO#: 21061255
Date: 7/13/2021

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).

The Lithium (6020B) analyses were subcontracted to Pace Analytical. Their report is attached in its entirety.



Element Materials Technology Lafayette
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Website: www.element.com

Analytical Report

(consolidated)

WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/22/2021 12:50:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-001 **Matrix:** AQUEOUS
Client Sample ID CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:15:08 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	1.24	0.500		mg/L	10	6/30/2021 9:09:02 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.168	0.0100		mg/L	1	6/29/2021 4:43:05 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 4:43:05 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 4:43:05 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 4:43:05 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 4:43:05 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 4:43:05 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 4:43:05 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 4:43:05 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:02:36 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:02:36 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:02:36 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/22/2021 2:10:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-002 **Matrix:** AQUEOUS
Client Sample ID CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:17:25 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.659	0.500		mg/L	10	6/30/2021 9:22:36 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.136	0.0100		mg/L	1	6/29/2021 4:45:24 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 4:45:24 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 4:45:24 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 4:45:24 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 4:45:24 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 4:45:24 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 4:45:24 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 4:45:24 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:05:25 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:05:25 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:05:25 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/22/2021 3:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-003 **Matrix:** AQUEOUS
Client Sample ID CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:19:41 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.352	0.0500		mg/L	1	6/30/2021 3:06:22 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.242	0.0100		mg/L	1	6/29/2021 4:47:43 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 4:47:43 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 4:47:43 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 4:47:43 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 4:47:43 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 4:47:43 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 4:47:43 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 4:47:43 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:08:13 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:08:13 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:08:13 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 8:40:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:21:57 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.249	0.0500		mg/L	1	6/30/2021 3:20:13 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.0969	0.0100		mg/L	1	6/29/2021 4:50:02 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 4:50:02 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 4:50:02 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 4:50:02 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 4:50:02 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 4:50:02 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 4:50:02 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 4:50:02 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:11:01 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:11:01 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:11:01 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 9:50:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:24:14 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.278	0.0500		mg/L	1	6/30/2021 3:34:01 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.194	0.0100		mg/L	1	6/29/2021 4:52:20 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 4:52:20 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 4:52:20 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 4:52:20 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 4:52:20 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 4:52:20 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 4:52:20 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 4:52:20 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:13:49 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:13:49 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:13:49 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 10:40:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-006 **Matrix:** AQUEOUS
Client Sample ID CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:26:31 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.295	0.0500		mg/L	1	6/30/2021 3:47:48 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.178	0.0100		mg/L	1	6/29/2021 4:54:39 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 4:54:39 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 4:54:39 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 4:54:39 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 4:54:39 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 4:54:39 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 4:54:39 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 4:54:39 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:16:37 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:16:37 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:16:37 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 11:40:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:28:47 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.307	0.0500		mg/L	1	6/30/2021 4:01:36 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.198	0.0100		mg/L	1	6/29/2021 4:56:57 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 4:56:57 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 4:56:57 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 4:56:57 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 4:56:57 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 4:56:57 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 4:56:57 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 4:56:57 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:19:24 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:19:24 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:19:24 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 12:30:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-008 **Matrix:** AQUEOUS
Client Sample ID CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:36:15 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.183	0.0500		mg/L	1	6/30/2021 4:15:22 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.101	0.0100		mg/L	1	6/29/2021 5:03:54 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:03:54 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:03:54 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:03:54 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:03:54 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:03:54 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:03:54 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:03:54 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:22:12 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:22:12 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:22:12 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 2:15:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:38:31 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.762	0.500		mg/L	10	6/30/2021 10:59:09 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.197	0.0100		mg/L	1	6/29/2021 5:06:13 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:06:13 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:06:13 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:06:13 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:06:13 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:06:13 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:06:13 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:06:13 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:25:00 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:25:00 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:25:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/23/2021 3:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-010 **Matrix:** AQUEOUS
Client Sample ID: CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:40:48 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.794	0.500		mg/L	10	6/30/2021 11:12:57 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.221	0.0100		mg/L	1	6/29/2021 5:08:32 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:08:32 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:08:32 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:08:32 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:08:32 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:08:32 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:08:32 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:08:32 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:27:48 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:27:48 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:27:48 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



Element Materials Technology Lafayette
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Analytical Report

(consolidated)

WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 8:00:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-011 **Matrix:** AQUEOUS
Client Sample ID CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:43:05 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.925	0.500		mg/L	10	6/30/2021 11:54:19 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.131	0.0100		mg/L	1	6/29/2021 5:10:50 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:10:50 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:10:50 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:10:50 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:10:50 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:10:50 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:10:50 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:10:50 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:39:03 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:39:03 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:39:03 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 8:50:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-012 **Matrix:** AQUEOUS
Client Sample ID CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:45:21 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.163	0.0500		mg/L	1	6/30/2021 4:29:11 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.167	0.0100		mg/L	1	6/29/2021 5:13:08 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:13:08 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:13:08 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:13:08 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:13:08 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:13:08 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:13:08 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:13:08 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:41:53 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:41:53 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:41:53 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 1:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-013 **Matrix:** AQUEOUS
Client Sample ID CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:47:41 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.0701	0.0500		mg/L	1	6/30/2021 12:21:54 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.0660	0.0100		mg/L	1	6/29/2021 5:15:27 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:15:27 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:15:27 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:15:27 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:15:27 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:15:27 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:15:27 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:15:27 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:44:40 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:44:40 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:44:40 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 1:40:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-014 **Matrix:** AQUEOUS
Client Sample ID CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 6:49:58 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.307	0.250		mg/L	5	6/30/2021 12:35:43 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.0665	0.0100		mg/L	1	6/29/2021 5:17:46 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:17:46 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:17:46 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:17:46 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:17:46 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:17:46 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:17:46 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:17:46 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 10:42:59 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 10:42:59 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 10:42:59 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-015 **Matrix:** AQUEOUS
Client Sample ID DUP

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 7:05:16 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.163	0.0500		mg/L	1	6/30/2021 4:42:58 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.160	0.0100		mg/L	1	6/29/2021 5:24:43 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:24:43 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:24:43 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:24:43 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:24:43 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:24:43 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:24:43 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:24:43 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:47:28 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:47:28 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:47:28 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21061255

Date Reported: 7/13/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 6/24/2021 2:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21061255-016 **Matrix:** AQUEOUS
Client Sample ID FB1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	7/2/2021 7:07:33 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	< 0.0500	0.0500		mg/L	1	6/30/2021 1:30:51 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:31:38 PM
Beryllium	< 0.00100	0.00100		mg/L	1	6/29/2021 5:31:38 PM
Cadmium	< 0.00500	0.00500		mg/L	1	6/29/2021 5:31:38 PM
Chromium	< 0.0100	0.0100		mg/L	1	6/29/2021 5:31:38 PM
Cobalt	< 0.0100	0.0100		mg/L	1	6/29/2021 5:31:38 PM
Lead	< 0.0100	0.0100		mg/L	1	6/29/2021 5:31:38 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	6/29/2021 5:31:38 PM
Selenium	< 0.0200	0.0200		mg/L	1	6/29/2021 5:31:38 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	6/30/2021 11:50:16 AM
Arsenic	< 10.0	10.0		µg/L	1	6/30/2021 11:50:16 AM
Thallium	< 0.250	0.250		µg/L	1	6/30/2021 11:50:16 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 40168

Sample ID	MB-40168	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100741
Client ID:	PBW	Batch ID:	40168	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459290
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	< 0.0100	0.0100									
Beryllium	< 0.00100	0.00100									
Cadmium	< 0.00500	0.00500									
Chromium	< 0.0100	0.0100									
Cobalt	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Molybdenum	< 0.0100	0.0100									
Selenium	< 0.0200	0.0200									

Sample ID	LCS-40168	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100741
Client ID:	LCSW	Batch ID:	40168	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459291
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.451	0.0100	0.5000	0	90.2	80	120				
Beryllium	0.440	0.00100	0.5000	0	88.0	80	120				
Cadmium	0.443	0.00500	0.5000	0	88.7	80	120				
Chromium	0.444	0.0100	0.5000	0	88.8	80	120				
Cobalt	0.450	0.0100	0.5000	0	90.0	80	120				
Lead	0.445	0.0100	0.5000	0	89.1	80	120				
Molybdenum	0.446	0.0100	0.5000	0	89.2	80	120				
Selenium	0.471	0.0200	0.5000	0	94.2	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 40168

Sample ID	LCSD-40168	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100741
Client ID:	LCSS02	Batch ID:	40168	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459292
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.449	0.0100	0.5000	0	89.8	80	120	0.4512	0.462	20	
Beryllium	0.438	0.00100	0.5000	0	87.7	80	120	0.4398	0.314	20	
Cadmium	0.438	0.00500	0.5000	0	87.7	80	120	0.4434	1.13	20	
Chromium	0.441	0.0100	0.5000	0	88.2	80	120	0.4440	0.687	20	
Cobalt	0.445	0.0100	0.5000	0	89.1	80	120	0.4502	1.08	20	
Lead	0.445	0.0100	0.5000	0	89.1	80	120	0.4454	0.00898	20	
Molybdenum	0.443	0.0100	0.5000	0	88.5	80	120	0.4462	0.819	20	
Selenium	0.462	0.0200	0.5000	0	92.4	80	120	0.4708	1.87	20	

Sample ID	21061255-014BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100741
Client ID:	CCR-14	Batch ID:	40168	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459309
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.505	0.0100	0.5000	0.06648	87.7	75	125				
Beryllium	0.427	0.00100	0.5000	0	85.5	75	125				
Cadmium	0.428	0.00500	0.5000	0	85.6	75	125				
Chromium	0.433	0.0100	0.5000	0	86.6	75	125				
Cobalt	0.431	0.0100	0.5000	0	86.2	75	125				
Lead	0.432	0.0100	0.5000	0	86.5	75	125				
Molybdenum	0.429	0.0100	0.5000	0	85.8	75	125				
Selenium	0.451	0.0200	0.5000	0	90.2	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 40168

Sample ID	21061255-014BMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	6/28/2021	RunNo:	100741
Client ID:	CCR-14	Batch ID:	40168	TestNo:	SW6010B			Analysis Date:	6/29/2021	SeqNo:	2459310
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.508	0.0100	0.5000	0.06648	88.4	75	125	0.5052	0.645	20	
Beryllium	0.430	0.00100	0.5000	0	86.1	75	125	0.4274	0.683	20	
Cadmium	0.429	0.00500	0.5000	0	85.8	75	125	0.4281	0.159	20	
Chromium	0.435	0.0100	0.5000	0	86.9	75	125	0.4330	0.367	20	
Cobalt	0.436	0.0100	0.5000	0	87.1	75	125	0.4310	1.07	20	
Lead	0.430	0.0100	0.5000	0	86.0	75	125	0.4325	0.566	20	
Molybdenum	0.431	0.0100	0.5000	0	86.2	75	125	0.4288	0.454	20	
Selenium	0.447	0.0200	0.5000	0	89.5	75	125	0.4512	0.861	20	

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 40169

Sample ID	MB-40169	SampType:	MBLK	TestCode:	6020A_W	Units:	µg/L	Prep Date:	6/28/2021	RunNo:	100763
Client ID:	PBW	Batch ID:	40169	TestNo:	SW6020A			Analysis Date:	6/30/2021	SeqNo:	2459509
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	< 0.250	0.250									
Arsenic	< 0.250	0.250									
Thallium	< 0.250	0.250									

Sample ID	LCS-40169	SampType:	LCS	TestCode:	6020A_W	Units:	µg/L	Prep Date:	6/28/2021	RunNo:	100763
Client ID:	LCSSW	Batch ID:	40169	TestNo:	SW6020A			Analysis Date:	6/30/2021	SeqNo:	2459510
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	488	5.00	500.0	0	97.7	80	120				
Arsenic	502	5.00	500.0	0	100	80	120				
Thallium	495	5.00	500.0	0	99.1	80	120				

Sample ID	LCSD-40169	SampType:	LCSD	TestCode:	6020A_W	Units:	µg/L	Prep Date:	6/28/2021	RunNo:	100763
Client ID:	LCSS02	Batch ID:	40169	TestNo:	SW6020A			Analysis Date:	6/30/2021	SeqNo:	2459511
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	477	5.00	500.0	0	95.5	80	120	488.3	2.27	20	
Arsenic	487	5.00	500.0	0	97.4	80	120	501.9	3.01	20	
Thallium	518	5.00	500.0	0	104	80	120	495.5	4.36	20	

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at test code

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 40169

Sample ID	21061255-014BMS	SampType: MS	TestCode: 6020A_W		Units: µg/L	Prep Date: 6/28/2021			RunNo: 100763			
Client ID:	CCR-14	Batch ID: 40169	TestNo: SW6020A			Analysis Date: 6/30/2021			SeqNo: 2459514			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		483	5.00	500.0	0.04614	96.5	75	125				
Arsenic		493	5.00	500.0	0.9983	98.3	75	125				
Thallium		497	5.00	500.0	0.05917	99.5	75	125				

Sample ID	21061255-014BMSD	SampType: MSD	TestCode: 6020A_W	Units: µg/L	Prep Date: 6/28/2021	RunNo: 100763					
Client ID: CCR-14	Batch ID: 40169	TestNo: SW6020A	Analysis Date: 6/30/2021	SeqNo: 2459515							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	478	5.00	500.0	0.04614	95.6	75	125	482.7	0.965	20	
Arsenic	502	5.00	500.0	0.9983	100	75	125	492.7	1.97	20	
Thallium	497	5.00	500.0	0.05917	99.4	75	125	497.4	0.109	20	

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 40191

Sample ID	MB-40191	SampType:	MBLK	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	6/30/2021	RunNo:	100819			
Client ID:	PBW	Batch ID:	40191	TestNo:	SW7470A			Analysis Date:	7/2/2021	SeqNo:	2461310			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		< 0.000200		0.000200										

Sample ID	LCS-40191	SampType:	LCS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	6/30/2021	RunNo:	100819	
Client ID:	LCSW	Batch ID:	40191	TestNo:	SW7470A			Analysis Date:	7/2/2021	SeqNo:	2461311	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0103	0.000200	0.01000	0	103	80	120				

Sample ID	LCSD-40191	SampType:	LCSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	6/30/2021	RunNo:	100819			
Client ID:	LCSS02	Batch ID:	40191	TestNo:	SW7470A			Analysis Date:	7/2/2021	SeqNo:	2461312			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0104		0.000200	0.01000	0		104	80	120	0.01033	0.768	20	

Sample ID	21061255-014BMS	SampType:	MS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	6/30/2021	RunNo:	100819	
Client ID:	CCR-14	Batch ID:	40191	TestNo:	SW7470A			Analysis Date:	7/2/2021	SeqNo:	2461334	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00969	0.000200	0.01000	0	96.9	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 40191

Sample ID	21061255-014BMSD	SampType: MSD	TestCode: HG_W_7470	Units: mg/L	Prep Date: 6/30/2021	RunNo: 100819					
Client ID: CCR-14	Batch ID: 40191	TestNo: SW7470A	Analysis Date: 7/2/2021	SeqNo: 2461335							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00975	0.000200	0.01000	0	97.5	75	125	0.009693	0.562	20	

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: R100748

Sample ID	MBLK	SampType:	MBLK	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	100748
Client ID:	PBW	Batch ID:	R100748	TestNo:	E 300.0			Analysis Date:	6/30/2021	SeqNo:	2460100
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		< 0.0500		0.0500							

Sample ID	LCS	SampType:	LCS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	100748
Client ID:	LCSW	Batch ID:	R100748	TestNo:	E 300.0			Analysis Date:	6/30/2021	SeqNo:	2460101
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		2.11		0.0500	2.000	0	106	90	110		

Sample ID	LCSD	SampType:	LCSD	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	100748
Client ID:	LCSS02	Batch ID:	R100748	TestNo:	E 300.0			Analysis Date:	6/30/2021	SeqNo:	2460102
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		2.18		0.0500	2.000	0	109	90	110	2.112	3.04 15

Sample ID	21061255-014AMS	SampType:	MS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	100748
Client ID:	CCR-14	Batch ID:	R100748	TestNo:	E 300.0			Analysis Date:	6/30/2021	SeqNo:	2460119
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		5.44		0.250	5.000	0.3067	103	80	120		

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21061255
13-Jul-21

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: R100748

Sample ID	21061255-014AMSD	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 100748					
Client ID: CCR-14	Batch ID: R100748	TestNo: E 300.0	Analysis Date: 6/30/2021	SeqNo: 2460120							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	5.63	0.250	5.000	0.3067	107	80	120	5.438	3.52	15	

Qualifiers:

B Analyte detected in the associated Method Blank
M Matrix Interference
RL Reporting Limit
U Analyte not detected

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
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Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21061255**

RcptNo: **1**

Logged by: **Danielle Hollier** **6/24/2021 5:00:00 PM**

Completed By: **Danielle Hollier** **6/25/2021 8:34:12 AM**

Reviewed By: **Caitlin Duplantis** **7/9/2021 4:17:17 PM**

Danielle Hollier
Danielle Hollier
Caitlin Duplantis

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Not Present			



LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 07/08/2021

Report # 221062927



Project 21061255

Samples Collected 6/22/21 - 6/24/21

<i>Deliver To</i>	<i>Additional Recipients</i>
Annie Reedy Element Materials Technology 2417 W Pinhook Rd Lafayette, LA 70508 800-737-2378	Kelli Foreman, Element Materials Technology Caitlin Duplan, Element Materials Technology Christina Thibeaux, Element Materials Technology Rhonda David, Element Materials Technology Buffy Bryant, Element Materials Technology





Report#: 221062927

Project ID: 21061255

Report Date: 07/08/2021

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % difference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 221062927



Report#: 221062927

Project ID: 21061255

Report Date: 07/08/2021

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234



Report#: 221062927

Project ID: 21061255

Report Date: 07/08/2021

Case Narrative

Client: Element Materials Technology **Report:** 221062927

Pace Analytical Gulf Coast received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).



