

APPENDIX C
ANALYTICAL LABORATORY REPORTS
w/CHAIN-OF-CUSTODY RECORDS



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

November 14, 2019

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX: (225) 344-6654

RE: Henning II / 9403-010-0100

Order No.: 19110024

Dear Greg Miller:

Element Materials Technology Lafayette received 15 sample(s) on 11/1/2019 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.

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.: LA180028. 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.

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 that reads 'Cristina Thibeaux'.

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



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Case Narrative

WO#: 19110024
Date: 11/14/2019

CLIENT: ICON Environmental Services
Project: Henning II / 9403-010-0100

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#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/29/2019 2:35:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-001 **Matrix:** SOIL
Client Sample ID H-1 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	20.7	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.32	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.12	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.79	0.10			1	11/12/2019
Soluble Calcium	2.58	0.02		meq/L	1	11/12/2019
Soluble Magnesium	0.77	0.05		meq/L	1	11/12/2019
Soluble Sodium	7.49	0.25		meq/L	1	11/12/2019
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	11/7/2019 11:49:50 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.03	1.97		mg/Kg-dry	1	11/13/2019 4:26:44 PM
Barium	2,940	0.986		mg/Kg-dry	1	11/13/2019 4:26:44 PM
Cadmium	< 0.493	0.493		mg/Kg-dry	1	11/13/2019 4:26:44 PM
Chromium	13.5	0.986		mg/Kg-dry	1	11/13/2019 4:26:44 PM
Lead	24.4	0.986		mg/Kg-dry	1	11/13/2019 4:26:44 PM
Strontium	78.9	0.986		mg/Kg-dry	1	11/13/2019 4:26:44 PM
Zinc	17.0	0.986		mg/Kg-dry	1	11/13/2019 4:26:44 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	4,210	48.7		mg/Kg-dry	1	11/13/2019 11:17:46 AM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/29/2019 2:35:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-001 **Matrix:** SOIL
Client Sample ID H-1 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	13.6	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
	M	Matrix Interference	ND	Not Detected at the Reporting Limit
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WO#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/29/2019 2:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-002 **Matrix:** SOIL
Client Sample ID H-1 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.3	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	4.79	0.10	*	mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	14.3	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	10.3	0.10			1	11/12/2019
Soluble Calcium	7.33	0.02		meq/L	1	11/12/2019
Soluble Magnesium	3.52	0.05		meq/L	1	11/12/2019
Soluble Sodium	23.9	0.25		meq/L	1	11/12/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	11/7/2019 11:57:11 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	11.7	1.99	*	mg/Kg-dry	1	11/13/2019 4:30:08 PM
Barium	102	0.994		mg/Kg-dry	1	11/13/2019 4:30:08 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	11/13/2019 4:30:08 PM
Chromium	8.47	0.994		mg/Kg-dry	1	11/13/2019 4:30:08 PM
Lead	9.71	0.994		mg/Kg-dry	1	11/13/2019 4:30:08 PM
Strontium	17.7	0.994		mg/Kg-dry	1	11/13/2019 4:30:08 PM
Zinc	30.0	0.994		mg/Kg-dry	1	11/13/2019 4:30:08 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	134	46.4		mg/Kg-dry	1	11/13/2019 11:21:11 AM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/29/2019 2:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-002 **Matrix:** SOIL
Client Sample ID H-1 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	16.4	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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WO#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/29/2019 3:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-003 **Matrix:** SOIL
Client Sample ID H-1 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	56.4	0.100		meq/100g	1	11/11/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.09	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.89	0.10		%	1	11/11/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.48	0.10			1	11/12/2019
Soluble Calcium	6.83	0.02		meq/L	1	11/12/2019
Soluble Magnesium	3.20	0.05		meq/L	1	11/12/2019