Report#: 221062927
Project ID: 21061255

Report Date: 07/08/2021

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22106292701	CCR-1	Water	6/22/21 12:50	6/28/21 11:07
22106292702	CCR-2	Water	6/22/21 14:10	6/28/21 11:07
22106292703	CCR-3	Water	6/22/21 15:00	6/28/21 11:07
22106292704	CCR-4	Water	6/23/21 08:40	6/28/21 11:07
22106292705	CCR-5	Water	6/23/21 09:50	6/28/21 11:07
22106292706	CCR-6	Water	6/23/21 10:40	6/28/21 11:07
22106292707	CCR-7	Water	6/23/21 11:40	6/28/21 11:07
22106292708	CCR-8	Water	6/23/21 12:30	6/28/21 11:07
22106292709	CCR-9	Water	6/23/21 14:15	6/28/21 11:07
22106292710	CCR-10	Water	6/23/21 15:00	6/28/21 11:07
22106292711	CCR-11	Water	6/24/21 08:00	6/28/21 11:07
22106292712	CCR-12	Water	6/24/21 08:50	6/28/21 11:07
22106292713	CCR-13	Water	6/24/21 13:00	6/28/21 11:07
22106292714	CCR-14	Water	6/24/21 13:40	6/28/21 11:07
22106292715	DUP	Water	6/24/21 00:01	6/28/21 11:07
22106292716	FB-1	Water	6/24/21 14:00	6/28/21 11:07
22106292717	CCR-14 MS	Water	6/24/21 13:40	6/28/21 11:07
22106292718	CCR-14 MSD	Water	6/24/21 13:40	6/28/21 11:07



Report#: 221062927
Project ID: 21061255

Report Date: 07/08/2021

Sample Results

CCR-1	Collect Date	06/22/2021 12:50	Lab ID	22106292701
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:27	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	24.6	5.00	ug/L

CCR-2	Collect Date	06/22/2021 14:10	Lab ID	22106292702
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:31	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	25.0	5.00	ug/L

CCR-3	Collect Date	06/22/2021 15:00	Lab ID	22106292703
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:34	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	29.2	5.00	ug/L

CCR-4	Collect Date	06/23/2021 08:40	Lab ID	22106292704
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:38	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	18.6	5.00	ug/L



Report#: 221062927

Project ID: 21061255

Report Date: 07/08/2021

Sample Results

CCR-5	Collect Date	06/23/2021 09:50	Lab ID	22106292705
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:41	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	21.0	5.00	ug/L

CCR-6	Collect Date	06/23/2021 10:40	Lab ID	22106292706
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:45	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	14.0	5.00	ug/L

CCR-7	Collect Date	06/23/2021 11:40	Lab ID	22106292707
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:48	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	15.2	5.00	ug/L

CCR-8	Collect Date	06/23/2021 12:30	Lab ID	22106292708
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:52	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	36.8	5.00	ug/L



Report#: 221062927
Project ID: 21061255

Report Date: 07/08/2021

Sample Results

CCR-9	Collect Date	06/23/2021 14:15	Lab ID	22106292709
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:55	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	15.8	5.00	ug/L

CCR-10	Collect Date	06/23/2021 15:00	Lab ID	22106292710
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/07/21 13:59	715644	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	9.73	5.00	ug/L

CCR-11	Collect Date	06/24/2021 08:00	Lab ID	22106292711
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:24	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	8.29	5.00	ug/L

CCR-12	Collect Date	06/24/2021 08:50	Lab ID	22106292712
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:28	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	25.6	5.00	ug/L



Report#: 221062927
Project ID: 21061255

Report Date: 07/08/2021

Sample Results

CCR-13	Collect Date	06/24/2021 13:00	Lab ID	22106292713
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:31	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	23.7	5.00	ug/L

CCR-14	Collect Date	06/24/2021 13:40	Lab ID	22106292714
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:34	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	15.1	5.00	ug/L

DUP	Collect Date	06/24/2021 00:01	Lab ID	22106292715
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:52	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	22.5	5.00	ug/L

FB-1	Collect Date	06/24/2021 14:00	Lab ID	22106292716
	Receive Date	06/28/2021 11:07	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:55	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	ND	5.00	ug/L



Report#: 221062927

Project ID: 21061255

Report Date: 07/08/2021

Sample Results

CCR-14 MS

Collect Date 06/24/2021 13:40
Receive Date 06/28/2021 11:07

Lab ID 22106292717
Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:38	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	241	5.00	ug/L

CCR-14 MSD

Collect Date 06/24/2021 13:40
Receive Date 06/28/2021 11:07

Lab ID 22106292718
Matrix Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
06/29/21 12:00	715001	EPA 3010A	1	07/08/21 13:41	715732	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	236	5.00	ug/L



Report#: 221062927

Project ID: 21061255

Report Date: 07/08/2021

Inorganics QC Summary

Analytical Batch 715644	Client ID Lab ID	MB715001 2207044	LCS715001 2207045				
Prep Batch 715001	Sample Type Prep Date	MB 06/29/21 12:00	LCS 06/29/21 12:00				
Prep Method EPA 3010A	Analysis Date Matrix	07/07/21 13:20 Water	07/07/21 13:24 Water				
EPA 6020B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R
Lithium	7439-93-2	ND	5.00	250	243	97	80 - 120

Analytical Batch 715732	Client ID Lab ID	CCR-14 22106292714	CCR-14 MS 22106292717					CCR-14 MSD 22106292718				
Prep Batch 715001	Sample Type Prep Date	SAMPLE 06/29/2021 12:00	MS 06/29/21 12:00					MSD 06/29/21 12:00				
Prep Method EPA 3010A	Analysis Date Matrix	07/08/2021 13:34 Water	07/08/21 13:38 Water					07/08/21 13:41 Water				
EPA 6020B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Lithium	7439-93-2	15.1	5.00	250	241	91	80 - 120	250	236	88	2	20



CHAIN OF CUSTODY RECORD

Omega COCID 10485

PAGE:

Client ID: 4462 - Element Materials Technology

SDG: 221062927

PM: JLM



FAX: (337) 233-6540

Website: www.element.com

SUB CONTRACTOR: GCAL		COMPANY: Pace Analytical Gulf Coast		SPECIAL INSTRUCTIONS / COMMENTS: 6020 - Lithium			
ADDRESS: 7979 Innovation Park Drive							
CITY, STATE, ZIP: Baton Rouge, LA 70820							
PHONE: (225) 769-4900 FAX: (225) 767-5717 EMAIL:							
ACCOUNT #							
ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Method Preserved Vials HOT Sample Vials, Additional Sample Description
1	21061255-001C 6020_W_SUB (SW6020A)	CCR-1	250HDPEHNO3	Aqueous	6/22/2021 12:50:00 PM	1	
2	21061255-002C 6020_W_SUB (SW6020A)	CCR-2	250HDPEHNO3	Aqueous	6/22/2021 2:10:00 PM	1	
3	21061255-003C 6020_W_SUB (SW6020A)	CCR-3	250HDPEHNO3	Aqueous	6/22/2021 3:00:00 PM	1	
4	21061255-004C 6020_W_SUB (SW6020A)	CCR-4	250HDPEHNO3	Aqueous	6/23/2021 8:40:00 AM	1	
5	21061255-005C 6020_W_SUB (SW6020A)	CCR-5	250HDPEHNO3	Aqueous	6/23/2021 9:50:00 AM	1	
6	21061255-006C 6020_W_SUB (SW6020A)	CCR-6	250HDPEHNO3	Aqueous	6/23/2021 10:40:00 AM	1	
7	21061255-007C 6020_W_SUB (SW6020A)	CCR-7	250HDPEHNO3	Aqueous	6/23/2021 11:40:00 AM	1	
8	21061255-008C 6020_W_SUB (SW6020A)	CCR-8	250HDPEHNO3	Aqueous	6/23/2021 12:30:00 PM	1	
9	21061255-009C 6020_W_SUB (SW6020A)	CCR-9	250HDPEHNO3	Aqueous	6/23/2021 2:15:00 PM	1	

Relinquished By: <i>[Signature]</i>	Date: 6/23/2021	Received By: <i>[Signature]</i>	Date: 6/23/2021	Time: 08:00
Relinquished By: <i>[Signature]</i>	Date: 6/23/2021	Received By: <i>[Signature]</i>	Date: 6/23/2021	Time: 11:07
Relinquished By: <i>[Signature]</i>	Date: 6/23/2021	Received By: <i>[Signature]</i>	Date: 6/23/2021	Time: 11:07
TAT: Standard ☐ RUSH ☒	Not BD ☐ 2nd BD ☐ 1st BD ☐	Note: RUSH requests will incur charges!		

REPORT TRANSMITTAL DESIRED:
☐ HARD COPY (call cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of Sample: 0.5 *[Signature]* C
Conc: 607 *[Signature]*



CHAIN OF CUSTODY RECORD

Omega C/CD 10485

PAGE

Client ID: 4462 - Element Materials Technology

SDG: 221062927

PM: JLM



FAX: (337) 233-6540

Website: www.element.com

SUB CONTRACTOR: GCAL		COMPANY: Pace Analytical Gulf Coast		SPECIAL INSTRUCTIONS / COMMENTS: 6020- Lithium			
ADDRESS: 7979 Innovation Park Drive							
CITY, STATE, ZIP: Baton Rouge, LA 70820							
PHONE: (225) 769-4900		FAX: (225) 767-5717		EMAIL:			
ACCOUNT #:							
ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Mutual Preserved Weights, HOT Sample Notation, Additional Sample Description
10	21061255-010C 6020_W_SUB (SW6020A)	CCR-10	250HDPEHNO3	Aqueous	6/23/2021 3:00:00 PM	1	10
11	21061255-011C 6020_W_SUB (SW6020A)	CCR-11	250HDPEHNO3	Aqueous	6/24/2021 8:00:00 AM	1	11
12	21061255-012C 6020_W_SUB (SW6020A)	CCR-12	250HDPEHNO3	Aqueous	6/24/2021 8:50:00 AM	1	12
13	21061255-013C 6020_W_SUB (SW6020A)	CCR-13	250HDPEHNO3	Aqueous	6/24/2021 1:00:00 PM	1	13
14	21061255-014C 6020_W_SUB (SW6020A)	CCR-14	250HDPEHNO3	Aqueous	6/24/2021 1:40:00 PM	3	14, 15, 17, 18
15	21061255-015C 6020_W_SUB (SW6020A)	DUP	250HDPEHNO3	Aqueous	6/24/2021	1	15
16	21061255-016C 6020_W_SUB (SW6020A)	FB1	250HDPEHNO3	Aqueous	6/24/2021 2:00:00 PM	1	16

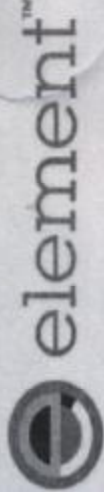
Relinquished By: <i>[Signature]</i>	Date: 6/23/21	Received By: <i>[Signature]</i>	Date: 6/23/21	Time: 0800	REPORT TRANSMITTAL DESIRED: ☐ HARD COPY (add cost) ☐ FAX ☐ EMAIL ☐ ONLINE
Relinquished By: <i>[Signature]</i>	Date: 6/23/21	Received By: <i>[Signature]</i>	Date: 6/23/21	Time: 1107	FOR LAB USE ONLY
Relinquished By: <i>[Signature]</i>	Date: 6/23/21	Received By: <i>[Signature]</i>	Date: 6/23/21	Time: 1107	Temp of sample: 0.3 634°C attempt to Cool?
TAT: Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐				Comm: 15	
Note: RUSH requests will incur surcharge!					



SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 221062927		CHECKLIST		YES	NO
Client PM JLM 4462 - Element Materials Technology	Transport Method CUSTOMER	Samples received with proper thermal preservation?		☒	☐
Profile Number 271810	Received By McQuine, Dodie N	Radioactivity is <1600 cpm? If no, record cpm value in notes section.		☒	☐
Line Item(s) 1 - Water	Receive Date(s) 06/28/21	COC relinquished and complete (including sampleIDs, collect times, and sampler)?		☒	☐
		All containers received in good condition and within hold time?		☒	☐
		All sample labels and containers received match the chain of custody?		☒	☐
		Preservative added to any containers?		☐	☒
		If received, was headspace for VOC water containers < 6mm?		☒	☐
		Samples collected in containers provided by Pace Gulf Coast?		☐	☒
COOLERS		DISCREPANCIES		LAB PRESERVATIONS	
Airbill	Thermometer ID: E34	None		None	
	Temp °C 0.3				
NOTES					



- ☐ 2203 S. Madison St., Muncie, IN 47302
765-747-9000/800-874-3563 Fax 765-747-0228
- ☐ 629 Washington St., Suite 300, Columbus, IN 47201
812-375-0531 Fax 812-375-0531
- ☐ 5738 Industrial Rd., Fort Wayne, IN 46825
219-471-7000 Fax 219-471-7777
- ☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
337-235-0483/800-737-2378
- ☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-9977/800324-5757
Fax 918-828-7756

Chain of Custody Record

Page 1 of 2

Collection		Comp	Grab	Sample Identification / Description	Preserv.		Number / Type of Container	Matrix Code	Test Requested				Comments / Remarks	
Date	Time				HCl HNO ₃ H ₂ O ₂	NaOH Na ₂ S ₂ O ₈			6010/6020 metals	6020 Sub	7470 Mercury			
6/22/15	1230	X		C C R - 1	None/ HNO ₃	3 Plastic	Aq	X	X	X				*6010 Metals: Ba, Be, Cd, Cr, Co, Pb, Mo, Se
↓	1410	X		C C R - 2	None/ HNO ₃	3 Plastic	Aq	X	X	X				**6020 Metals: As, Sb, Ti
↓	1500	X		C C R - 3	None/ HNO ₃	3 Plastic	Aq	X	X	X				***6020 Sub Metal: Li
6/23/15	840	X		C C R - 4	None/ HNO ₃	3 Plastic	Aq	X	X	X				
↓	950	X		C C R - 5	None/ HNO ₃	3 Plastic	Aq	X	X	X				
↓	1040	X		C C R - 6	None/ HNO ₃	3 Plastic	Aq	X	X	X				
↓	1140	X		C C R - 7	None/ HNO ₃	3 Plastic	Aq	X	X	X				
↓	1230	X		C C R - 8	None/ HNO ₃	3 Plastic	Aq	X	X	X				
↓	1415	X		C C R - 9	None/ HNO ₃	3 Plastic	Aq	X	X	X				
↓	1500	X		C C R - 10	None/ HNO ₃	3 Plastic	Aq	X	X	X				UPS / FedEx Airborne / Element Hand / Mail

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time
<i>[Signature]</i>	6/24/15	0020			
<i>[Signature]</i>					

Matrix Codes	Container Types	Shipping Conditions	Requested TAT
DW = Drinking Water AQ = Aqueous GW = Ground Water WW = Waste Water	LIQ = Liquid SLD = Solid SL = Sludge	☒ Iced Temp 23° ☐ Ambient	☐ 24-Hr. ☐ 72-Hr. ☒ Standard ☐ Other

Thank-you for using Element Materials Technology



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

September 23, 2021

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: Entergy: CCR Detection Monitoring

Order No.: 21090547

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 9/17/2021 for the analyses presented in the following report.

In accordance with your instructions, Element Lafayette either conducted or subcontracted these analyses. Subcontracted analyses will be identified in the accompanying case narrative. All relevant sampling information can be found on the attached Chain-of-Custody form. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet the applicable requirements of TNI. Reported results relate only to the items tested.

Where applicable, all soil data, except for 29-B, are reported on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Case Narrative

WO#: 21090547
Date: 9/23/2021

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/15/2021 12:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-001 **Matrix:** AQUEOUS
Client Sample ID CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	39.3	2.50		mg/L	10	9/20/2021 5:52:47 PM
Fluoride	0.264	0.0500		mg/L	1	9/20/2021 12:35:34 PM
Sulfate	3.42	0.250		mg/L	1	9/20/2021 12:35:34 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 7:55:39 PM
Calcium	25.8	0.500		mg/L	1	9/21/2021 7:55:39 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	287	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/15/2021 12:45:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-002 **Matrix:** AQUEOUS
Client Sample ID CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	51.6	2.50		mg/L	10	9/20/2021 6:06:35 PM
Fluoride	0.313	0.0500		mg/L	1	9/20/2021 12:49:21 PM
Sulfate	1.66	0.250		mg/L	1	9/20/2021 12:49:21 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:02:34 PM
Calcium	21.4	0.500		mg/L	1	9/21/2021 8:02:34 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	260	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/15/2021 1:30:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-003 **Matrix:** AQUEOUS
Client Sample ID CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	120	2.50		mg/L	10	9/20/2021 6:20:23 PM
Fluoride	0.360	0.0500		mg/L	1	9/20/2021 1:03:08 PM
Sulfate	3.84	0.250		mg/L	1	9/20/2021 1:03:08 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:04:52 PM
Calcium	30.0	0.500		mg/L	1	9/21/2021 8:04:52 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	390	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 9:55:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	40.8	2.50		mg/L	10	9/20/2021 6:34:10 PM
Fluoride	0.216	0.0500		mg/L	1	9/20/2021 1:16:56 PM
Sulfate	12.2	0.250		mg/L	1	9/20/2021 1:16:56 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	0.105	0.100		mg/L	1	9/21/2021 8:07:09 PM
Calcium	19.0	0.500		mg/L	1	9/21/2021 8:07:09 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	263	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



Element Materials Technology Lafayette
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Website: www.element.com

Analytical Report

(consolidated)

WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 10:45:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	53.6	2.50		mg/L	10	9/20/2021 6:47:58 PM
Fluoride	0.248	0.0500		mg/L	1	9/20/2021 1:30:44 PM
Sulfate	0.378	0.250		mg/L	1	9/20/2021 1:30:44 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	0.103	0.100		mg/L	1	9/21/2021 8:09:28 PM
Calcium	33.5	0.500		mg/L	1	9/21/2021 8:09:28 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	398	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 12:10:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-006 **Matrix:** AQUEOUS
Client Sample ID CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	95.8	2.50		mg/L	10	9/20/2021 2:12:08 PM
Fluoride	0.238	0.0500		mg/L	1	9/20/2021 2:53:30 PM
Sulfate	< 0.250	0.250		mg/L	1	9/20/2021 2:53:30 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:11:46 PM
Calcium	30.4	0.500		mg/L	1	9/21/2021 8:11:46 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	327	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 1:20:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	71.2	2.50		mg/L	10	9/20/2021 7:01:45 PM
Fluoride	0.226	0.0500		mg/L	1	9/20/2021 3:07:18 PM
Sulfate	0.271	0.250		mg/L	1	9/20/2021 3:07:18 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:18:40 PM
Calcium	48.3	0.500		mg/L	1	9/21/2021 8:18:40 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	340	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 2:25:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-008 **Matrix:** AQUEOUS
Client Sample ID CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	77.2	2.50		mg/L	10	9/20/2021 7:15:33 PM
Fluoride	0.165	0.0500		mg/L	1	9/20/2021 3:21:05 PM
Sulfate	1.33	0.250		mg/L	1	9/20/2021 3:21:05 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:20:59 PM
Calcium	11.4	0.500		mg/L	1	9/21/2021 8:20:59 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	292	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 3:15:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	66.5	2.50		mg/L	10	9/20/2021 7:29:20 PM
Fluoride	0.530	0.0500		mg/L	1	9/20/2021 3:34:54 PM
Sulfate	6.72	0.250		mg/L	1	9/20/2021 3:34:54 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:23:17 PM
Calcium	31.9	0.500		mg/L	1	9/21/2021 8:23:17 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	348	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 10:35:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-010 **Matrix:** AQUEOUS
Client Sample ID CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	36.7	2.50		mg/L	10	9/20/2021 8:10:42 PM
Fluoride	0.550	0.0500		mg/L	1	9/20/2021 3:48:41 PM
Sulfate	5.62	0.250		mg/L	1	9/20/2021 3:48:41 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:30:14 PM
Calcium	26.9	0.500		mg/L	1	9/21/2021 8:30:14 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	314	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 11:20:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-011 **Matrix:** AQUEOUS
Client Sample ID CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	25.4	2.50		mg/L	10	9/20/2021 8:24:29 PM
Fluoride	0.629	0.0500		mg/L	1	9/20/2021 4:02:28 PM
Sulfate	3.08	0.250		mg/L	1	9/20/2021 4:02:28 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:32:33 PM
Calcium	29.7	0.500		mg/L	1	9/21/2021 8:32:33 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	237	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 12:10:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-012 **Matrix:** AQUEOUS
Client Sample ID CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	17.0	0.250		mg/L	1	9/20/2021 4:16:14 PM
Fluoride	0.146	0.0500		mg/L	1	9/20/2021 4:16:14 PM
Sulfate	15.1	0.250		mg/L	1	9/20/2021 4:16:14 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:34:53 PM
Calcium	20.2	0.500		mg/L	1	9/21/2021 8:34:53 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	167	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

(consolidated)

WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 1:05:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-013 **Matrix:** AQUEOUS
Client Sample ID: CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	12.0	0.250		mg/L	1	9/20/2021 4:30:02 PM
Fluoride	0.227	0.0500		mg/L	1	9/20/2021 4:30:02 PM
Sulfate	1.55	0.250		mg/L	1	9/20/2021 4:30:02 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:37:13 PM
Calcium	27.8	0.500		mg/L	1	9/21/2021 8:37:13 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	191	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 2:35:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-014 **Matrix:** AQUEOUS
Client Sample ID: CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	11.0	0.250		mg/L	1	9/20/2021 4:43:49 PM
Fluoride	0.176	0.0500		mg/L	1	9/20/2021 4:43:49 PM
Sulfate	0.758	0.250		mg/L	1	9/20/2021 4:43:49 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:39:33 PM
Calcium	16.8	0.500		mg/L	1	9/21/2021 8:39:33 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	147	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-015 **Matrix:** AQUEOUS
Client Sample ID Duplicate

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	54.5	2.50		mg/L	10	9/20/2021 8:38:16 PM
Fluoride	0.220	0.0500		mg/L	1	9/20/2021 5:25:11 PM
Sulfate	< 0.250	0.250		mg/L	1	9/20/2021 5:25:11 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	0.110	0.100		mg/L	1	9/21/2021 8:41:53 PM
Calcium	34.1	0.500		mg/L	1	9/21/2021 8:41:53 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	398	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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Analytical Report

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WO#: 21090547

Date Reported: 9/23/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 3:30:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21090547-016 **Matrix:** AQUEOUS
Client Sample ID: Field Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	< 0.250	0.250		mg/L	1	9/20/2021 5:38:59 PM
Fluoride	< 0.0500	0.0500		mg/L	1	9/20/2021 5:38:59 PM
Sulfate	< 0.250	0.250		mg/L	1	9/20/2021 5:38:59 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	9/21/2021 8:44:13 PM
Calcium	< 0.500	0.500		mg/L	1	9/21/2021 8:44:13 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	< 20.0	20.0		mg/L	1	9/20/2021 10:10:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits
	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode		



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QC SUMMARY REPORT

WO#: 21090547
23-Sep-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 41004

Sample ID	MB-41004	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	9/20/2021	RunNo:	102773			
Client ID:	PBW	Batch ID:	41004	TestNo:	SW6010B			Analysis Date:	9/21/2021	SeqNo:	2507351			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		< 0.100		0.100										
Calcium		< 0.500		0.500										

Sample ID	LCS-41004	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	9/20/2021	RunNo:	102773	
Client ID:	LCSW	Batch ID:	41004	TestNo:	SW6010B			Analysis Date:	9/21/2021	SeqNo:	2507352	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.506	0.100	0.5000	0	101	80	120				
Calcium		49.4	0.500	50.00	0	98.7	80	120				

Sample ID	LCSD-41004	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	9/20/2021	RunNo:	102773	
Client ID:	LCSS02	Batch ID:	41004	TestNo:	SW6010B			Analysis Date:	9/21/2021	SeqNo:	2507353	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.525	0.100	0.5000	0	105	80	120	0.5058	3.69	20	
Calcium		50.3	0.500	50.00	0	101	80	120	49.37	1.92	20	

Sample ID	21090547-006BMS	SampType: MS	TestCode: 6010_W		Units: mg/L	Prep Date: 9/20/2021				RunNo: 102773		
Client ID:	CCR-6	Batch ID: 41004	TestNo: SW6010B			Analysis Date: 9/21/2021				SeqNo: 2507362		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.636	0.100	0.5000	0	127	75	125				S

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as sp



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QC SUMMARY REPORT

WO#: 21090547
23-Sep-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 41004

Sample ID	21090547-006BMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 9/20/2021	RunNo: 102773					
Client ID: CCR-6	Batch ID: 41004	TestNo: SW6010B	Analysis Date: 9/21/2021	SeqNo: 2507362							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	80.9	0.500	50.00	30.44	101	75	125				

Sample ID	21090547-006BMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 9/20/2021	RunNo: 102773					
Client ID: CCR-6	Batch ID: 41004	TestNo: SW6010B	Analysis Date: 9/21/2021	SeqNo: 2507363							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.637	0.100	0.5000	0	127	75	125	0.6357	0.143	20	S
Calcium	81.5	0.500	50.00	30.44	102	75	125	80.93	0.694	20	

NOTES:

S - Spike recovery indicates matrix interference. The method is in control as indicated by the Lab Control Sample.

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as sp



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: 21090547
23-Sep-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R102705

Sample ID	MB-R102705	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	102705		
Client ID:	PBW	Batch ID:	R102705	TestNo:	SM2540C			Analysis Date:	9/20/2021	SeqNo:	2507016		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) < 20.0 20.0

Sample ID	LCS-R102705	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	102705		
Client ID:	LCSW	Batch ID:	R102705	TestNo:	SM2540C			Analysis Date:	9/20/2021	SeqNo:	2507017		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,010 20.0 1,000 0 101 85 115

Sample ID	LCSD-R102705	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	102705		
Client ID:	LCSS02	Batch ID:	R102705	TestNo:	SM2540C			Analysis Date:	9/20/2021	SeqNo:	2507018		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,000 20.0 1,000 0 100 85 115 1,013 1.19 10

Sample ID	21090547-006ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	102705		
Client ID:	CCR-6	Batch ID:	R102705	TestNo:	SM2540C			Analysis Date:	9/20/2021	SeqNo:	2507026		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 317 20.0 327.0 3.11 10

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

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QC SUMMARY REPORT

WO#: 21090547
23-Sep-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R102705

Sample ID	21090547-006ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	102705
Client ID:	CCR-6	Batch ID:	R102705	TestNo:	SM2540C			Analysis Date:	9/20/2021	SeqNo:	2507026
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Sample ID	21090547-015ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	102705
Client ID:	Duplicate	Batch ID:	R102705	TestNo:	SM2540C			Analysis Date:	9/20/2021	SeqNo:	2507036
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filterable)		399		20.0						398.0	0.251 10

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as sp



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QC SUMMARY REPORT

WO#: 21090547
23-Sep-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R102742

Sample ID	MBLK	SampType:	MBLK	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	102742	
Client ID:	PBW	Batch ID:	R102742	TestNo:	E 300.0			Analysis Date:	9/20/2021	SeqNo:	2506233	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250	0.250									
Fluoride		< 0.0500	0.0500									
Sulfate		< 0.250	0.250									

Sample ID	LCS	SampType:	LCS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	102742	
Client ID:	LCSW	Batch ID:	R102742	TestNo:	E 300.0			Analysis Date:	9/20/2021	SeqNo:	2506234	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.1	0.250	10.00	0	101	90	110				
Fluoride		1.93	0.0500	2.000	0	96.4	90	110				
Sulfate		10.0	0.250	10.00	0	100	90	110				

Sample ID	LCSD	SampType:	LCSD	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	102742	
Client ID:	LCSS02	Batch ID:	R102742	TestNo:	E 300.0			Analysis Date:	9/20/2021	SeqNo:	2506235	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.0	0.250	10.00	0	100	90	110	10.07	0.306	15	
Fluoride		1.95	0.0500	2.000	0	97.3	90	110	1.927	1.00	15	
Sulfate		10.0	0.250	10.00	0	100	90	110	10.02	0.235	15	

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

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RL Reporting Limit
U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as sp



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QC SUMMARY REPORT

WO#: 21090547
23-Sep-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R102742

Sample ID	21090281-001AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 102742					
Client ID:	ZZZZZZ	Batch ID: R102742	TestNo: E 300.0	Analysis Date: 9/20/2021	SeqNo: 2506237						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.82	0.250	5.000	0.1551	93.3	80	120				
Fluoride	0.870	0.0500	1.000	0	87.0	80	120				
Sulfate	5.21	0.250	5.000	0.1479	101	80	120				

Sample ID	21090281-001AMSD	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 102742					
Client ID:	ZZZZZZ	Batch ID: R102742	TestNo: E 300.0	Analysis Date: 9/20/2021	SeqNo: 2506238						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.87	0.250	5.000	0.1551	94.3	80	120	4.820	1.05	15	
Fluoride	0.931	0.0500	1.000	0	93.1	80	120	0.8699	6.83	15	
Sulfate	5.23	0.250	5.000	0.1479	102	80	120	5.205	0.408	15	

Sample ID	21090547-006AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 102742					
Client ID:	CCR-6	Batch ID: R102742	TestNo: E 300.0	Analysis Date: 9/20/2021	SeqNo: 2506256						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	144	2.50	50.00	95.85	95.9	80	120				
Fluoride	9.58	0.500	10.00	0.5414	90.3	80	120				
Sulfate	54.0	2.50	50.00	1.520	105	80	120				

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

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U Analyte not detected

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as sp



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QC SUMMARY REPORT

WO#: 21090547
23-Sep-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R102742

Sample ID	21090547-006AMSD	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 102742					
Client ID:	CCR-6	Batch ID: R102742	TestNo: E 300.0	Analysis Date: 9/20/2021	SeqNo: 2506257						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	143	2.50	50.00	95.85	93.7	80	120	143.8	0.774	15	
Fluoride	9.03	0.500	10.00	0.5414	84.9	80	120	9.575	5.90	15	
Sulfate	51.9	2.50	50.00	1.520	101	80	120	53.98	3.83	15	

Qualifiers:

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

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Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21090547**

RcptNo: **1**

Logged by: **Tammy Thibodeaux** **9/17/2021 4:50:00 PM**

Tammy Thibodeaux

Completed By: **Tammy Thibodeaux** **9/20/2021 8:39:00 AM**

Tammy Thibodeaux

Reviewed By: **Caitlin Duplantis** **9/20/2021 10:58:52 AM**

Caitlin Duplantis

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Added year of collection to COC as per samples received.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Not Present			



- ☐ 2203 S. Madison St., Muncie, IN 47302
765-747-9000/800-874-3563 Fax 765-747-0228
- ☐ 629 Washington St., Suite 300, Columbus, IN 47201
812-376-0531 Fax 812-375-0531
- ☐ 5738 Industrial Rd., Fort Wayne, IN 46825
219-471-7000 Fax 219-471-7777

- ☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
337-235-0483/800-737-2378
Fax 337-233-6540
- ☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-9977/800324-5757
Fax 918-828-7756

Chain of Custody Record

Page 1 of 2

Client Name: Pivotal Engineering LLC Project: CCR Detection Monitoring Laboratory Number 21090347

Contact Name: Terry Elnaggar Quote #: 6786

Phone/Fax: (504) 799-3653 Sampler's Signature: *[Signature]*

Collection		Comp	Grab	Sample Identification / Description	Preserv.	Number / Type of Container	Matrix Code	Test Requested				Comments / Remarks
Date	Time							TDS	300: Cl, F, SO4	6010 metals*		
9/15/12	1700		X	C C R - 1	None/ HNO3	2 Plastic	Aq	X	X	X		
	1745		X	C C R - 2	None/ HNO3	2 Plastic	Aq	X	X	X		
	1830		X	C C R - 3	None/ HNO3	2 Plastic	Aq	X	X	X		
9/16/12	0955		X	C C R - 4	None/ HNO3	2 Plastic	Aq	X	X	X		
	1045		X	C C R - 5	None/ HNO3	2 Plastic	Aq	X	X	X		
	1210		X	C C R - 6	None/ HNO3	2 Plastic	Aq	X	X	X		
	1320		X	C C R - 7	None/ HNO3	2 Plastic	Aq	X	X	X		
	1425		X	C C R - 8	None/ HNO3	2 Plastic	Aq	X	X	X		
	1515		X	C C R - 9	None/ HNO3	2 Plastic	Aq	X	X	X		
9/17/12	1035		X	C C R - 10	None/ HNO3	2 Plastic	Aq	X	X	X		

UPS / FedEx - Airborne / Element Hand / Mail

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time

Relinquished by: (Signature) *[Signature]* Date 9/17/12 Time 4:59 PM

Relinquished by: (Signature) *[Signature]* Date 9/17/12 Time 10:50

Requested TAT: ☐ 24-Hr. ☐ 72-Hr. ☒ Standard

Shipping Conditions: ☒ Iced ☐ Ambient

Container Types: G = Glass, P = Plastic, V = Vial

Matrix Codes: DW = Drinking Water, AQ = Aqueous, LIQ = Liquid, GW = Ground Water, O = Oil, SLD = Solid, WW = Waste Water, SO = Soil, SL = Sludge

Thank-you for using Element Materials Technology



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Lafayette, LA 70508-3344
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October 04, 2021

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: CCR Assessment Monitoring

Order No.: 21090548

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 9/17/2021 for the analyses presented in the following report.

In accordance with your instructions, Element Lafayette either conducted or subcontracted these analyses. Subcontracted analyses will be identified in the accompanying case narrative. All relevant sampling information can be found on the attached Chain-of-Custody form. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet the applicable requirements of TNI. Reported results relate only to the items tested.

Where applicable, all soil data, except for 29-B, are reported on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
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Case Narrative

WO#: 21090548
Date: 10/4/2021

CLIENT: Pivotal Engineering LLC

Project: CCR Assessment Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).

The Lithium (6020B) analyses were subcontracted to Pace Analytical. Their report is attached in its entirety.



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Analytical Report

(consolidated)

WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/15/2021 12:00:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-001 **Matrix:** AQUEOUS
Client Sample ID: CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:12:02 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.264	0.0500		mg/L	1	9/20/2021 12:35:34 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.184	0.0100		mg/L	1	9/21/2021 7:55:39 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 7:55:39 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 7:55:39 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 7:55:39 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 7:55:39 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 7:55:39 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 7:55:39 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 7:55:39 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:19:18 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:19:18 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:19:18 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/15/2021 12:45:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-002 **Matrix:** AQUEOUS
Client Sample ID: CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:14:18 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.313	0.0500		mg/L	1	9/20/2021 12:49:21 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.153	0.0100		mg/L	1	9/21/2021 8:02:34 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:02:34 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:02:34 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:02:34 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:02:34 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:02:34 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:02:34 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:02:34 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:22:06 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:22:06 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:22:06 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/15/2021 1:30:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-003 **Matrix:** AQUEOUS
Client Sample ID: CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:21:46 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.360	0.0500		mg/L	1	9/20/2021 1:03:08 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.281	0.0100		mg/L	1	9/21/2021 8:04:52 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:04:52 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:04:52 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:04:52 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:04:52 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:04:52 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:04:52 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:04:52 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:24:54 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:24:54 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:24:54 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



Element Materials Technology Lafayette
2417 W. Pinhook Road
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TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 9:55:00 AM
Project: CCR Assessment Monitoring
Lab ID: 21090548-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:24:02 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.216	0.0500		mg/L	1	9/20/2021 1:16:56 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.107	0.0100		mg/L	1	9/21/2021 8:07:09 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:07:09 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:07:09 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:07:09 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:07:09 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:07:09 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:07:09 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:07:09 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:27:41 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:27:41 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:27:41 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 10:45:00 AM
Project: CCR Assessment Monitoring
Lab ID: 21090548-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:26:18 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.248	0.0500		mg/L	1	9/20/2021 1:30:44 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.219	0.0100		mg/L	1	9/21/2021 8:09:28 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:09:28 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:09:28 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:09:28 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:09:28 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:09:28 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:09:28 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:09:28 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:30:29 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:30:29 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:30:29 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 12:10:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-006 **Matrix:** AQUEOUS
Client Sample ID: CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:28:34 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.238	0.0500		mg/L	1	9/20/2021 2:53:30 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.200	0.0100		mg/L	1	9/21/2021 8:11:46 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:11:46 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:11:46 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:11:46 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:11:46 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:11:46 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:11:46 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:11:46 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:43:18 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:43:18 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:43:18 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 1:20:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:38:50 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.226	0.0500		mg/L	1	9/20/2021 3:07:18 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.242	0.0100		mg/L	1	9/21/2021 8:18:40 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:18:40 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:18:40 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:18:40 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:18:40 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:18:40 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:18:40 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:18:40 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:54:31 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:54:31 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:54:31 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 2:25:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-008 **Matrix:** AQUEOUS
Client Sample ID CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:41:07 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.165	0.0500		mg/L	1	9/20/2021 3:21:05 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.110	0.0100		mg/L	1	9/21/2021 8:20:59 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:20:59 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:20:59 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:20:59 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:20:59 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:20:59 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:20:59 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:20:59 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 12:57:19 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 12:57:19 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 12:57:19 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 3:15:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:43:23 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.530	0.0500		mg/L	1	9/20/2021 3:34:54 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.248	0.0100		mg/L	1	9/21/2021 8:23:17 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:23:17 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:23:17 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:23:17 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:23:17 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:23:17 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:23:17 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:23:17 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:00:07 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:00:07 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:00:07 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 10:35:00 AM
Project: CCR Assessment Monitoring
Lab ID: 21090548-010 **Matrix:** AQUEOUS
Client Sample ID: CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:50:51 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.550	0.0500		mg/L	1	9/20/2021 3:48:41 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.249	0.0100		mg/L	1	9/21/2021 8:30:14 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:30:14 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:30:14 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:30:14 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:30:14 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:30:14 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:30:14 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:30:14 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:02:55 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:02:55 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:02:55 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 11:20:00 AM
Project: CCR Assessment Monitoring
Lab ID: 21090548-011 **Matrix:** AQUEOUS
Client Sample ID: CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:53:11 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.629	0.0500		mg/L	1	9/20/2021 4:02:28 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.156	0.0100		mg/L	1	9/21/2021 8:32:33 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:32:33 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:32:33 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:32:33 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:32:33 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:32:33 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:32:33 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:32:33 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:05:43 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:05:43 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:05:43 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 12:10:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-012 **Matrix:** AQUEOUS
Client Sample ID: CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:55:28 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.146	0.0500		mg/L	1	9/20/2021 4:16:14 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.189	0.0100		mg/L	1	9/21/2021 8:34:53 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:34:53 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:34:53 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:34:53 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:34:53 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:34:53 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:34:53 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:34:53 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:08:31 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:08:31 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:08:31 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 1:05:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-013 **Matrix:** AQUEOUS
Client Sample ID: CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 7:57:44 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.227	0.0500		mg/L	1	9/20/2021 4:30:02 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.101	0.0100		mg/L	1	9/21/2021 8:37:13 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:37:13 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:37:13 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:37:13 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:37:13 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:37:13 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:37:13 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:37:13 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:22:34 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:22:34 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:22:34 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/17/2021 2:35:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-014 **Matrix:** AQUEOUS
Client Sample ID CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 8:00:00 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.176	0.0500		mg/L	1	9/20/2021 4:43:49 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.0785	0.0100		mg/L	1	9/21/2021 8:39:33 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:39:33 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:39:33 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:39:33 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:39:33 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:39:33 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:39:33 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:39:33 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:25:23 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:25:23 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:25:23 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021
Project: CCR Assessment Monitoring
Lab ID: 21090548-015 **Matrix:** AQUEOUS
Client Sample ID Duplicate

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 8:02:16 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.220	0.0500		mg/L	1	9/20/2021 5:25:11 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.222	0.0100		mg/L	1	9/21/2021 8:41:53 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:41:53 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:41:53 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:41:53 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:41:53 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:41:53 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:41:53 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:41:53 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:28:11 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:28:11 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:28:11 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21090548

Date Reported: 10/4/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 9/16/2021 3:30:00 PM
Project: CCR Assessment Monitoring
Lab ID: 21090548-016 **Matrix:** AQUEOUS
Client Sample ID Field Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	9/23/2021 8:04:33 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	< 0.0500	0.0500		mg/L	1	9/20/2021 5:38:59 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:44:13 PM
Beryllium	< 0.00100	0.00100		mg/L	1	9/21/2021 8:44:13 PM
Cadmium	< 0.00500	0.00500		mg/L	1	9/21/2021 8:44:13 PM
Chromium	< 0.0100	0.0100		mg/L	1	9/21/2021 8:44:13 PM
Cobalt	< 0.0100	0.0100		mg/L	1	9/21/2021 8:44:13 PM
Lead	< 0.0100	0.0100		mg/L	1	9/21/2021 8:44:13 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	9/21/2021 8:44:13 PM
Selenium	< 0.0200	0.0200		mg/L	1	9/21/2021 8:44:13 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	9/22/2021 1:30:59 PM
Arsenic	< 10.0	10.0		µg/L	1	9/22/2021 1:30:59 PM
Thallium	< 0.250	0.250		µg/L	1	9/22/2021 1:30:59 PM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: 41004B

Sample ID	21090548-006BMS	SampType: MS	TestCode: 6010_W		Units: mg/L	Prep Date: 9/20/2021			RunNo: 102804			
Client ID:	CCR-6	Batch ID: 41004B	TestNo: SW6010B			Analysis Date: 9/21/2021			SeqNo: 2508028			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		0.702	0.0100	0.5000	0.2001	100	75	125				
Beryllium		0.506	0.00100	0.5000	0	101	75	125				
Cadmium		0.499	0.00500	0.5000	0	99.8	75	125				
Chromium		0.504	0.0100	0.5000	0	101	75	125				
Cobalt		0.502	0.0100	0.5000	0	100	75	125				
Lead		0.492	0.0100	0.5000	0	98.5	75	125				
Molybdenum		0.488	0.0100	0.5000	0	97.6	75	125				
Selenium		0.518	0.0200	0.5000	0	104	75	125				