Soluble Sodium	12.3	0.25		meq/L	1	11/12/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	11/7/2019 11:59:29 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	12.2	1.94	*	mg/Kg-dry	1	11/13/2019 4:42:52 PM
Barium	257	0.968		mg/Kg-dry	1	11/13/2019 4:42:52 PM
Cadmium	< 0.484	0.484		mg/Kg-dry	1	11/13/2019 4:42:52 PM
Chromium	24.5	0.968		mg/Kg-dry	1	11/13/2019 4:42:52 PM
Lead	15.6	0.968		mg/Kg-dry	1	11/13/2019 4:42:52 PM
Strontium	64.5	0.968		mg/Kg-dry	1	11/13/2019 4:42:52 PM
Zinc	81.7	0.968		mg/Kg-dry	1	11/13/2019 4:42:52 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	374	48.9		mg/Kg-dry	1	11/13/2019 11:24:35 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/29/2019 3:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-003 **Matrix:** SOIL
Client Sample ID H-1 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	19.9	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/29/2019 4:45:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-004 **Matrix:** SOIL
Client Sample ID H-1 32-34'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	1.21	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	54.5	1.25		mg/L	5	11/13/2019 10:04:48 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	16.8	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 8:35:00 AM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-005 **Matrix:** SOIL
Client Sample ID H-1 42-44'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	0.53	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.7	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 2:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-006 **Matrix:** SOIL
Client Sample ID H-2 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.2	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.38	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.14	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	1.42	0.10			1	11/12/2019
Soluble Calcium	1.36	0.02		meq/L	1	11/12/2019
Soluble Magnesium	0.46	0.05		meq/L	1	11/12/2019
Soluble Sodium	1.35	0.25		meq/L	1	11/12/2019
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.101	0.101		mg/Kg-dry	1	11/7/2019 12:01:47 PM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.47	1.96		mg/Kg-dry	1	11/13/2019 4:46:18 PM
Barium	1,100	0.978		mg/Kg-dry	1	11/13/2019 4:46:18 PM
Cadmium	< 0.489	0.489		mg/Kg-dry	1	11/13/2019 4:46:18 PM
Chromium	11.5	0.978		mg/Kg-dry	1	11/13/2019 4:46:18 PM
Lead	13.5	0.978		mg/Kg-dry	1	11/13/2019 4:46:18 PM
Strontium	55.8	0.978		mg/Kg-dry	1	11/13/2019 4:46:18 PM
Zinc	22.9	0.978		mg/Kg-dry	1	11/13/2019 4:46:18 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	1,230	49.4		mg/Kg-dry	1	11/13/2019 11:27:59 AM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 2:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-006 **Matrix:** SOIL
Client Sample ID H-2 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	14.9	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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WO#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 3:00:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-007 **Matrix:** SOIL
Client Sample ID H-2 4-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	29.5	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.02	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	9.06	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	6.43	0.10			1	11/12/2019
Soluble Calcium	1.13	0.02		meq/L	1	11/12/2019
Soluble Magnesium	0.63	0.05		meq/L	1	11/12/2019
Soluble Sodium	6.02	0.25		meq/L	1	11/12/2019
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	11/7/2019 12:04:05 PM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.13	1.98		mg/Kg-dry	1	11/13/2019 4:49:43 PM
Barium	336	0.989		mg/Kg-dry	1	11/13/2019 4:49:43 PM
Cadmium	< 0.494	0.494		mg/Kg-dry	1	11/13/2019 4:49:43 PM
Chromium	12.2	0.989		mg/Kg-dry	1	11/13/2019 4:49:43 PM
Lead	13.2	0.989		mg/Kg-dry	1	11/13/2019 4:49:43 PM
Strontium	27.1	0.989		mg/Kg-dry	1	11/13/2019 4:49:43 PM
Zinc	24.0	0.989		mg/Kg-dry	1	11/13/2019 4:49:43 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	378	49.1		mg/Kg-dry	1	11/13/2019 11:31:23 AM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 3:00:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-007 **Matrix:** SOIL
Client Sample ID H-2 4-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.0	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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
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Analytical Report