Sample ID	21090548-006BMSD	SampType: MSD	TestCode: 6010_W		Units: mg/L	Prep Date: 9/20/2021			RunNo: 102804		
Client ID:	CCR-6	Batch ID: 41004B	TestNo: SW6010B			Analysis Date: 9/21/2021			SeqNo: 2508029		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.708	0.0100	0.5000	0.2001	101	75	125	0.7016	0.843	20	
Beryllium	0.512	0.00100	0.5000	0	102	75	125	0.5059	1.14	20	
Cadmium	0.504	0.00500	0.5000	0	101	75	125	0.4992	0.909	20	
Chromium	0.510	0.0100	0.5000	0	102	75	125	0.5040	1.15	20	
Cobalt	0.508	0.0100	0.5000	0	102	75	125	0.5023	1.11	20	
Lead	0.500	0.0100	0.5000	0	99.9	75	125	0.4923	1.46	20	
Molybdenum	0.498	0.0100	0.5000	0	99.5	75	125	0.4880	1.93	20	
Selenium	0.523	0.0200	0.5000	0	105	75	125	0.5180	0.930	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: 41004B

Sample ID MB-41004	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 9/20/2021	RunNo: 102804
Client ID: PBW	Batch ID: 41004B	TestNo: SW6010B		Analysis Date: 9/21/2021	SeqNo: 2509432
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Barium	< 0.0100	0.0100			
Beryllium	< 0.00100	0.00100			
Cadmium	< 0.00500	0.00500			
Chromium	< 0.0100	0.0100			
Cobalt	< 0.0100	0.0100			
Lead	< 0.0100	0.0100			
Molybdenum	< 0.0100	0.0100			
Selenium	< 0.0200	0.0200			

Sample ID LCS-41004	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 9/20/2021	RunNo: 102804
Client ID: LCSW	Batch ID: 41004B	TestNo: SW6010B		Analysis Date: 9/21/2021	SeqNo: 2509432
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Barium	0.491	0.0100	0.5000	0	98.3 80 120
Beryllium	0.493	0.00100	0.5000	0	98.6 80 120
Cadmium	0.486	0.00500	0.5000	0	97.3 80 120
Chromium	0.494	0.0100	0.5000	0	98.7 80 120
Cobalt	0.498	0.0100	0.5000	0	99.7 80 120
Lead	0.485	0.0100	0.5000	0	97.0 80 120
Molybdenum	0.484	0.0100	0.5000	0	96.9 80 120
Selenium	0.510	0.0200	0.5000	0	102 80 120

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: 41004B

Sample ID	LCSD-41004	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	9/20/2021	RunNo:	102804
Client ID:	LCSS02	Batch ID:	41004B	TestNo:	SW6010B			Analysis Date:	9/21/2021	SeqNo:	2509434
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.506	0.0100	0.5000	0	101	80	120	0.4915	2.89	20	
Beryllium	0.507	0.00100	0.5000	0	101	80	120	0.4928	2.82	20	
Cadmium	0.505	0.00500	0.5000	0	101	80	120	0.4863	3.71	20	
Chromium	0.509	0.0100	0.5000	0	102	80	120	0.4936	3.15	20	
Cobalt	0.513	0.0100	0.5000	0	103	80	120	0.4984	2.94	20	
Lead	0.501	0.0100	0.5000	0	100	80	120	0.4850	3.17	20	
Molybdenum	0.498	0.0100	0.5000	0	99.5	80	120	0.4844	2.71	20	
Selenium	0.525	0.0200	0.5000	0	105	80	120	0.5096	2.99	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: 41005

Sample ID	MB-41005	SampType:	MBLK	TestCode:	6020A_W	Units:	µg/L	Prep Date:	9/20/2021	RunNo:	102808			
Client ID:	PBW	Batch ID:	41005	TestNo:	SW6020A			Analysis Date:	9/22/2021	SeqNo:	2508306			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		< 0.250		0.250										
Arsenic		< 0.250		0.250										
Thallium		< 0.250		0.250										

Sample ID	LCS-41005	SampType:	LCS	TestCode:	6020A_W	Units:	µg/L	Prep Date:	9/20/2021	RunNo:	102808			
Client ID:	LCSW	Batch ID:	41005	TestNo:	SW6020A			Analysis Date:	9/22/2021	SeqNo:	2508307			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		466		5.00	500.0	0		93.2	80	120				
Arsenic		476		5.00	500.0	0		95.2	80	120				
Thallium		511		5.00	500.0	0		102	80	120				

Sample ID	LCSD-41005	SampType:	LCSD	TestCode:	6020A_W	Units:	µg/L	Prep Date:	9/20/2021	RunNo:	102808			
Client ID:	LCSS02	Batch ID:	41005	TestNo:	SW6020A			Analysis Date:	9/22/2021	SeqNo:	2508308			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		468		5.00	500.0	0		93.6	80	120	465.9	0.498	20	
Arsenic		487		5.00	500.0	0		97.5	80	120	475.8	2.38	20	
Thallium		509		5.00	500.0	0		102	80	120	510.6	0.305	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: 41005

Sample ID	21090548-006BMS	SampType: MS	TestCode: 6020A_W		Units: µg/L	Prep Date: 9/20/2021			RunNo: 102808			
Client ID:	CCR-6	Batch ID: 41005	TestNo: SW6020A			Analysis Date: 9/22/2021			SeqNo: 2508319			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		500	5.00	500.0	0	100	75	125				
Arsenic		506	5.00	500.0	0.05073	101	75	125				
Thallium		504	5.00	500.0	0	101	75	125				

Sample ID	21090548-006BMSD	SampType: MSD	TestCode: 6020A_W	Units: µg/L	Prep Date: 9/20/2021	RunNo: 102808					
Client ID: CCR-6	Batch ID: 41005	TestNo: SW6020A	Analysis Date: 9/22/2021	SeqNo: 2508320							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	502	5.00	500.0	0	100	75	125	500.3	0.266	20	
Arsenic	512	5.00	500.0	0.05073	102	75	125	506.3	1.16	20	
Thallium	503	5.00	500.0	0	101	75	125	504.2	0.147	20	

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode

H	Holding times for preparation or analysis exceeded
R	RPD outside accepted recovery limits
SDL	Sample detection limit

M	Matrix Interference
RL	Reporting Limit
U	Analyte not detected



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: 41017

Sample ID	MB-41017	SampType:	MBLK	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	9/22/2021	RunNo:	102828	
Client ID:	PBW	Batch ID:	41017	TestNo:	SW7470A			Analysis Date:	9/23/2021	SeqNo:	2508802	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		< 0.000200	0.000200									

Sample ID	LCS-41017	SampType:	LCS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	9/22/2021	RunNo:	102828	
Client ID:	LCSW	Batch ID:	41017	TestNo:	SW7470A			Analysis Date:	9/23/2021	SeqNo:	2508803	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0113	0.000200	0.01000	0	113	80	120				

Sample ID	LCSD-41017	SampType:	LCSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	9/22/2021	RunNo:	102828	
Client ID:	LCSS02	Batch ID:	41017	TestNo:	SW7470A			Analysis Date:	9/23/2021	SeqNo:	2508804	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0114	0.000200	0.01000	0	114	80	120	0.01134	0.219	20	

Sample ID	21090548-006BMS	SampType: MS	TestCode: HG_W_7470	Units: mg/L	Prep Date: 9/22/2021	RunNo: 102828					
Client ID: CCR-6	Batch ID: 41017	TestNo: SW7470A	Analysis Date: 9/23/2021	SeqNo: 2508818							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0110	0.000200	0.01000	0	110	75	125				

Qualifiers:

E	Value above quantitation range
ND	Not Detected at the Reporting Limit
S	Spike Recovery outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode

H	Holding times for preparation or analysis exceeded
R	RPD outside accepted recovery limits
SDL	Sample detection limit

M	Matrix Interference
RL	Reporting Limit
U	Analyte not detected



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: 41017

Sample ID	21090548-006BMSD	SampType: MSD	TestCode: HG_W_7470	Units: mg/L	Prep Date: 9/22/2021	RunNo: 102828					
Client ID: CCR-6	Batch ID: 41017	TestNo: SW7470A	Analysis Date: 9/23/2021	SeqNo: 2508819							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0110	0.000200	0.01000	0	110	75	125	0.01097	0.392	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: R102746

Sample ID	MBLK	SampType:	MBLK	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	102746
Client ID:	PBW	Batch ID:	R102746	TestNo:	E 300.0			Analysis Date:	9/20/2021	SeqNo:	2506368
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		< 0.0500		0.0500							

Sample ID	LCS	SampType:	LCS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	102746
Client ID:	LCSW	Batch ID:	R102746	TestNo:	E 300.0			Analysis Date:	9/20/2021	SeqNo:	2506369
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		1.93		0.0500	2.000	0	96.4	90	110		

Sample ID	LCSD	SampType:	LCSD	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	102746
Client ID:	LCSS02	Batch ID:	R102746	TestNo:	E 300.0			Analysis Date:	9/20/2021	SeqNo:	2506370
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		1.95		0.0500	2.000	0	97.3	90	110	1.927	1.00 15

Sample ID	21090281-001AMS	SampType:	MS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	102746
Client ID:	ZZZZZZ	Batch ID:	R102746	TestNo:	E 300.0			Analysis Date:	9/20/2021	SeqNo:	2506372
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Fluoride		0.870		0.0500	1.000	0	87.0	80	120		

Qualifiers:
E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21090548
04-Oct-21

Client: Pivotal Engineering LLC
Project: CCR Assessment Monitoring

BatchID: R102746

Sample ID	21090281-001AMSD	SampType: MSD	TestCode: 300.0		Units: mg/L		Prep Date:			RunNo: 102746		
Client ID:	ZZZZZZ	Batch ID: R102746	TestNo: E 300.0		Analysis Date: 9/20/2021				SeqNo: 2506373			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		0.931	0.0500	1.000	0	93.1	80	120	0.8699	6.83	15	

Sample ID	21090548-006AMS	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 102746					
Client ID: CCR-6	Batch ID: R102746	TestNo: E 300.0	Analysis Date: 9/20/2021	SeqNo: 2506386							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	9.58	0.500	10.00	0.5414	90.3	80	120				

Sample ID	21090548-006AMSD	SampType: MSD	TestCode: 300.0		Units: mg/L	Prep Date:			RunNo: 102746			
Client ID:	CCR-6	Batch ID: R102746	TestNo: E 300.0			Analysis Date: 9/20/2021			SeqNo: 2506387			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		9.03	0.500	10.00	0.5414	84.9	80	120	9.575	5.90	15	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21090548**

RcptNo: **1**

Logged by: **Tammy Thibodeaux** **9/17/2021 4:50:00 PM**

Tammy Thibodeaux

Completed By: **Tammy Thibodeaux** **9/20/2021 9:02:12 AM**

Tammy Thibodeaux

Reviewed By: **Caitlin Duplantis** **9/20/2021 10:57:59 AM**

Caitlin Duplantis

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Added year of collection to COC as per sample received.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Not Present			



LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 10/01/2021

Report # 221092129



Project 21090548

Samples Collected 9/15/21 - 9/17/21

<i>Deliver To</i>	<i>Additional Recipients</i>
Annie Reedy Element Materials Technology 2417 W Pinhook Rd Lafayette, LA 70508 800-737-2378	Kelli Foreman, Element Materials Technology Caitlin Duplan, Element Materials Technology Christina Thibaux, Element Materials Technology Rhonda David, Element Materials Technology Buffy Bryant, Element Materials Technology





Report#: 221092129

Project ID: 21090548

Report Date: 10/01/2021

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % difference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 221092129



Report#: 221092129

Project ID: 21090548

Report Date: 10/01/2021

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234



Report#: 221092129

Project ID: 21090548

Report Date: 10/01/2021

Case Narrative

Client: Element Materials Technology **Report:** 221092129

Pace Analytical Gulf Coast received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).



Report#: 221092129
Project ID: 21090548

Report Date: 10/01/2021

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22109212901	CCR-1	Water	9/15/21 12:00	9/21/21 09:23
22109212902	CCR-2	Water	9/15/21 12:45	9/21/21 09:23
22109212903	CCR-3	Water	9/15/21 13:30	9/21/21 09:23
22109212904	CCR-4	Water	9/16/21 09:55	9/21/21 09:23
22109212905	CCR-5	Water	9/16/21 10:45	9/21/21 09:23
22109212906	CCR-6	Water	9/16/21 12:10	9/21/21 09:23
22109212907	CCR-7	Water	9/16/21 13:20	9/21/21 09:23
22109212908	CCR-8	Water	9/16/21 14:25	9/21/21 09:23
22109212909	CCR-9	Water	9/16/21 15:15	9/21/21 09:23
22109212910	CCR-10	Water	9/17/21 10:35	9/21/21 09:23
22109212911	CCR-11	Water	9/17/21 11:20	9/21/21 09:23
22109212912	CCR-12	Water	9/17/21 12:10	9/21/21 09:23
22109212913	CCR-13	Water	9/17/21 13:05	9/21/21 09:23
22109212914	CCR-14	Water	9/17/21 14:35	9/21/21 09:23
22109212915	DUPLICATE	Water	9/16/21 00:01	9/21/21 09:23
22109212916	FIELD BLANK	Water	9/16/21 15:30	9/21/21 09:23
22109212917	CCR-6-MS	Water	9/16/21 12:10	9/21/21 09:23
22109212918	CCR-6-MSD	Water	9/16/21 12:10	9/21/21 09:23



Report#: 221092129

Project ID: 21090548

Report Date: 10/01/2021

Sample Results

CCR-1	Collect Date	09/15/2021 12:00	Lab ID	22109212901
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 16:46	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	21.7	5.00	ug/L

CCR-2	Collect Date	09/15/2021 12:45	Lab ID	22109212902
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 16:50	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	20.7	5.00	ug/L

CCR-3	Collect Date	09/15/2021 13:30	Lab ID	22109212903
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 16:53	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	26.2	5.00	ug/L

CCR-4	Collect Date	09/16/2021 09:55	Lab ID	22109212904
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 16:57	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	15.8	5.00	ug/L



Report#: 221092129
Project ID: 21090548

Report Date: 10/01/2021

Sample Results

CCR-5	Collect Date	09/16/2021 10:45	Lab ID	22109212905
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:00	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	19.3	5.00	ug/L

CCR-6	Collect Date	09/16/2021 12:10	Lab ID	22109212906
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:04	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	11.7	5.00	ug/L

CCR-7	Collect Date	09/16/2021 13:20	Lab ID	22109212907
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:28	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	11.7	5.00	ug/L

CCR-8	Collect Date	09/16/2021 14:25	Lab ID	22109212908
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:31	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	35.6	5.00	ug/L



Report#: 221092129
Project ID: 21090548

Report Date: 10/01/2021

Sample Results

CCR-9	Collect Date	09/16/2021 15:15	Lab ID	22109212909
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:35	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	10.2	5.00	ug/L

CCR-10	Collect Date	09/17/2021 10:35	Lab ID	22109212910
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:38	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	8.07	5.00	ug/L

CCR-11	Collect Date	09/17/2021 11:20	Lab ID	22109212911
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:42	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	7.67	5.00	ug/L

CCR-12	Collect Date	09/17/2021 12:10	Lab ID	22109212912
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:45	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	25.7	5.00	ug/L



Report#: 221092129
Project ID: 21090548

Report Date: 10/01/2021

Sample Results

CCR-13	Collect Date	09/17/2021 13:05	Lab ID	22109212913
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:49	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	21.9	5.00	ug/L

CCR-14	Collect Date	09/17/2021 14:35	Lab ID	22109212914
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:52	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	15.9	5.00	ug/L

DUPLICATE	Collect Date	09/16/2021 00:01	Lab ID	22109212915
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:56	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	19.5	5.00	ug/L

FIELD BLANK	Collect Date	09/16/2021 15:30	Lab ID	22109212916
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:59	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	ND	5.00	ug/L



Report#: 221092129

Project ID: 21090548

Report Date: 10/01/2021

Sample Results

CCR-6-MS	Collect Date	09/16/2021 12:10	Lab ID	22109212917
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:07	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	232	5.00	ug/L

CCR-6-MSD	Collect Date	09/16/2021 12:10	Lab ID	22109212918
	Receive Date	09/21/2021 09:23	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
09/29/21 07:30	722073	EPA 3010A	1	09/30/21 17:11	722293	LWZ	

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	240	5.00	ug/L



Report#: 221092129

Project ID: 21090548

Report Date: 10/01/2021

Inorganics QC Summary

Analytical Batch 722293	Client ID Lab ID	MB722073 2244694	LCS722073 2244695				
Prep Batch 722073	Sample Type Prep Date	MB 09/29/21 07:30	LCS 09/29/21 07:30				
Prep Method EPA 3010A	Analysis Date Matrix	09/30/21 16:39 Water	09/30/21 16:43 Water				
EPA 6020B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R
Lithium	7439-93-2	ND	5.00	250	244	98	80 - 120

Analytical Batch 722293	Client ID Lab ID	CCR-6 22109212906	CCR-6-MS 22109212917 MS					CCR-6-MSD 22109212918 MSD				
Prep Batch 722073	Sample Type Prep Date	SAMPLE 09/29/2021 07:30	09/29/21 07:30					09/29/21 07:30				
Prep Method EPA 3010A	Analysis Date Matrix	09/30/2021 17:04 Water	09/30/21 17:07 Water					09/30/21 17:11 Water				
EPA 6020B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Lithium	7439-93-2	11.7	5.00	250	232	88	80 - 120	250	240	91	3	20



CHAIN OF CUSTODY RECORD

Omega COULD 10733

PAGE 1

OF 2

ADDRESS
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Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 233-0483
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SUB CONTRACTOR: GCAL COMPANY: Pace Analytical Gulf Coast
ADDRESS: 7979 Innovation Park Drive
CITY, STATE, ZIP: Baton Rouge, LA 70820
PHONE: (225) 769-4900 FAX: (225) 767-5717 EMAIL:
ACCOUNT #:

SPECIAL INSTRUCTIONS / COMMENTS:
ELA 038533 PO
3.4E34 37

ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Method Preserved Weights HOT Sample Notation, Additional Sample Description.
1	21090548-001C 6020_W_SUB (SW6020A)	CCR-1	250HDPEHNO3	Aqueous	9/15/2021 12:00:00 PM	1	1
2	21090548-002C 6020_W_SUB (SW6020A)	CCR-2	250HDPEHNO3	Aqueous	9/15/2021 12:45:00 PM	1	2
3	21090548-003C 6020_W_SUB (SW6020A)	CCR-3	250HDPEHNO3	Aqueous	9/15/2021 1:30:00 PM	1	3
4	21090548-004C 6020_W_SUB (SW6020A)	CCR-4	250HDPEHNO3	Aqueous	9/16/2021 9:55:00 AM	1	4
5	21090548-005C 6020_W_SUB (SW6020A)	CCR-5	250HDPEHNO3	Aqueous	9/16/2021 10:45:00 AM	1	5
6	21090548-006C 6020_W_SUB (SW6020A)	CCR-6	250HDPEHNO3	Aqueous	9/16/2021 12:15:00 PM	3	6
7	21090548-007C 6020_W_SUB (SW6020A)	CCR-7	250HDPEHNO3	Aqueous	9/16/2021 1:20:00 PM	1	7
8	21090548-008C 6020_W_SUB (SW6020A)	CCR-8	250HDPEHNO3	Aqueous	9/16/2021 2:25:00 PM	1	8
9	21090548-009C 6020_W_SUB (SW6020A)	CCR-9	250HDPEHNO3	Aqueous	9/16/2021 3:15:00 PM	1	9

Client ID: 4462 - Element Materials Technology

SDG: 221092129

PM: JLM



Relinquished to: *Pace Kfe* Date: 9-11-21 Time: 0705
Relinquished by: *Pace Kfe* Date: 9-11-21 Time: 0705
Relinquished to: *Pace Kfe* Date: 9-11-21 Time: 0705
Relinquished by: *Pace Kfe* Date: 9-11-21 Time: 0705

1.1.1) Sample: ☐ Result: ☐ Next BD: ☐ 3rd BD: ☐
Note: 100% requires will incur surcharge!



CHAIN OF CUSTODY RECORD

Omega COCID 10733

PAGE: 2

OF: 2

ADDRESS
Element Materials Technology
Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 233-0483
FAX: (337) 233-6540
Website: www.element.com

SUB CONTRACTOR: GCAL	COMPANY: Pace Analytical Gulf Coast
ADDRESS: 7979 Innovation Park Drive	
CITY, STATE, ZIP: Baton Rouge, LA 70820	
PHONE: (225) 769-4900	FAX: (225) 767-5717
ACCOUNT #:	TRAFFIC

SPECIAL INSTRUCTIONS / COMMENTS:

EIA 038533 PO

3.4 E34 374m

ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Michael Preserved Weights (NOT Sample Notation, Additional Sample Description)
10	21090548-010C 6020_W_SUB (SW6020A)	CCR-10	250HDPETHNO3	Aqueous	9/17/2021 10:35:00 AM	1	10
11	21090548-011C 6020_W_SUB (SW6020A)	CCR-11	250HDPETHNO3	Aqueous	9/17/2021 11:20:00 AM	1	11
12	21090548-012C 6020_W_SUB (SW6020A)	CCR-12	250HDPETHNO3	Aqueous	9/17/2021 12:10:00 PM	1	12
13	21090548-013C 6020_W_SUB (SW6020A)	CCR-13	250HDPETHNO3	Aqueous	9/17/2021 1:05:00 PM	1	13
14	21090548-014C 6020_W_SUB (SW6020A)	CCR-14	250HDPETHNO3	Aqueous	9/17/2021 2:35:00 PM	1	14
15	21090548-015C 6020_W_SUB (SW6020A)	Duplicate	250HDPETHNO3	Aqueous	9/16/2021	1	15
16	21090548-016C 6020_W_SUB (SW6020A)	Field Blank	250HDPETHNO3	Aqueous	9/16/2021 3:30:00 PM	1	16

Client ID: 4462 - Element Materials Technology

SDG: 221092129

PM: JLM

☐ HARD COPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples: _____ °C Attempt to Cool? _____

Comments: _____

Relinquished By: <i>[Signature]</i>	Date: 9-11-21	Time: 0705	Received By: <i>[Signature]</i>	Date: 9-11-21	Time: 0705
Relinquished By: <i>[Signature]</i>	Date: 9-11-21	Time: 0933	Received By: <i>[Signature]</i>	Date: 9-11-21	Time: 0933
Relinquished By: <i>[Signature]</i>	Date: 9-11-21	Time: 0933	Received By: <i>[Signature]</i>	Date: 9-11-21	Time: 0933

TAXI: ☐ Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 1st BD ☐

Notes: RUSH requests will incur surcharge!



SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 221092129		CHECKLIST	YES	NO
Client PM JLM 4462 - Element Materials Technology	Transport Method CUSTOMER	Samples received with proper thermal preservation?	☒	☐
Profile Number 271810	Received By McQuine, Dodie N	Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☒	☐
Line Item(s) 13 - LI	Receive Date(s) 09/21/21	COC relinquished and complete (including sample IDs, collect times, and sampler)?	☒	☐
		All containers received in good condition and within hold time?	☒	☐
		All sample labels and containers received match the chain of custody?	☒	☐
		Preservative added to any containers?	☐	☒
		If received, was headspace for VOC water containers < 6mm?	☒	☐
		Samples collected in containers provided by Pace Gulf Coast?	☐	☒
COOLERS		LAB PRESERVATIONS		
Airbill	Thermometer ID: E34	DISCREPANCIES	None	
	Temp °C 3.4			
NOTES				



- ☐ 2203 S. Madison St., Muncie, IN 47302
765-747-9000/800-874-3563 Fax 765-747-0228
- ☐ 629 Washington St., Suite 300, Columbus, IN 47201
812-375-0531 Fax 812-375-0531
- ☐ 5738 Industrial Rd., Fort Wayne, IN 46825
219-471-7000 Fax 219-471-7777

- ☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
337-235-0483/800-737-2378
Fax 337-233-8540
- ☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-9977/800324-5757
Fax 918-828-7756

Chain of Custody Record

Page <u>1</u> of <u>2</u>		Laboratory Number <u>21090548</u>	
Client Name: Pivotal Engineering LLC		Project: CCR Assessment Monitoring	
Contact Name: Terry Elnaggar		Quote #: 6786	
Phone/Fax: (504) 799-3653		Sampler's Signature: <i>Terry Elnaggar</i>	
Collection Date		Sample Identification / Description	
Date	Time	Comp	Tab
9/15/21	1200	X	C C R - 1
↓	1245	X	C C R - 2
↓	1330	X	C C R - 3
9/16/21	955	X	C C R - 4
↓	1015	X	C C R - 5
↓	1210	X	C C R - 6
↓	1320	X	C C R - 7
↓	1425	X	C C R - 8
↓	1515	X	C C R - 9
9/17/21	1035	X	C C R - 10
All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.		P.O. Number	
Relinquished by: (Signature) <i>Pivotal Eng</i>		Received by: (Signature)	
Relinquished by: (Signature)		Received by: (Signature)	
Date		Date	
Time		Time	
9/17/21		9/17/21	
450 PM		1650	
Shipping Conditions		Requested TAT	
☒ Iced <i>LI</i>		☐ 24-Hr. ☐ 72-Hr.	
Temp. <i>LI</i>		☐ 48-Hr. ☒ Standard	
☐ Ambient <i>LI</i>		☐ Other	
Container Types		Matrix Codes	
G = Glass		AQ = Aqueous	
P = Plastic		O = Oil	
V = Vial		SL = Sludge	
LIQ = Liquid		SO = Soil	
SLD = Solid			
SL = Sludge			
DW = Drinking Water			
GW = Ground Water			
WW = Waste Water			
Thank-you for using Element Materials Technology		UPS / FedEx Airborne / Element Hand / Mail	



- ☐ 2203 S. Madison St., Muncie, IN 47302
765-747-9000/800-874-3563 Fax 765-747-0228
- ☐ 629 Washington St., Suite 300, Columbus, IN 47201
812-375-0531 Fax 812-375-0531
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- ☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
337-235-0483/800-737-2378
Fax 337-233-6540
- ☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-8977/800324-5757
Fax 918-828-7756

Chain of Custody Record

Page <u>2</u> of <u>2</u>		Laboratory Number <u>21090343</u>	
Client Name: Pivotal Engineering LLC		Project: CCR Assessment Monitoring	
Contact Name: Terry Elhaggar		Quote #: 6786	
Phone/Fax: (504) 799-3653		Sampler's Signature:	
Sample Identification / Description		Preserv.	
Collection		HCl HNO ₃ H ₂ SO ₄ NaOH Na ₂ S ₂ O ₃	
Date	Time	Comp	Grab
9/17/21	1120	C	X
9/17/21	1210	C	X
9/17/21	1305	C	X
9/17/21	1435	C	X
9/16/21	1215	M	X
9/16/21	1220	M	X
9/16/21	—	D	X
9/16/21	1530	F	X
9/17/21	1650	B	X
Sample Identification / Description		Matrix Code	
300: Fluoride		Aq	
***6020 Sub		Aq	
7470 Mercury		Aq	
Comments / Remarks		*6010**6020 metals	
*6010 Metals: Ba, Be, Cd, Cr, Co, Pb, Mo, Se		X	
**6020 Metals: As, Sb, Ti		X	
***6020 Sub Metal: Li		X	
UPS / FedEx - Airborne / Element Hand / Mail		X	
All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.		P.O. Number	
Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Date	Time	Date	Time
9/17/21	1650	9/17/21	1650
Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Date	Time	Date	Time
9/17/21	1650	9/17/21	1650
Matrix Codes		Requested TAT	
DW = Drinking Water AQ = Aqueous	LIQ = Liquid	☐ 24-Hr. ☐ 72-Hr.	
GW = Ground Water O = Oil	SLD = Solid	☐ 48-Hr. ☒ Standard	
WW = Waste Water SO = Soil	SL = Sludge	☐ Other	
Container Types		Shipping Conditions	
G = Glass		☒ Iced ☐ Ambient	
P = Plastic		Temp. <u>41</u>	
V = Vial		45	
Thank-you for using Element Materials Technology			



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

December 30, 2021

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: Entergy: CCR Detection Monitoring

Order No.: 21120845

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 12/16/2021 for the analyses presented in the following report.

In accordance with your instructions, Element Lafayette either conducted or subcontracted these analyses. Subcontracted analyses will be identified in the accompanying case narrative. All relevant sampling information can be found on the attached Chain-of-Custody form. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet the applicable requirements of TNI. Reported results relate only to the items tested.

Where applicable, all soil data, except for 29-B, are reported on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Case Narrative

WO#: 21120845
Date: 12/30/2021

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 12:05:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-001 **Matrix:** AQUEOUS
Client Sample ID CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	44.9	2.50		mg/L	10	12/20/2021 2:44:51 PM
Fluoride	0.321	0.0500		mg/L	1	12/20/2021 9:13:47 AM
Sulfate	3.25	0.250		mg/L	1	12/20/2021 9:13:47 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/21/2021 2:47:51 PM
Calcium	27.8	0.500		mg/L	1	12/21/2021 2:47:51 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	491	10.0		mg/L	1	12/17/2021 12:56:00 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 1:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-002 **Matrix:** AQUEOUS
Client Sample ID CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	56.6	2.50		mg/L	10	12/20/2021 2:58:39 PM
Fluoride	0.322	0.0500		mg/L	1	12/20/2021 9:27:23 AM
Sulfate	1.63	0.250		mg/L	1	12/20/2021 9:27:23 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/21/2021 2:50:10 PM
Calcium	22.3	0.500		mg/L	1	12/21/2021 2:50:10 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	380	10.0		mg/L	1	12/17/2021 12:56:00 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at test code



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 1:50:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-003 **Matrix:** AQUEOUS
Client Sample ID CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	126	2.50		mg/L	10	12/20/2021 3:12:26 PM
Fluoride	0.367	0.0500		mg/L	1	12/20/2021 9:41:11 AM
Sulfate	3.64	0.250		mg/L	1	12/20/2021 9:41:11 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/21/2021 2:57:05 PM
Calcium	31.0	0.500		mg/L	1	12/21/2021 2:57:05 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	665	10.0		mg/L	1	12/17/2021 12:56:00 PM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at test code



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Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 3:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	47.9	2.50		mg/L	10	12/20/2021 3:26:14 PM
Fluoride	0.255	0.0500		mg/L	1	12/20/2021 9:54:59 AM
Sulfate	12.8	0.250		mg/L	1	12/20/2021 9:54:59 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	0.108	0.100		mg/L	1	12/21/2021 2:59:24 PM
Calcium	19.9	0.500		mg/L	1	12/21/2021 2:59:24 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	297	10.0		mg/L	1	12/20/2021 11:28:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 10:30:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	79.2	2.50		mg/L	10	12/20/2021 3:40:01 PM
Fluoride	0.311	0.0500		mg/L	1	12/20/2021 10:08:47 AM
Sulfate	< 0.250	0.250		mg/L	1	12/20/2021 10:08:47 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	0.112	0.100		mg/L	1	12/21/2021 3:01:43 PM
Calcium	35.4	0.500		mg/L	1	12/21/2021 3:01:43 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	433	10.0		mg/L	1	12/20/2021 11:28:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 11:20:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-006 **Matrix:** AQUEOUS
Client Sample ID CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	63.5	2.50		mg/L	10	12/20/2021 3:53:49 PM
Fluoride	0.229	0.0500		mg/L	1	12/20/2021 10:22:35 AM
Sulfate	< 0.250	0.250		mg/L	1	12/20/2021 10:22:35 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	0.104	0.100		mg/L	1	12/21/2021 3:04:03 PM
Calcium	32.2	0.500		mg/L	1	12/21/2021 3:04:03 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: HXW	
Total Dissolved Solids (Residue, Filterable)	349	10.0		mg/L	1	12/20/2021 11:28:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 12:10:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	91.6	2.50		mg/L	10	12/20/2021 4:07:38 PM
Fluoride	0.203	0.0500		mg/L	1	12/20/2021 10:36:23 AM
Sulfate	< 0.250	0.250		mg/L	1	12/20/2021 10:36:23 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/21/2021 3:06:22 PM
Calcium	50.2	0.500		mg/L	1	12/21/2021 3:06:22 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	334	10.0		mg/L	1	12/20/2021 11:28:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 1:25:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-008 **Matrix:** AQUEOUS
Client Sample ID CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	83.9	2.50		mg/L	10	12/20/2021 4:21:24 PM
Fluoride	0.181	0.0500		mg/L	1	12/20/2021 10:50:12 AM
Sulfate	1.24	0.250		mg/L	1	12/20/2021 10:50:12 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/21/2021 3:08:40 PM
Calcium	12.3	0.500		mg/L	1	12/21/2021 3:08:40 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	315	10.0		mg/L	1	12/20/2021 11:28:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 2:15:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	71.5	2.50		mg/L	10	12/20/2021 4:35:12 PM
Fluoride	0.527	0.0500		mg/L	1	12/20/2021 11:04:00 AM
Sulfate	6.70	0.250		mg/L	1	12/20/2021 11:04:00 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/21/2021 3:10:59 PM
Calcium	32.5	0.500		mg/L	1	12/21/2021 3:10:59 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	713	10.0		mg/L	1	12/20/2021 11:28:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 3:00:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-010 **Matrix:** AQUEOUS
Client Sample ID CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Chloride	47.4	2.50		mg/L	10	12/20/2021 4:49:00 PM
Fluoride	0.585	0.0500		mg/L	1	12/20/2021 11:17:47 AM
Sulfate	5.15	0.250		mg/L	1	12/20/2021 11:17:47 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Boron	< 0.100	0.100		mg/L	1	12/27/2021 9:04:21 PM
Calcium	25.3	0.500		mg/L	1	12/27/2021 9:04:21 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: HXW	
Total Dissolved Solids (Residue, Filterable)	344	10.0		mg/L	1	12/20/2021 11:28:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at test code



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Analytical Report

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WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 3:40:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-011 **Matrix:** AQUEOUS
Client Sample ID: CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	29.9	2.50		mg/L	10	12/20/2021 5:30:23 PM
Fluoride	0.795	0.0500		mg/L	1	12/20/2021 11:59:11 AM
Sulfate	3.03	0.250		mg/L	1	12/20/2021 11:59:11 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/27/2021 9:06:41 PM
Calcium	26.7	0.500		mg/L	1	12/27/2021 9:06:41 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	242	10.0		mg/L	1	12/21/2021 11:56:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at test code



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Analytical Report

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WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 10:15:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-012 **Matrix:** AQUEOUS
Client Sample ID CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	17.8	0.250		mg/L	1	12/20/2021 12:12:59 PM
Fluoride	0.116	0.0500		mg/L	1	12/20/2021 12:12:59 PM
Sulfate	14.7	0.250		mg/L	1	12/20/2021 12:12:59 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/27/2021 9:09:01 PM
Calcium	18.7	0.500		mg/L	1	12/27/2021 9:09:01 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	346	10.0		mg/L	1	12/21/2021 11:56:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 11:10:00 AM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-013 **Matrix:** AQUEOUS
Client Sample ID: CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	13.0	0.250		mg/L	1	12/20/2021 12:26:47 PM
Fluoride	0.257	0.0500		mg/L	1	12/20/2021 12:26:47 PM
Sulfate	0.799	0.250		mg/L	1	12/20/2021 12:26:47 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/27/2021 9:11:21 PM
Calcium	20.6	0.500		mg/L	1	12/27/2021 9:11:21 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	158	10.0		mg/L	1	12/21/2021 11:56:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at test code



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Analytical Report

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WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 12:10:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-014 **Matrix:** AQUEOUS
Client Sample ID CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	12.6	0.250		mg/L	1	12/20/2021 1:08:11 PM
Fluoride	0.148	0.0500		mg/L	1	12/20/2021 1:08:11 PM
Sulfate	0.710	0.250		mg/L	1	12/20/2021 1:08:11 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/27/2021 9:22:58 PM
Calcium	15.8	0.500		mg/L	1	12/27/2021 9:22:58 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	143	10.0		mg/L	1	12/21/2021 11:56:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-015 **Matrix:** AQUEOUS
Client Sample ID DUP

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	17.8	0.250		mg/L	1	12/20/2021 1:21:59 PM
Fluoride	0.154	0.0500		mg/L	1	12/20/2021 1:21:59 PM
Sulfate	14.8	0.250		mg/L	1	12/20/2021 1:21:59 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/27/2021 9:25:18 PM
Calcium	18.9	0.500		mg/L	1	12/27/2021 9:25:18 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	190	10.0		mg/L	1	12/21/2021 11:56:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120845

Date Reported: 12/30/2021

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 12:15:00 PM
Project: Entergy: CCR Detection Monitoring
Lab ID: 21120845-016 **Matrix:** AQUEOUS
Client Sample ID FB 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Chloride	< 0.250	0.250		mg/L	1	12/20/2021 1:35:48 PM
Fluoride	< 0.0500	0.0500		mg/L	1	12/20/2021 1:35:48 PM
Sulfate	< 0.250	0.250		mg/L	1	12/20/2021 1:35:48 PM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Boron	< 0.100	0.100		mg/L	1	12/27/2021 9:27:38 PM
Calcium	< 0.500	0.500		mg/L	1	12/27/2021 9:27:38 PM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	107	10.0		mg/L	1	12/21/2021 11:56:00 AM

Qualifiers:	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at test code



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 42026

Sample ID	MB-42026	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/17/2021	RunNo:	105323			
Client ID:	PBW	Batch ID:	42026	TestNo:	SW6010B			Analysis Date:	12/21/2021	SeqNo:	2578198			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		< 0.100		0.100										
Calcium		< 0.500		0.500										

Sample ID	LCS-42026	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/17/2021	RunNo:	105323	
Client ID:	LCSW	Batch ID:	42026	TestNo:	SW6010B			Analysis Date:	12/21/2021	SeqNo:	2578199	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.528	0.100	0.5000	0	106	80	120				
Calcium		51.9	0.500	50.00	0	104	80	120				

Sample ID	LCSD-42026	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/17/2021	RunNo:	105323	
Client ID:	LCSS02	Batch ID:	42026	TestNo:	SW6010B			Analysis Date:	12/21/2021	SeqNo:	2578200	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		0.531	0.100	0.5000	0	106	80	120	0.5281	0.518	20	
Calcium		51.7	0.500	50.00	0	103	80	120	51.85	0.238	20	

Sample ID	21120818-001FMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/17/2021	RunNo: 105323					
Client ID: ZZZZZZ	Batch ID: 42026	TestNo: SW6010B	Analysis Date: 12/21/2021	SeqNo: 2578205							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.546	0.100	0.5000	0	109	75	125				

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 42026

Sample ID	21120818-001FMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/17/2021	RunNo: 105323					
Client ID: ZZZZZZ	Batch ID: 42026	TestNo: SW6010B	Analysis Date: 12/21/2021	SeqNo: 2578205							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	53.2	0.500	50.00	1.375	104	75	125				

Sample ID	21120818-001FMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 12/17/2021	RunNo: 105323					
Client ID: ZZZZZZ	Batch ID: 42026	TestNo: SW6010B	Analysis Date: 12/21/2021	SeqNo: 2578206							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.549	0.100	0.5000	0	110	75	125	0.5457	0.656	20	
Calcium	52.5	0.500	50.00	1.375	102	75	125	53.21	1.33	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: 42061

Sample ID	21120845-013BMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/21/2021	RunNo: 105450					
Client ID: CCR-13	Batch ID: 42061	TestNo: SW6010B	Analysis Date: 12/27/2021	SeqNo: 2583099							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.502	0.100	0.5000	0	100	75	125				
Calcium	58.2	0.500	50.00	20.58	75.3	75	125				

Sample ID	21120845-013BMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 12/21/2021	RunNo: 105450					
Client ID: CCR-13	Batch ID: 42061	TestNo: SW6010B	Analysis Date: 12/27/2021	SeqNo: 2583102							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.526	0.100	0.5000	0	105	75	125	0.5022	4.69	20	
Calcium	64.0	0.500	50.00	20.58	86.7	75	125	58.22	9.39	20	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105206