(consolidated)

WO#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 3:10:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-008 **Matrix:** SOIL
Client Sample ID H-2 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	36.4	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.78	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.78	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.40	0.10			1	11/12/2019
Soluble Calcium	1.20	0.02		meq/L	1	11/12/2019
Soluble Magnesium	0.66	0.05		meq/L	1	11/12/2019
Soluble Sodium	4.24	0.25		meq/L	1	11/12/2019
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.102	0.102		mg/Kg-dry	1	11/7/2019 12:06:23 PM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	8.96	1.93		mg/Kg-dry	1	11/13/2019 4:53:12 PM
Barium	370	0.965		mg/Kg-dry	1	11/13/2019 4:53:12 PM
Cadmium	< 0.482	0.482		mg/Kg-dry	1	11/13/2019 4:53:12 PM
Chromium	19.3	0.965		mg/Kg-dry	1	11/13/2019 4:53:12 PM
Lead	13.3	0.965		mg/Kg-dry	1	11/13/2019 4:53:12 PM
Strontium	65.6	0.965		mg/Kg-dry	1	11/13/2019 4:53:12 PM
Zinc	57.5	0.965		mg/Kg-dry	1	11/13/2019 4:53:12 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	317	48.4		mg/Kg-dry	1	11/13/2019 12:41:40 PM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 3:10:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-008 **Matrix:** SOIL
Client Sample ID H-2 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.7	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 3:55:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-009 **Matrix:** SOIL
Client Sample ID H-2 28-30'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B	Analyst: MRM	
Electrical Conductivity	1.43	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A	Analyst: SGP	
Chloride	41.7	1.25		mg/L	5	11/13/2019 10:18:19 AM
PERCENT MOISTURE				LDNR 29-B	Analyst: BXL	
Percent Moisture	15.7	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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WO#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/30/2019 4:10:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-010 **Matrix:** SOIL
Client Sample ID H-2 34-36'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	2.26	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	20.6	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 2:30:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-011 **Matrix:** SOIL
Client Sample ID H-3 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	22.7	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.77	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.60	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	1.85	0.10			1	11/12/2019
Soluble Calcium	2.75	0.02		meq/L	1	11/12/2019
Soluble Magnesium	1.03	0.05		meq/L	1	11/12/2019
Soluble Sodium	2.54	0.25		meq/L	1	11/12/2019
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.102	0.102		mg/Kg-dry	1	11/7/2019 12:08:46 PM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.70	1.93		mg/Kg-dry	1	11/13/2019 4:56:40 PM
Barium	675	0.964		mg/Kg-dry	1	11/13/2019 4:56:40 PM
Cadmium	< 0.482	0.482		mg/Kg-dry	1	11/13/2019 4:56:40 PM
Chromium	12.0	0.964		mg/Kg-dry	1	11/13/2019 4:56:40 PM
Lead	14.6	0.964		mg/Kg-dry	1	11/13/2019 4:56:40 PM
Strontium	19.0	0.964		mg/Kg-dry	1	11/13/2019 4:56:40 PM
Zinc	19.1	0.964		mg/Kg-dry	1	11/13/2019 4:56:40 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	676	46.8		mg/Kg-dry	1	11/13/2019 12:45:06 PM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 2:30:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-011 **Matrix:** SOIL
Client Sample ID H-3 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	12.8	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 2:40:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-012 **Matrix:** SOIL
Client Sample ID H-3 4-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.1	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.74	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	10.4	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.39	0.10			1	11/12/2019
Soluble Calcium	0.57	0.02		meq/L	1	11/12/2019
Soluble Magnesium	0.26	0.05		meq/L	1	11/12/2019
Soluble Sodium	4.74	0.25		meq/L	1	11/12/2019
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	11/7/2019 12:11:04 PM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.03	1.89		mg/Kg-dry	1	11/13/2019 5:07:10 PM
Barium	180	0.945		mg/Kg-dry	1	11/13/2019 5:07:10 PM
Cadmium	< 0.473	0.473		mg/Kg-dry	1	11/13/2019 5:07:10 PM
Chromium	11.7	0.945		mg/Kg-dry	1	11/13/2019 5:07:10 PM
Lead	16.4	0.945		mg/Kg-dry	1	11/13/2019 5:07:10 PM
Strontium	20.2	0.945		mg/Kg-dry	1	11/13/2019 5:07:10 PM
Zinc	14.2	0.945		mg/Kg-dry	1	11/13/2019 5:07:10 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	282	45.6		mg/Kg-dry	1	11/13/2019 12:48:31 PM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 2:40:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-012 **Matrix:** SOIL
Client Sample ID H-3 4-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	16.4	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 2:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-013 **Matrix:** SOIL
Client Sample ID H-3 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	38.1	0.100		meq/100g	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.20	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
LDNR 29-B Analyst: MRM						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.87	0.10		%	1	11/11/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.42	0.10			1	11/12/2019
Soluble Calcium	0.32	0.02		meq/L	1	11/12/2019
Soluble Magnesium	0.14	0.05		meq/L	1	11/12/2019
Soluble Sodium	1.17	0.25		meq/L	1	11/12/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	11/14/2019 9:50:53 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.59	1.86		mg/Kg-dry	1	11/13/2019 5:10:34 PM
Barium	122	0.931		mg/Kg-dry	1	11/13/2019 5:10:34 PM
Cadmium	< 0.466	0.466		mg/Kg-dry	1	11/13/2019 5:10:34 PM
Chromium	13.3	0.931		mg/Kg-dry	1	11/13/2019 5:10:34 PM
Lead	10.1	0.931		mg/Kg-dry	1	11/13/2019 5:10:34 PM
Strontium	24.6	0.931		mg/Kg-dry	1	11/13/2019 5:10:34 PM
Zinc	35.4	0.931		mg/Kg-dry	1	11/13/2019 5:10:34 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	218	47.3		mg/Kg-dry	1	11/13/2019 12:51:42 PM
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 2:50:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-013 **Matrix:** SOIL
Client Sample ID H-3 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	16.4	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110024