Sample ID	MB-R105206	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105206		
Client ID:	PBW	Batch ID:	R105206	TestNo:	SM2540C			Analysis Date:	12/17/2021	SeqNo:	2576407		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) < 10.0 10.0

Sample ID	LCS-R105206	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105206		
Client ID:	LCSW	Batch ID:	R105206	TestNo:	SM2540C			Analysis Date:	12/17/2021	SeqNo:	2576408		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,010 10.0 1,000 0 101 85 115

Sample ID	LCSD-R105206	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105206		
Client ID:	LCSS02	Batch ID:	R105206	TestNo:	SM2540C			Analysis Date:	12/17/2021	SeqNo:	2576409		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,010 10.0 1,000 0 101 85 115 1,013 0.198 10

Sample ID	21120818-009GDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105206		
Client ID:	ZZZZZZ	Batch ID:	R105206	TestNo:	SM2540C			Analysis Date:	12/17/2021	SeqNo:	2576430		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 157 10.0 155.0 1.28 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105206

Sample ID	21120818-009GDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105206
Client ID:	ZZZZZZ	Batch ID:	R105206	TestNo:	SM2540C			Analysis Date:	12/17/2021	SeqNo:	2576430
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Sample ID	21120639-001DDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105206
Client ID:	ZZZZZZ	Batch ID:	R105206	TestNo:	SM2540C			Analysis Date:	12/17/2021	SeqNo:	2576431
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filterable)		378		10.0						380.0	0.528 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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Lafayette, LA 70508-3344
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Website: www.element.com

QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105243

Sample ID	MB-R105243	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105243
Client ID:	PBW	Batch ID:	R105243	TestNo:	SM2540C			Analysis Date:	12/20/2021	SeqNo:	2578054
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filterable) < 10.0 10.0

Sample ID	LCS-R105243	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105243
Client ID:	LCSW	Batch ID:	R105243	TestNo:	SM2540C			Analysis Date:	12/20/2021	SeqNo:	2578055
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filterable) 1,040 10.0 1,000 0 104 85 115

Sample ID	LCSD-R105243	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105243
Client ID:	LCSS02	Batch ID:	R105243	TestNo:	SM2540C			Analysis Date:	12/20/2021	SeqNo:	2578056
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filterable) 1,040 10.0 1,000 0 104 85 115 1,039 0.0963 10

Sample ID	21120818-006GDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105243
Client ID:	ZZZZZZ	Batch ID:	R105243	TestNo:	SM2540C			Analysis Date:	12/20/2021	SeqNo:	2578077
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filterable) 450 10.0 451.0 0.222 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105243

Sample ID	21120818-006GDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105243
Client ID:	ZZZZZZ	Batch ID:	R105243	TestNo:	SM2540C			Analysis Date:	12/20/2021	SeqNo:	2578077
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Sample ID	21120818-007GDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105243
Client ID:	ZZZZZZ	Batch ID:	R105243	TestNo:	SM2540C			Analysis Date:	12/20/2021	SeqNo:	2578078
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filterable)		491		10.0						489.0	0.408 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105284

Sample ID	mblk	SampType: MBLK	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105284					
Client ID: PBW	Batch ID: R105284	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2577031							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	< 0.250	0.250									
Fluoride	< 0.0500	0.0500									
Sulfate	< 0.250	0.250									

Sample ID	Ics	SampType: LCS	TestCode: 300.0		Units: mg/L		Prep Date:			RunNo: 105284		
Client ID:	LCSW	Batch ID: R105284	TestNo: E 300.0		Analysis Date: 12/20/2021				SeqNo: 2577032			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.3	0.250	10.00	0	103	90	110				
Fluoride		2.16	0.0500	2.000	0	108	90	110				
Sulfate		10.5	0.250	10.00	0	105	90	110				

Sample ID	lcsd	SampType: LCSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105284					
Client ID:	LCSS02	Batch ID: R105284	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2577033						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.6	0.250	10.00	0	106	90	110	10.27	3.34	15	
Fluoride	2.19	0.0500	2.000	0	110	90	110	2.157	1.51	15	
Sulfate	10.9	0.250	10.00	0	109	90	110	10.51	3.22	15	

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105284

Sample ID	21120845-013ams	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105284					
Client ID:	CCR-13	Batch ID: R105284	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2577049						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	17.7	0.250	5.000	12.97	94.9	80	120				
Fluoride	1.29	0.0500	1.000	0.2567	104	80	120				
Sulfate	5.88	0.250	5.000	0.7992	102	80	120				

Sample ID	21120845-013amsd	SampType: MSD	TestCode: 300.0		Units: mg/L		Prep Date:			RunNo: 105284		
Client ID:	CCR-13	Batch ID: R105284	TestNo: E 300.0		Analysis Date: 12/20/2021				SeqNo: 2577050			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chloride	17.8	0.250	5.000	12.97	97.6	80	120	17.71	0.764	15		
Fluoride	1.23	0.0500	1.000	0.2567	97.1	80	120	1.293	5.21	15		
Sulfate	5.93	0.250	5.000	0.7992	103	80	120	5.882	0.868	15		

Sample ID	21120845-016ams	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105284					
Client ID:	FB 1	Batch ID: R105284	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2577054						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	5.35	0.250	5.000	0	107	80	120				
Fluoride	1.17	0.0500	1.000	0	117	80	120				
Sulfate	5.54	0.250	5.000	0	111	80	120				

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105284

Sample ID	21120845-016amsd	SampType: MSD	TestCode: 300.0		Units: mg/L		Prep Date:			RunNo: 105284		
Client ID:	FB 1	Batch ID: R105284	TestNo: E 300.0		Analysis Date: 12/20/2021				SeqNo: 2577055			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		5.52	0.250	5.000	0	110	80	120	5.352	3.18	15	
Fluoride		1.20	0.0500	1.000	0	120	80	120	1.166	2.99	15	S
Sulfate		5.73	0.250	5.000	0	115	80	120	5.541	3.41	15	

NOTES:

S - Spike recovery indicates matrix interference. The method is in control for the analyte as indicated by the LCS/LCSD and sample MS.

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Matrix Interference	ND	Not Detected at the Reporting Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode		



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105303

Sample ID	MB-R105303	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105303			
Client ID:	PBW	Batch ID:	R105303	TestNo:	SM2540C			Analysis Date:	12/21/2021	SeqNo:	2581470			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) < 10.0 10.0

Sample ID	LCS-R105303	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105303			
Client ID:	LCSW	Batch ID:	R105303	TestNo:	SM2540C			Analysis Date:	12/21/2021	SeqNo:	2581471			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,000 10.0 1,000 0 100 85 115

Sample ID	LCSD-R105303	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105303			
Client ID:	LCSS02	Batch ID:	R105303	TestNo:	SM2540C			Analysis Date:	12/21/2021	SeqNo:	2581472			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,000 10.0 1,000 0 100 85 115 1,003 0.200 10

Sample ID	21120845-011ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105303			
Client ID:	CCR-11	Batch ID:	R105303	TestNo:	SM2540C			Analysis Date:	12/21/2021	SeqNo:	2581493			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 240 10.0 242.0 0.830 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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QC SUMMARY REPORT

WO#: 21120845
30-Dec-21

Client: Pivotal Engineering LLC

Project: Entergy: CCR Detection Monitoring

BatchID: R105303

Sample ID	21120845-011ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105303
Client ID:	CCR-11	Batch ID:	R105303	TestNo:	SM2540C			Analysis Date:	12/21/2021	SeqNo:	2581493
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Sample ID	21120845-013ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105303
Client ID:	CCR-13	Batch ID:	R105303	TestNo:	SM2540C			Analysis Date:	12/21/2021	SeqNo:	2581494
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filterable)		155		10.0						158.0	1.92 10

Qualifiers:

H Holding times for preparation or analysis exceeded
RL Reporting Limit
U Analyte not detected

M Matrix Interference
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

ND Not Detected at the Reporting Limit
SDL Sample detection limit



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Website: www.element.com

Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21120845**

RcptNo: **1**

Logged by: **Tammy Thibodeaux** **12/16/2021 5:17:00 PM**

Tammy Thibodeaux

Completed By: **Tammy Thibodeaux** **12/17/2021 5:54:55 AM**

Tammy Thibodeaux

Reviewed By: **Cristina Thibeaux** **12/17/2021 3:01:07 PM**

Cristina Thibeaux

Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☒ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Added year of collection to COC as per sample received.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.1	Good	Not Present			



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 Fax 337-233-6540
☐ 3445 S Sheridan, Tulsa, OK 74145
 918-828-9977/800324-5757
 Fax 918-828-7756

☐ 2203 S. Madison St., Muncie, IN 47302
 765-747-9000/800-874-3563 Fax 765-747-0228
☐ 629 Washington St., Suite 300, Columbus, IN 47201
 812-375-0531 Fax 812-375-0531
☐ 5738 Industrial Rd., Fort Wayne, IN 46825
 219-471-7000 Fax 219-471-7777

Chain of Custody Record

Laboratory Number 21120845

Page 1 of 2		Client Name: Pivotal Engineering LLC		Project: CCR Detection Monitoring		Preserv. NaOH Na ₂ S ₂ O ₃		Matrix Code		Test Requested		Comments / Remarks	
Contact Name: Terry Elnaggar		Quote #: 6786		Sampler's Signature: <i>[Signature]</i>		HCl HNO ₃ H ₂ SO ₄		Number / Type of Container		TDS			
Phone/Fax: (504) 799-3653		Sample Identification / Description		C C R - 1		None/ HNO ₃ 2 Plastic		Aq		X X X		*5010 Metals: B, Ca	
Collection Date		Grab		Comp		None/ HNO ₃ 2 Plastic		Aq		X X X			
12/14/10 1300		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1300		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1350		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1500		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
12/15/10 1030		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1120		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1210		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1325		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1415		X				None/ HNO ₃ 2 Plastic		Aq		X X X			
1500		X				None/ HNO ₃ 2 Plastic		Aq		X X X		UPS / FedEx Airborne / Element Hand / Mail	

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date 12/16	Time 13:15
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time

Requested TAT: ☐ 24-Hr. ☐ 72-Hr. ☒ Standard

Shipping Conditions: ☒ Iced Temp. 5.1°C ☐ Ambient *PO*

Container Types: G = Glass P = Plastic V = Vial

Matrix Codes: DW = Drinking Water AQ = Aqueous LIQ = Liquid GW = Ground Water O = Oil SLD = Solid WW = Waste Water SO = Soil SL = Sludge

Thank-you for using Element Materials Technology



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 812-375-0531 Fax 812-375-0531
☐ 5738 Industrial Rd., Fort Wayne, IN 46825
 219-471-7000 Fax 219-471-7777

- ☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
 337-235-0483/800-737-2378
 Fax 337-233-6540
☐ 3445 S Sheridan, Tulsa, OK 74145
 918-828-9977/800324-5757
 Fax 918-828-7756

Chain of Custody Record

Page 2 of 2
 Client Name: Pivotal Engineering LLC
 Contact Name: Terry Elnaggar
 Phone/Fax: (504) 799-3653
 Laboratory Number 2120845

Collection		Comp	Grab	Sample Identification / Description	Preserv. HCl HNO ₃ H ₂ SO ₄ NaOH Na ₂ S ₂ O ₅	Number / Type of Container	Matrix Code	Test Requested				Comments / Remarks
Date	Time							TDS	300: Cl, F, SO ₄	6010 metals*		
12/15	1540	X		C C R - 1 1	None/ HNO ₃	2 Plastic	Aq	X	X	X		*6010 Metals: B, Ca
12/16	1015	X		C C R - 1 2	None/ HNO ₃	2 Plastic	Aq	X	X	X		
	11:10	X		C C R - 1 3	None/ HNO ₃	2 Plastic	Aq	X	X	X		
	12:10	X		C C R - 1 4	None/ HNO ₃	2 Plastic	Aq	X	X	X		
	11:15	X		M S (CCR-13)	None/ HNO ₃	2 Plastic	Aq	X	X	X		
	11:15	X		M S D (CCR-13)	None/ HNO ₃	2 Plastic	Aq	X	X	X		
	—	X		D U P	None/ HNO ₃	2 Plastic	Aq	X	X	X		
✓	12:15	X		F B 1	None/ HNO ₃	2 Plastic	Aq	X	X	X		

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Relinquished by: (Signature)	Received by: (Signature)	Date	Time
<i>Terry Elnaggar</i>		12/16	17:15

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
	<i>Michael Davis</i>	12/16	17:17

Matrix Codes: DW = Drinking Water, AQ = Aqueous, LIQ = Liquid, GW = Ground Water, O = Oil, SLD = Solid, WW = Waste Water, SO = Soil, SL = Sludge
 Container Types: G = Glass, P = Plastic, V = Vial
 Shipping Conditions: ☒ Iced, ☐ 24-Hr., ☐ 48-Hr., ☐ 72-Hr., ☒ Standard, ☐ Other
 Requested TAT: 12-16
 Thank-you for using Element Materials Technology



Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

January 04, 2022

Terry Elnaggar
Pivotal Engineering LLC
1515 Poydras St., STE. 1875
New Orleans, LA 70112
TEL: (504) 799-3653
FAX

RE: Entergy: CCR Assessment Monitoring

Order No.: 21120844

Dear Terry Elnaggar:

Element Materials Technology Lafayette received 16 sample(s) on 12/16/2021 for the analyses presented in the following report.

In accordance with your instructions, Element Lafayette either conducted or subcontracted these analyses. Subcontracted analyses will be identified in the accompanying case narrative. All relevant sampling information can be found on the attached Chain-of-Custody form. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet the applicable requirements of TNI. Reported results relate only to the items tested.

Where applicable, all soil data, except for 29-B, are reported on a wet-weight basis unless otherwise indicated in the units field as –dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA023. ISDH Certification No.: C-LA-01. NDELCP Certification No.: R-226. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation. PA registration No.: 68-05967.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in blue ink, appearing to read 'Cristina Thibeaux'.

Cristina Thibeaux
Customer Service Supervisor
2417 W. Pinhook Road
Lafayette, LA 70508-3344



Element Materials Technology Lafayette
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TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Case Narrative

WO#: 21120844
Date: 1/4/2022

CLIENT: Pivotal Engineering LLC

Project: Entergy: CCR Assessment Monitoring

Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).

The Lithium (6020B) analyses were subcontracted to Pace Analytical. Their report is attached in its entirety.



Element Materials Technology Lafayette
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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 12:05:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-001 **Matrix:** AQUEOUS
Client Sample ID CCR-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:15:13 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.321	0.0500		mg/L	1	12/20/2021 9:13:47 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.199	0.0100		mg/L	1	12/21/2021 2:47:51 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 2:47:51 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 2:47:51 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 2:47:51 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 2:47:51 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 2:47:51 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 2:47:51 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 2:47:51 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:02:13 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:02:13 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:02:13 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 1:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-002 **Matrix:** AQUEOUS
Client Sample ID CCR-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:17:32 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.322	0.0500		mg/L	1	12/20/2021 9:27:23 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.161	0.0100		mg/L	1	12/21/2021 2:50:10 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 2:50:10 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 2:50:10 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 2:50:10 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 2:50:10 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 2:50:10 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 2:50:10 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 2:50:10 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:05:03 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:05:03 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:05:03 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 1:50:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-003 **Matrix:** AQUEOUS
Client Sample ID CCR-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:19:49 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.367	0.0500		mg/L	1	12/20/2021 9:41:11 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.294	0.0100		mg/L	1	12/21/2021 2:57:05 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 2:57:05 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 2:57:05 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 2:57:05 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 2:57:05 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 2:57:05 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 2:57:05 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 2:57:05 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:07:51 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:07:51 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:07:51 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/14/2021 3:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-004 **Matrix:** AQUEOUS
Client Sample ID CCR-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:22:07 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.255	0.0500		mg/L	1	12/20/2021 9:54:59 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.130	0.0100		mg/L	1	12/21/2021 2:59:24 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 2:59:24 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 2:59:24 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 2:59:24 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 2:59:24 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 2:59:24 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 2:59:24 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 2:59:24 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:10:38 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:10:38 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:10:38 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 10:30:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-005 **Matrix:** AQUEOUS
Client Sample ID CCR-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:24:26 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.311	0.0500		mg/L	1	12/20/2021 10:08:47 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.236	0.0100		mg/L	1	12/21/2021 3:01:43 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 3:01:43 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 3:01:43 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 3:01:43 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 3:01:43 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 3:01:43 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 3:01:43 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 3:01:43 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:13:26 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:13:26 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:13:26 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 11:20:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-006 **Matrix:** AQUEOUS
Client Sample ID CCR-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:26:44 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.229	0.0500		mg/L	1	12/20/2021 10:22:35 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.214	0.0100		mg/L	1	12/21/2021 3:04:03 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 3:04:03 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 3:04:03 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 3:04:03 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 3:04:03 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 3:04:03 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 3:04:03 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 3:04:03 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:16:14 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:16:14 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:16:14 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 12:10:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-007 **Matrix:** AQUEOUS
Client Sample ID CCR-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A		Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:29:02 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0		Analyst: SGP
Fluoride	0.203	0.0500		mg/L	1	12/20/2021 10:36:23 AM
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Barium	0.254	0.0100		mg/L	1	12/21/2021 3:06:22 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 3:06:22 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 3:06:22 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 3:06:22 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 3:06:22 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 3:06:22 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 3:06:22 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 3:06:22 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A		Analyst: MRB
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:19:02 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:19:02 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:19:02 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 1:25:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-008 **Matrix:** AQUEOUS
Client Sample ID CCR-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:36:34 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.181	0.0500		mg/L	1	12/20/2021 10:50:12 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.121	0.0100		mg/L	1	12/21/2021 3:08:40 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 3:08:40 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 3:08:40 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 3:08:40 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 3:08:40 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 3:08:40 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 3:08:40 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 3:08:40 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:21:50 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:21:50 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:21:50 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 2:15:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-009 **Matrix:** AQUEOUS
Client Sample ID CCR-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:38:52 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.527	0.0500		mg/L	1	12/20/2021 11:04:00 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.257	0.0100		mg/L	1	12/21/2021 3:10:59 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/21/2021 3:10:59 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/21/2021 3:10:59 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/21/2021 3:10:59 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/21/2021 3:10:59 PM
Lead	< 0.0100	0.0100		mg/L	1	12/21/2021 3:10:59 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/21/2021 3:10:59 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/21/2021 3:10:59 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/21/2021 10:24:37 AM
Arsenic	< 10.0	10.0		µg/L	1	12/21/2021 10:24:37 AM
Thallium	< 0.250	0.250		µg/L	1	12/21/2021 10:24:37 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
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Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 3:00:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-010 **Matrix:** AQUEOUS
Client Sample ID CCR-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:41:10 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.585	0.0500		mg/L	1	12/20/2021 11:17:47 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.251	0.0100		mg/L	1	12/27/2021 9:04:21 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/27/2021 9:04:21 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:04:21 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:04:21 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/27/2021 9:04:21 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:04:21 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/27/2021 9:04:21 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/27/2021 9:04:21 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/28/2021 8:41:34 AM
Arsenic	< 10.0	10.0		µg/L	1	12/28/2021 8:41:34 AM
Thallium	< 0.250	0.250		µg/L	1	12/28/2021 8:41:34 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/15/2021 3:40:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-011 **Matrix:** AQUEOUS
Client Sample ID CCR-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:43:29 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.795	0.0500		mg/L	1	12/20/2021 11:59:11 AM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.145	0.0100		mg/L	1	12/27/2021 9:06:41 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/27/2021 9:06:41 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:06:41 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:06:41 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/27/2021 9:06:41 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:06:41 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/27/2021 9:06:41 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/27/2021 9:06:41 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/28/2021 8:44:22 AM
Arsenic	< 10.0	10.0		µg/L	1	12/28/2021 8:44:22 AM
Thallium	< 0.250	0.250		µg/L	1	12/28/2021 8:44:22 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 10:15:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-012 **Matrix:** AQUEOUS
Client Sample ID CCR-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:45:47 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.116	0.0500		mg/L	1	12/20/2021 12:12:59 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.181	0.0100		mg/L	1	12/27/2021 9:09:01 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/27/2021 9:09:01 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:09:01 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:09:01 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/27/2021 9:09:01 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:09:01 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/27/2021 9:09:01 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/27/2021 9:09:01 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/28/2021 8:47:10 AM
Arsenic	< 10.0	10.0		µg/L	1	12/28/2021 8:47:10 AM
Thallium	< 0.250	0.250		µg/L	1	12/28/2021 8:47:10 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 11:10:00 AM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-013 **Matrix:** AQUEOUS
Client Sample ID CCR-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:48:09 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.257	0.0500		mg/L	1	12/20/2021 12:26:47 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.0950	0.0100		mg/L	1	12/27/2021 9:11:21 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/27/2021 9:11:21 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:11:21 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:11:21 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/27/2021 9:11:21 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:11:21 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/27/2021 9:11:21 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/27/2021 9:11:21 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/28/2021 9:04:01 AM
Arsenic	< 10.0	10.0		µg/L	1	12/28/2021 9:04:01 AM
Thallium	< 0.250	0.250		µg/L	1	12/28/2021 9:04:01 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

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WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 12:10:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-014 **Matrix:** AQUEOUS
Client Sample ID CCR-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 6:58:23 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.148	0.0500		mg/L	1	12/20/2021 1:08:11 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.0792	0.0100		mg/L	1	12/27/2021 9:22:58 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/27/2021 9:22:58 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:22:58 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:22:58 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/27/2021 9:22:58 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:22:58 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/27/2021 9:22:58 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/27/2021 9:22:58 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/28/2021 9:15:14 AM
Arsenic	< 10.0	10.0		µg/L	1	12/28/2021 9:15:14 AM
Thallium	< 0.250	0.250		µg/L	1	12/28/2021 9:15:14 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-015 **Matrix:** AQUEOUS
Client Sample ID DUP

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER, TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 7:05:56 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	0.154	0.0500		mg/L	1	12/20/2021 1:21:59 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	0.182	0.0100		mg/L	1	12/27/2021 9:25:18 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/27/2021 9:25:18 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:25:18 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:25:18 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/27/2021 9:25:18 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:25:18 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/27/2021 9:25:18 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/27/2021 9:25:18 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/28/2021 9:18:01 AM
Arsenic	< 10.0	10.0		µg/L	1	12/28/2021 9:18:01 AM
Thallium	< 0.250	0.250		µg/L	1	12/28/2021 9:18:01 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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Analytical Report

(consolidated)

WO#: 21120844

Date Reported: 1/4/2022

CLIENT: Pivotal Engineering LLC **Collection Date:** 12/16/2021 12:15:00 PM
Project: Entergy: CCR Assessment Monitoring
Lab ID: 21120844-016 **Matrix:** AQUEOUS
Client Sample ID FB-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY IN GROUND WATER,TOTAL				SW7470A	Analyst: BXB	
Mercury	< 0.000200	0.000200		mg/L	1	12/22/2021 7:08:13 AM
INORGANIC ANIONS IN WATER BY IC				E 300.0	Analyst: SGP	
Fluoride	< 0.0500	0.0500		mg/L	1	12/20/2021 1:35:48 PM
METALS IN WATER BY ICP, TOTALS				SW6010B	Analyst: STS	
Barium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:27:38 PM
Beryllium	< 0.00100	0.00100		mg/L	1	12/27/2021 9:27:38 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:27:38 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:27:38 PM
Cobalt	< 0.0100	0.0100		mg/L	1	12/27/2021 9:27:38 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:27:38 PM
Molybdenum	< 0.0100	0.0100		mg/L	1	12/27/2021 9:27:38 PM
Selenium	< 0.0200	0.0200		mg/L	1	12/27/2021 9:27:38 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A	Analyst: MRB	
Antimony	< 0.250	0.250		µg/L	1	12/28/2021 9:20:49 AM
Arsenic	< 10.0	10.0		µg/L	1	12/28/2021 9:20:49 AM
Thallium	< 0.250	0.250		µg/L	1	12/28/2021 9:20:49 AM

Qualifiers:	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
	U	Analyte not detected	W	Sample container temperature is out of limit as specified at testcode



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42026

Sample ID	MB-42026	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/17/2021	RunNo:	105323
Client ID:	PBW	Batch ID:	42026	TestNo:	SW6010B			Analysis Date:	12/21/2021	SeqNo:	2578198
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	< 0.0100	0.0100									
Beryllium	< 0.00100	0.00100									
Cadmium	< 0.00500	0.00500									
Chromium	< 0.0100	0.0100									
Cobalt	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Molybdenum	< 0.0100	0.0100									
Selenium	< 0.0200	0.0200									

Sample ID	LCS-42026	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/17/2021	RunNo:	105323
Client ID:	LCSW	Batch ID:	42026	TestNo:	SW6010B			Analysis Date:	12/21/2021	SeqNo:	2578199
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.522	0.0100	0.5000	0	104	80	120				
Beryllium	0.527	0.00100	0.5000	0	105	80	120				
Cadmium	0.517	0.00500	0.5000	0	103	80	120				
Chromium	0.524	0.0100	0.5000	0	105	80	120				
Cobalt	0.526	0.0100	0.5000	0	105	80	120				
Lead	0.514	0.0100	0.5000	0	103	80	120				
Molybdenum	0.509	0.0100	0.5000	0	102	80	120				
Selenium	0.523	0.0200	0.5000	0	105	80	120				

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42026

Sample ID	LCSD-42026	SampType: LCSD	TestCode: 6010_W		Units: mg/L	Prep Date: 12/17/2021			RunNo: 105323		
Client ID:	LCSS02	Batch ID: 42026	TestNo: SW6010B			Analysis Date: 12/21/2021			SeqNo: 2578200		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.522	0.0100	0.5000	0	104	80	120	0.5222	0.0440	20	
Beryllium	0.524	0.00100	0.5000	0	105	80	120	0.5271	0.626	20	
Cadmium	0.512	0.00500	0.5000	0	102	80	120	0.5165	0.836	20	
Chromium	0.524	0.0100	0.5000	0	105	80	120	0.5238	0.0267	20	
Cobalt	0.525	0.0100	0.5000	0	105	80	120	0.5256	0.0780	20	
Lead	0.519	0.0100	0.5000	0	104	80	120	0.5138	1.05	20	
Molybdenum	0.511	0.0100	0.5000	0	102	80	120	0.5087	0.371	20	
Selenium	0.526	0.0200	0.5000	0	105	80	120	0.5228	0.688	20	

Sample ID	21120818-001FMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/17/2021	RunNo: 105323					
Client ID: ZZZZZZ	Batch ID: 42026	TestNo: SW6010B	Analysis Date: 12/21/2021	SeqNo: 2578205							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.582	0.0100	0.5000	0.06762	103	75	125				
Beryllium	0.524	0.00100	0.5000	0	105	75	125				
Cadmium	0.508	0.00500	0.5000	0	102	75	125				
Chromium	0.518	0.0100	0.5000	0	104	75	125				
Cobalt	0.519	0.0100	0.5000	0	104	75	125				
Lead	0.513	0.0100	0.5000	0	103	75	125				
Molybdenum	0.503	0.0100	0.5000	0	101	75	125				
Selenium	0.509	0.0200	0.5000	0	102	75	125				

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42026

Sample ID	21120818-001FMSD	SampType: MSD	TestCode: 6010_W		Units: mg/L	Prep Date: 12/17/2021			RunNo: 105323		
Client ID:	ZZZZZZ	Batch ID: 42026	TestNo: SW6010B			Analysis Date: 12/21/2021			SeqNo: 2578206		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.584	0.0100	0.5000	0.06762	103	75	125	0.5820	0.275	20	
Beryllium	0.525	0.00100	0.5000	0	105	75	125	0.5238	0.145	20	
Cadmium	0.512	0.00500	0.5000	0	102	75	125	0.5082	0.679	20	
Chromium	0.521	0.0100	0.5000	0	104	75	125	0.5182	0.475	20	
Cobalt	0.523	0.0100	0.5000	0	105	75	125	0.5191	0.821	20	
Lead	0.509	0.0100	0.5000	0	102	75	125	0.5127	0.775	20	
Molybdenum	0.507	0.0100	0.5000	0	101	75	125	0.5026	0.806	20	
Selenium	0.511	0.0200	0.5000	0	102	75	125	0.5093	0.378	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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Website: www.element.com

QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42027

Sample ID	MB-42027	SampType:	MBLK	TestCode:	6020A_W	Units:	µg/L	Prep Date:	12/17/2021	RunNo:	105300			
Client ID:	PBW	Batch ID:	42027	TestNo:	SW6020A			Analysis Date:	12/21/2021	SeqNo:	2577501			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		< 0.250		0.250										
Arsenic		< 0.250		0.250										
Thallium		< 0.250		0.250										

Sample ID	LCS-42027	SampType: LCS	TestCode: 6020A_W	Units: µg/L	Prep Date: 12/17/2021	RunNo: 105300					
Client ID:	LCSW	Batch ID: 42027	TestNo: SW6020A	Analysis Date: 12/21/2021	SeqNo: 2577503						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	469	5.00	500.0	0	93.8	80	120				
Arsenic	470	5.00	500.0	0	94.0	80	120				
Thallium	482	5.00	500.0	0	96.4	80	120				

Sample ID	LCSD-42027	SampType:	LCSD	TestCode:	6020A_W	Units:	µg/L	Prep Date:	12/17/2021	RunNo:	105300			
Client ID:	LCSS02	Batch ID:	42027	TestNo:	SW6020A			Analysis Date:	12/21/2021	SeqNo:	2577504			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		479		5.00	500.0	0		95.7	80	120	468.8	2.10	20	
Arsenic		483		5.00	500.0	0		96.6	80	120	469.8	2.76	20	
Thallium		495		5.00	500.0	0		99.0	80	120	481.8	2.73	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42027

Sample ID	21120818-001FMS	SampType: MS	TestCode: 6020A_W	Units: µg/L	Prep Date: 12/17/2021	RunNo: 105300					
Client ID:	ZZZZZZ	Batch ID: 42027	TestNo: SW6020A		Analysis Date: 12/21/2021	SeqNo: 2577507					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	501	5.00	500.0	0.07595	100	75	125				
Arsenic	499	5.00	500.0	0.03903	99.8	75	125				
Thallium	509	5.00	500.0	0.04447	102	75	125				

Sample ID	21120818-001FMSD	SampType: MSD	TestCode: 6020A_W	Units: µg/L	Prep Date: 12/17/2021	RunNo: 105300					
Client ID:	ZZZZZZ	Batch ID: 42027	TestNo: SW6020A		Analysis Date: 12/21/2021	SeqNo: 2577508					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	494	5.00	500.0	0.07595	98.8	75	125	500.7	1.32	20	
Arsenic	490	5.00	500.0	0.03903	97.9	75	125	498.9	1.89	20	
Thallium	499	5.00	500.0	0.04447	99.8	75	125	508.9	1.99	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42038

Sample ID	MB-42038	SampType:	MBLK	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	12/20/2021	RunNo:	105336			
Client ID:	PBW	Batch ID:	42038	TestNo:	SW7470A			Analysis Date:	12/22/2021	SeqNo:	2578608			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		< 0.000200		0.000200										

Sample ID	LCS-42038	SampType:	LCS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	12/20/2021	RunNo:	105336			
Client ID:	LCSW	Batch ID:	42038	TestNo:	SW7470A			Analysis Date:	12/22/2021	SeqNo:	2578609			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0105		0.000200	0.01000	0		105	80	120				

Sample ID	LCSD-42038	SampType:	LCSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	12/20/2021	RunNo:	105336			
Client ID:	LCSS02	Batch ID:	42038	TestNo:	SW7470A			Analysis Date:	12/22/2021	SeqNo:	2578610			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0107		0.000200	0.01000	0		107	80	120	0.01055	1.15	20	

Sample ID	21120844-013BMS	SampType:	MS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	12/20/2021	RunNo:	105336			
Client ID:	CCR-13	Batch ID:	42038	TestNo:	SW7470A			Analysis Date:	12/22/2021	SeqNo:	2578627			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00997		0.000200	0.01000	0		99.7	75	125				

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42038

Sample ID	21120844-013BMSD	SampType: MSD	TestCode: HG_W_7470	Units: mg/L	Prep Date: 12/20/2021	RunNo: 105336					
Client ID: CCR-13	Batch ID: 42038	TestNo: SW7470A	Analysis Date: 12/22/2021	SeqNo: 2578628							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0101	0.000200	0.01000	0	101	75	125	0.009971	1.68	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42061

Sample ID	MB-42061	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105418	
Client ID:	PBW	Batch ID:	42061	TestNo:	SW6010B			Analysis Date:	12/27/2021	SeqNo:	2582746	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		< 0.0100	0.0100									
Beryllium		< 0.00100	0.00100									
Cadmium		< 0.00500	0.00500									
Chromium		< 0.0100	0.0100									
Cobalt		< 0.0100	0.0100									
Lead		< 0.0100	0.0100									
Molybdenum		< 0.0100	0.0100									
Selenium		< 0.0200	0.0200									

Sample ID	LCS-42061	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/21/2021	RunNo: 105418					
Client ID:	LCSW	Batch ID: 42061	TestNo: SW6010B		Analysis Date: 12/27/2021	SeqNo: 2582747					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.470	0.0100	0.5000	0	94.1	80	120				
Beryllium	0.482	0.00100	0.5000	0	96.4	80	120				
Cadmium	0.468	0.00500	0.5000	0	93.7	80	120				
Chromium	0.466	0.0100	0.5000	0	93.2	80	120				
Cobalt	0.468	0.0100	0.5000	0	93.6	80	120				
Lead	0.461	0.0100	0.5000	0	92.2	80	120				
Molybdenum	0.456	0.0100	0.5000	0	91.2	80	120				
Selenium	0.462	0.0200	0.5000	0	92.4	80	120				

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42061

Sample ID	LCSD-42061	SampType: LCSD	TestCode: 6010_W	Units: mg/L	Prep Date: 12/21/2021	RunNo: 105418					
Client ID:	LCSS02	Batch ID: 42061	TestNo: SW6010B	Analysis Date: 12/27/2021	SeqNo: 2582748						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.464	0.0100	0.5000	0	92.8	80	120	0.4703	1.35	20	
Beryllium	0.476	0.00100	0.5000	0	95.2	80	120	0.4821	1.29	20	
Cadmium	0.458	0.00500	0.5000	0	91.5	80	120	0.4683	2.30	20	
Chromium	0.458	0.0100	0.5000	0	91.7	80	120	0.4660	1.68	20	
Cobalt	0.462	0.0100	0.5000	0	92.3	80	120	0.4678	1.36	20	
Lead	0.458	0.0100	0.5000	0	91.5	80	120	0.4608	0.695	20	
Molybdenum	0.450	0.0100	0.5000	0	90.0	80	120	0.4558	1.32	20	
Selenium	0.464	0.0200	0.5000	0	92.8	80	120	0.4618	0.432	20	

Sample ID	21120844-013BMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 12/21/2021	RunNo: 105418					
Client ID: CCR-13	Batch ID: 42061	TestNo: SW6010B	Analysis Date: 12/27/2021	SeqNo: 2582753							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.529	0.0100	0.5000	0.09504	86.8	75	125				
Beryllium	0.461	0.00100	0.5000	0	92.2	75	125				
Cadmium	0.447	0.00500	0.5000	0	89.4	75	125				
Chromium	0.448	0.0100	0.5000	0	89.7	75	125				
Cobalt	0.445	0.0100	0.5000	0	89.0	75	125				
Lead	0.436	0.0100	0.5000	0	87.2	75	125				
Molybdenum	0.435	0.0100	0.5000	0	87.1	75	125				
Selenium	0.439	0.0200	0.5000	0.008910	86.0	75	125				

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42061

Sample ID	21120844-013BMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	CCR-13	Batch ID:	42061	TestNo:	SW6010B			Analysis Date:	12/27/2021	SeqNo:	2582756
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.542	0.0100	0.5000	0.09504	89.5	75	125	0.5288	2.52	20	
Beryllium	0.476	0.00100	0.5000	0	95.3	75	125	0.4612	3.22	20	
Cadmium	0.460	0.00500	0.5000	0	92.1	75	125	0.4469	2.96	20	
Chromium	0.461	0.0100	0.5000	0	92.3	75	125	0.4485	2.84	20	
Cobalt	0.458	0.0100	0.5000	0	91.6	75	125	0.4448	2.93	20	
Lead	0.448	0.0100	0.5000	0	89.6	75	125	0.4359	2.75	20	
Molybdenum	0.449	0.0100	0.5000	0	89.7	75	125	0.4353	3.03	20	
Selenium	0.456	0.0200	0.5000	0.008910	89.5	75	125	0.4390	3.90	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42062

Sample ID	MB-42062	SampType:	MBLK	TestCode:	6020A_W	Units:	µg/L	Prep Date:	12/21/2021	RunNo:	105437
Client ID:	PBW	Batch ID:	42062	TestNo:	SW6020A			Analysis Date:	12/28/2021	SeqNo:	2582373
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	< 0.250	0.250									
Arsenic	< 0.250	0.250									
Thallium	< 0.250	0.250									

Sample ID	LCS-42062	SampType:	LCS	TestCode:	6020A_W	Units:	µg/L	Prep Date:	12/21/2021	RunNo:	105437
Client ID:	LCSSW	Batch ID:	42062	TestNo:	SW6020A			Analysis Date:	12/28/2021	SeqNo:	2582374
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	488	5.00	500.0	0	97.6	80	120				
Arsenic	494	5.00	500.0	0	98.9	80	120				
Thallium	508	5.00	500.0	0	102	80	120				

Sample ID	LCSD-42062	SampType:	LCSD	TestCode:	6020A_W	Units:	µg/L	Prep Date:	12/21/2021	RunNo:	105437
Client ID:	LCSS02	Batch ID:	42062	TestNo:	SW6020A			Analysis Date:	12/28/2021	SeqNo:	2582375
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	493	5.00	500.0	0	98.7	80	120	488.1	1.06	20	
Arsenic	492	5.00	500.0	0	98.4	80	120	494.4	0.472	20	
Thallium	509	5.00	500.0	0	102	80	120	507.7	0.325	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: 42062

Sample ID	21120844-013BMS	SampType: MS	TestCode: 6020A_W	Units: µg/L	Prep Date: 12/21/2021	RunNo: 105437					
Client ID:	CCR-13	Batch ID: 42062	TestNo: SW6020A		Analysis Date: 12/28/2021	SeqNo: 2582387					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	494	5.00	500.0	0	98.8	75	125				
Arsenic	493	5.00	500.0	0.1020	98.7	75	125				
Thallium	485	5.00	500.0	0	96.9	75	125				

Sample ID	21120844-013BMSD	SampType: MSD	TestCode: 6020A_W	Units: µg/L	Prep Date: 12/21/2021	RunNo: 105437					
Client ID:	CCR-13	Batch ID: 42062	TestNo: SW6020A		Analysis Date: 12/28/2021	SeqNo: 2582388					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	523	5.00	500.0	0	105	75	125	494.2	5.62	20	
Arsenic	516	5.00	500.0	0.1020	103	75	125	493.4	4.54	20	
Thallium	513	5.00	500.0	0	103	75	125	484.7	5.64	20	

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: R105281

Sample ID	mblk	SampType:	MBLK		TestCode:	300.0		Units:	mg/L		Prep Date:				RunNo:	105281	
Client ID:	PBW	Batch ID:	R105281		TestNo:	E 300.0					Analysis Date:	12/20/2021			SeqNo:	2576794	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual				
Fluoride		< 0.0500	0.0500														

Sample ID	Ics	SampType: LCS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105281					
Client ID: LCSW	Batch ID: R105281	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2576795							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	2.16	0.0500	2.000	0	108	90	110				

Sample ID	Icsd	SampType: LCSD	TestCode: 300.0		Units: mg/L		Prep Date:			RunNo: 105281		
Client ID:	LCSS02	Batch ID: R105281	TestNo: E 300.0		Analysis Date: 12/20/2021				SeqNo: 2576796			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		2.19	0.0500	2.000	0	110	90	110	2.157	1.51	15	

Sample ID	21120844-013ams	SampType:	MS	TestCode:	300.0	Units:	mg/L	Prep Date:		RunNo:	105281	
Client ID:	CCR-13	Batch ID:	R105281	TestNo:	E 300.0			Analysis Date:	12/20/2021	SeqNo:	2576812	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride		1.29	0.0500	1.000	0.2567	104	80	120				

Qualifiers:

E Value above quantitation range
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits
W Sample container temperature is out of limit as specified at testcode

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
SDL Sample detection limit

M Matrix Interference
RL Reporting Limit
U Analyte not detected



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QC SUMMARY REPORT

WO#: 21120844
04-Jan-22

Client: Pivotal Engineering LLC
Project: Entergy: CCR Assessment Monitoring

BatchID: R105281

Sample ID	21120844-013amsd	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105281					
Client ID:	CCR-13	Batch ID: R105281	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2576813						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.23	0.0500	1.000	0.2567	97.1	80	120	1.293	5.21	15	

Sample ID	21120844-016ams	SampType: MS	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105281					
Client ID:	FB-1	Batch ID: R105281	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2576817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.17	0.0500	1.000	0	117	80	120				

Sample ID	21120844-016amsd	SampType: MSD	TestCode: 300.0	Units: mg/L	Prep Date:	RunNo: 105281					
Client ID:	FB-1	Batch ID: R105281	TestNo: E 300.0	Analysis Date: 12/20/2021	SeqNo: 2576818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.20	0.0500	1.000	0	120	80	120	1.166	2.99	15	S

NOTES:

S - Spike recovery outside of recovery limits due to dilution. The method is in control for the analyte as indicated by the LCS/LCSD and sample MSD.

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
W	Sample container temperature is out of limit as specified at testcode				



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

Sample Log-In Check List

Client Name: **PIVOTAL_ENGINEERIN**

Work Order Number: **21120844**

RcptNo: **1**

Logged by: **Tammy Thibodeaux** **12/16/2021 5:17:00 PM**

Tammy Thibodeaux

Completed By: **Tammy Thibodeaux** **12/17/2021 5:44:08 AM**

Tammy Thibodeaux

Reviewed By: **Cristina Thibeaux** **12/17/2021 2:57:12 PM**

Cristina Thibeaux

Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☒ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Added year of collection to COC as per sample received.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.1	Good	Not Present			



LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 12/30/2021

Report # 221121809



Project 21120844

Samples Collected 12/14/21 - 12/16/21

<i>Deliver To</i>	<i>Additional Recipients</i>
Annie Reedy Element Materials Technology 2417 W Pinhook Rd Lafayette, LA 70508 800-737-2378	Kelli Foreman, Element Materials Technology Caitlin Duplan, Element Materials Technology Christina Thibaux, Element Materials Technology Rhonda David, Element Materials Technology Buffy Bryant, Element Materials Technology





Report#: 221121809

Project ID: 21120844

Report Date: 12/30/2021

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % difference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 221121809



Report#: 221121809

Project ID: 21120844

Report Date: 12/30/2021

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234



Report#: 221121809

Project ID: 21120844

Report Date: 12/30/2021

Case Narrative

Client: Element Materials Technology **Report:** 221121809

Pace Analytical Gulf Coast received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).



Report#: 221121809
Project ID: 21120844

Report Date: 12/30/2021

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22112180901	CCR-1	Water	12/14/21 12:05	12/17/21 10:50
22112180902	CCR-2	Water	12/14/21 13:00	12/17/21 10:50
22112180903	CCR-3	Water	12/14/21 13:50	12/17/21 10:50
22112180904	CCR-4	Water	12/14/21 15:00	12/17/21 10:50
22112180905	CCR-5	Water	12/15/21 10:30	12/17/21 10:50
22112180906	CCR-6	Water	12/15/21 11:20	12/17/21 10:50
22112180907	CCR-7	Water	12/15/21 12:10	12/17/21 10:50
22112180908	CCR-8	Water	12/15/21 13:25	12/17/21 10:50
22112180909	CCR-9	Water	12/15/21 14:15	12/17/21 10:50
22112180910	CCR-10	Water	12/15/21 15:00	12/17/21 10:50
22112180911	CCR-11	Water	12/15/21 15:40	12/17/21 10:50
22112180912	CCR-12	Water	12/15/21 10:15	12/17/21 10:50
22112180913	CCR-13	Water	12/16/21 11:10	12/17/21 10:50
22112180914	CCR-13 MS	Water	12/16/21 11:10	12/17/21 10:50
22112180915	CCR-13 MSD	Water	12/16/21 11:10	12/17/21 10:50
22112180916	CCR-14	Water	12/16/21 12:10	12/17/21 10:50
22112180917	DUP	Water	12/16/21 00:01	12/17/21 10:50
22112180918	FB-1	Water	12/16/21 12:15	12/17/21 10:50



Report#: 221121809
Project ID: 21120844

Report Date: 12/30/2021

Sample Results

CCR-1	Collect Date	12/14/2021 12:05	Lab ID	22112180901
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:09	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	22.1	5.00	ug/L

CCR-2	Collect Date	12/14/2021 13:00	Lab ID	22112180902
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:15	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	22.5	5.00	ug/L

CCR-3	Collect Date	12/14/2021 13:50	Lab ID	22112180903
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:20	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	27.4	5.00	ug/L

CCR-4	Collect Date	12/14/2021 15:00	Lab ID	22112180904
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:26	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	16.9	5.00	ug/L



Report#: 221121809
Project ID: 21120844

Report Date: 12/30/2021

Sample Results

CCR-5	Collect Date	12/15/2021 10:30	Lab ID	22112180905
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:31	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	20.3	5.00	ug/L

CCR-6	Collect Date	12/15/2021 11:20	Lab ID	22112180906
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:37	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	12.7	5.00	ug/L

CCR-7	Collect Date	12/15/2021 12:10	Lab ID	22112180907
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:42	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	10.8	5.00	ug/L

CCR-8	Collect Date	12/15/2021 13:25	Lab ID	22112180908
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:48	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	37.4	5.00	ug/L



Report#: 221121809
Project ID: 21120844

Report Date: 12/30/2021

Sample Results

CCR-9	Collect Date	12/15/2021 14:15	Lab ID	22112180909
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:54	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	10.3	5.00	ug/L

CCR-10	Collect Date	12/15/2021 15:00	Lab ID	22112180910
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/27/21 23:59	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	9.79	5.00	ug/L

CCR-11	Collect Date	12/15/2021 15:40	Lab ID	22112180911
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 00:16	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	6.92	5.00	ug/L

CCR-12	Collect Date	12/15/2021 10:15	Lab ID	22112180912
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 00:21	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	24.1	5.00	ug/L



Report#: 221121809
Project ID: 21120844

Report Date: 12/30/2021

Sample Results

CCR-13	Collect Date	12/16/2021 11:10	Lab ID	22112180913
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 00:27	730441	LWZ	NA
CAS# 7439-93-2	Parameter Lithium		Result 30.7	LOQ 5.00			Units ug/L

CCR-13 MS	Collect Date	12/16/2021 11:10	Lab ID	22112180914
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 00:32	730441	LWZ	NA
CAS# 7439-93-2	Parameter Lithium		Result 259	LOQ 5.00			Units ug/L

CCR-13 MSD	Collect Date	12/16/2021 11:10	Lab ID	22112180915
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 00:38	730441	LWZ	NA
CAS# 7439-93-2	Parameter Lithium		Result 270	LOQ 5.00			Units ug/L

CCR-14	Collect Date	12/16/2021 12:10	Lab ID	22112180916
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 00:55	730441	LWZ	NA
CAS# 7439-93-2	Parameter Lithium		Result 16.1	LOQ 5.00			Units ug/L



Report#: 221121809

Project ID: 21120844

Report Date: 12/30/2021

Sample Results

DUP	Collect Date	12/16/2021 00:01	Lab ID	22112180917
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 01:00	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	24.6	5.00	ug/L

FB-1	Collect Date	12/16/2021 12:15	Lab ID	22112180918
	Receive Date	12/17/2021 10:50	Matrix	Water

EPA 6020B

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
12/18/21 09:00	729810	EPA 3010A	1	12/28/21 01:06	730441	LWZ	NA

CAS#	Parameter	Result	LOQ	Units
7439-93-2	Lithium	ND	5.00	ug/L



Report#: 221121809

Project ID: 21120844

Report Date: 12/30/2021

Inorganics QC Summary

Analytical Batch 730441	Client ID Lab ID	MB729810 2288452	LCS729810 2288453				
Prep Batch 729810	Sample Type Prep Date	MB 12/18/21 09:00	LCS 12/18/21 09:00				
Prep Method EPA 3010A	Analysis Date Matrix	12/27/21 22:58 Water	12/27/21 23:04 Water				
EPA 6020B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R
Lithium	7439-93-2	ND	5.00	250	234	93	80 - 120

Analytical Batch 730441	Client ID Lab ID	CCR-13 22112180913	CCR-13 MS 22112180914					CCR-13 MSD 22112180915				
Prep Batch 729810	Sample Type Prep Date	SAMPLE 12/18/2021 09:00	MS 12/18/21 09:00					MSD 12/18/21 09:00				
Prep Method EPA 3010A	Analysis Date Matrix	12/28/2021 00:27 Water	12/28/21 00:32 Water					12/28/21 00:38 Water				
EPA 6020B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Lithium	7439-93-2	30.7	5.00	250	259	91	80 - 120	250	270	96	4	20



CHAIN OF CUSTODY RECORD

Omega COCID 11174

Client ID: 4462 - Element Materials Technology

SDG: 221121809

PM: JLM

FAX: (337) 233-6540
Website: www.element.com

SUB CONTRACTOR: GCAL		COMPANY: Pace Analytical Gulf Coast	
ADDRESS: 7979 Innovation Park Drive			
CITY, STATE, ZIP: Baton Rouge, LA 70820			
PHONE: (225) 769-4900		FAX: (225) 767-5717	
EMAIL:			
ACCOUNT #:			

SPECIAL INSTRUCTIONS / COMMENTS:

ELA 039599 PO

ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Method Preserved Weights HOT Sample Rotation, Additional Sample Descriptions
1	21120844-001C 6020_W_SUB (SW6020A)	CCR-1	250HDPHNC3	Aqueous	12/14/2021 12:05:00 PM	1	1
2	21120844-002C 6020_W_SUB (SW6020A)	CCR-2	250HDPHNC3	Aqueous	12/14/2021 1:00:00 PM	1	2
3	21120844-003C 6020_W_SUB (SW6020A)	CCR-3	250HDPHNC3	Aqueous	12/14/2021 1:50:00 PM	1	3
4	21120844-004C 6020_W_SUB (SW6020A)	CCR-4	250HDPHNC3	Aqueous	12/14/2021 3:00:00 PM	1	4
5	21120844-005C 6020_W_SUB (SW6020A)	CCR-5	250HDPHNC3	Aqueous	12/15/2021 10:30:00 AM	1	5
6	21120844-006C 6020_W_SUB (SW6020A)	CCR-6	250HDPHNC3	Aqueous	12/15/2021 11:20:00 AM	1	6
7	21120844-007C 6020_W_SUB (SW6020A)	CCR-7	250HDPHNC3	Aqueous	12/15/2021 12:10:00 PM	1	7
8	21120844-008C 6020_W_SUB (SW6020A)	CCR-8	250HDPHNC3	Aqueous	12/15/2021 1:25:00 PM	1	8
9	21120844-009C 6020_W_SUB (SW6020A)	CCR-9	250HDPHNC3	Aqueous	12/15/2021 2:15:00 PM	1	9

Relinquished By: <u>Jameson</u>	Date: <u>12/14/21</u>	Time: <u>0800</u>	Received By: <u>Jameson</u>	Date: <u>12/14/21</u>	Time: <u>0800</u>
Relinquished By: <u>Jameson</u>	Date: <u>12/14/21</u>	Time: <u>1044</u>	Received By: <u>Jameson</u>	Date: <u>12/14/21</u>	Time: <u>1045</u>
Relinquished By: <u>Jameson</u>	Date: <u>12/14/21</u>	Time: <u>10:50</u>	Received By: <u>Jameson</u>	Date: <u>12/14/21</u>	Time: <u>1050</u>
TAT: ☐ Standard ☐ RUSH			Note: RUSH requests will incur surcharges!		
1st ID ☐ 2nd ID ☐ 3rd ID ☐			REPORT TRANSMITTAL DESIRED: ☐ HARD COPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE		
FOR LAB USE ONLY			Temp of sample: <u>1.2</u> °C		
Comments:			Attempts to Cool? <u>E3U</u>		



CHAIN OF CUSTODY RECORD

PA	Omega COVID 11174
----	-------------------

Client ID: 4462 - Element Materials Technology

SDG: 221121809

PM: JLM



FAX: (351) 253-6340
Website: www.element.com

SUB-CONTRACTOR: GCAL		COMPANY: Pace Analytical Gulf Coast		SPECIAL INSTRUCTIONS / COMMENTS: ELA 039699 PO			
ADDRESS:							
CITY, STATE, ZIP: 7979 Innovation Park Drive							
Baton Rouge, LA 70820							
PHONE: (225) 769-4900	FAX: (225) 767-5717	EMAIL:					
ACCOUNT #:							
ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Method Preserved Weights HOT Sample Notation, Additional Sample Descriptions
10	21120844-010C	CCR-10	250HDPENHO3	Aqueous	12/15/2021 3:00:00 PM	1	10
	6020_W_SUE (SW6020A)						
11	21120844-011C	CCR-11	250HDPENHO3	Aqueous	12/15/2021 3:40:00 PM	1	11
	6020_W_SUE (SW6020A)						
12	21120844-012C	CCR-12	250HDPENHO3	Aqueous	12/15/2021 10:15:00 AM	1	12
	6020_W_SUE (SW6020A)						
13	21120844-013C	CCR-13	250HDPENHO3	Aqueous	12/16/2021 11:10:00 AM	3	13, 1
	6020_W_SUE (SW6020A)						
14	21120844-014C	CCR-14	250HDPENHO3	Aqueous	12/16/2021 12:10:00 PM	1	14, 1
	6020_W_SUE (SW6020A)						
15	21120844-015C	DUP	250HDPENHO3	Aqueous	12/16/2021	1	15, 1
	6020_W_SUE (SW6020A)						
16	21120844-015C	FB-1	250HDPENHO3	Aqueous	12/16/2021 12:15:00 PM	1	16, 1
	6020_W_SUE (SW6020A)						

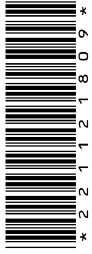
Relinquished By: <u>Young of the Month</u>	Date: <u>12/17/17</u>	Time: <u>08:02</u>	Received by: <u>Amerson</u>	Date: <u>12/17/17</u>	Time: <u>08:00</u>
Relinquished By: <u>Amerson</u>	Date: <u>12/17/17</u>	Time: <u>10:44</u>	Requested by: <u>[Signature]</u>	Date: <u>12/17/17</u>	Time: <u>10:45</u>
Relinquished By: <u>[Signature]</u>	Date: <u>12/17/17</u>	Time: <u>10:54</u>	Received by: <u>[Signature]</u>	Date: <u>12/17/17</u>	Time: <u>10:50</u>

TAT: Standard ☐ RUSH ☒

Notes: RUSH requests will incur surcharges!



SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 221121809		CHECKLIST		YES	NO
Client PM JLM 4462 - Element Materials Technology	Transport Method COURIER	Samples received with proper thermal preservation?		☒	☐
Profile Number 271810	Received By Roberts, George S.	Radioactivity is <1600 cpm? If no, record cpm value in notes section.		☒	☐
Line Item(s) 1 - Water	Receive Date(s) 12/17/21	COC relinquished and complete (including sample IDs, collect times, and sampler)?		☒	☐
		All containers received in good condition and within hold time?		☒	☐
		All sample labels and containers received match the chain of custody?		☒	☐
		Preservative added to any containers?		☐	☒
		If received, was headspace for VOC water containers < 6mm?		☒	☐
		Samples collected in containers provided by Pace Gulf Coast?		☒	☐
COOLERS		DISCREPANCIES		LAB PRESERVATIONS	
Airbill	Thermometer ID: E34	None		None	
	Temp °C 1.2				
NOTES					

Revision 1.6

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☐ 2203 S. Madison St., Muncie, IN 47302
765-747-9000/800-874-3563 Fax 765-747-0228

☐ 629 Washington St., Suite 300, Columbus, IN 47201
812-375-0531 Fax 812-375-0531

☐ 5738 Industrial Rd., Fort Wayne, IN 46825
219-471-7000 Fax 219-471-7777

☒ 2417 W. Pinhook Rd, Lafayette, LA 70508
337-235-0483/800-737-2378
Fax 337-233-6540

☐ 3445 S Sheridan, Tulsa, OK 74145
918-828-9977/800324-5757
Fax 918-828-7756

Chain of Custody Record

Page <u>1</u> of <u>2</u>		Laboratory Number <u>2120844</u>	
Client Name: Pivotal Engineering LLC		Project: CCR Assessment Monitoring	
Contact Name: Terry Flanagan		Quote #: 6786	
Phone/Fax: (504) 799-3653		Sampler's Signature: <i>[Signature]</i>	

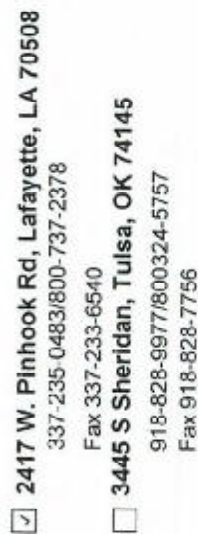
Collection		Comp	Sample Identification / Description			Preserv. HCl HNO ₃ H ₂ SO ₄ NaOH Na ₂ S ₂ O ₃	Number / Type of Container	Matrix Code	Test Requested				Comments / Remarks			
Date	Time		Lab	Time	Time				300: Fluoride	**6020 metals	***6020 Sub	7470 Mercury				
12/14	1205	X		C	C	R	-	1		None/ HNO ₃	3 Plastic	Aq	X	X	X	*6010 Metals: Ba, Be, Cd, Cr, Co, Pb, Mo, Se
	1300	X		C	C	R	-	2		None/ HNO ₃	3 Plastic	Aq	X	X	X	
	1350	X		C	C	R	-	3		None/ HNO ₃	3 Plastic	Aq	X	X	X	**6020 Metals: As, Sb, Ti
	1500	X		C	C	R	-	4		None/ HNO ₃	3 Plastic	Aq	X	X	X	
12/15	1030	X		C	C	R	-	5		None/ HNO ₃	3 Plastic	Aq	X	X	X	**6020 Sub Metal Li
	1120	X		C	C	R	-	6		None/ HNO ₃	3 Plastic	Aq	X	X	X	
	1210	X		C	C	R	-	7		None/ HNO ₃	3 Plastic	Aq	X	X	X	
	1325	X		C	C	R	-	8		None/ HNO ₃	3 Plastic	Aq	X	X	X	
	1415	X		C	C	R	-	9		None/ HNO ₃	3 Plastic	Aq	X	X	X	
	1500	X		C	C	R	-	10		None/ HNO ₃	3 Plastic	Aq	X	X	X	UPS / FedEx Airborne / Element / Mail

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature)	Date	Time	Relinquished by: (Signature)	Received by: (Signature)	Date	Time
	Received by: (Signature)	Date	Time	Relinquished by: (Signature)	Received by: (Signature)	Date	Time

Matrix Codes DW = Drinking Water AQ = Aqueous GW = Ground Water O = Oil MW = Waste Water SO = Soil	Container Types G = Glass P = Plastic V = Vial	Shipping Conditions ☒ Iced Temp <u>4.5°C</u> ☐ Ambient <u>4.5°C</u>	Requested TAT ☐ 24-Hr. ☐ 72-Hr. ☐ 48-Hr. ☒ Standard ☐ Other
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Thank-you for using Element Materials Technology



Laboratory Number 2120844

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