Date Reported: 11/14/2019

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 3:15:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-014 **Matrix:** SOIL
Client Sample ID H-3 20-22'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	0.35	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	5.67	0.500		mg/L	2	11/13/2019 10:32:03 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	18.3	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110024**

Date Reported: **11/14/2019**

CLIENT: ICON Environmental Services **Collection Date:** 10/31/2019 4:00:00 PM
Project: Henning II / 9403-010-0100
Lab ID: 19110024-015 **Matrix:** SOIL
Client Sample ID H-3 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	0.24	0.10		mmhos/cm	1	11/8/2019 3:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.5	1.00		wt%	1	11/4/2019 8:30:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32141

Sample ID: MB-32141	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/7/2019	RunNo: 83531						
Client ID: PBS	Batch ID: 32141	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/7/2019	SeqNo: 2090269						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.100 0.100

Sample ID: LCS-32141	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/7/2019	RunNo: 83531						
Client ID: LCSS	Batch ID: 32141	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/7/2019	SeqNo: 2090270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.881 0.100 0.8330 0 106 80 120

Sample ID: LCSD-32141	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/7/2019	RunNo: 83531						
Client ID: LCSS02	Batch ID: 32141	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/7/2019	SeqNo: 2090271						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.884 0.100 0.8330 0 106 80 120 0.8808 0.304 20

Sample ID: 19110003-005AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/7/2019	RunNo: 83531						
Client ID: ZZZZZZ	Batch ID: 32141	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/7/2019	SeqNo: 2090274						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 1.32 0.107 0.8900 0.4539 97.0 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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 Website: www.element.com

QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32141

Sample ID: 19110003-005AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/7/2019	RunNo: 83531						
Client ID: ZZZZZZ	Batch ID: 32141	TestNo: 29B/SW7471 SW7471A	Analysis Date: 11/7/2019	SeqNo: 2090275							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.32	0.107	0.8914	0.4539	96.7	75	125	1.317	0.102	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32181

Sample ID: 19110024-012ADUP	SampType: DUP	TestCode: ESP_S	Units: %	Prep Date: 11/8/2019	RunNo: 83654						
Client ID: H-3 4-8'	Batch ID: 32181	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/11/2019	SeqNo: 2093159						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %	10.2	0.10						10.37	1.71	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32182

Sample ID: 19110024-012ADUP	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 11/8/2019	RunNo: 83654						
Client ID: H-3 4-8'	Batch ID: 32182	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/11/2019	SeqNo: 2093123						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	27.0	0.100						27.09	0.386	20	

Sample ID: LCS-32182	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 11/8/2019	RunNo: 83654						
Client ID: LCSS	Batch ID: 32182	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/11/2019	SeqNo: 2093127						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	19.8	0.100	25.00	0	79.3	76	124				

Sample ID: LCSD-32182	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 11/8/2019	RunNo: 83654						
Client ID: LCSS02	Batch ID: 32182	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/11/2019	SeqNo: 2093128						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	19.7	0.100	25.00	0	78.7	76	124	19.83	0.793	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32184

Sample ID: 19110004-002ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/11/2019	RunNo: 83649						
Client ID: ZZZZZZ	Batch ID: 32184	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/12/2019	SeqNo: 2092695						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	0.58	0.10						0.46	23.2	20	R
Soluble Calcium	1.03	0.02						1.04	0.48	20	
Soluble Magnesium	0.54	0.05						0.54	0.75	20	
Soluble Sodium	0.52	0.25						0.41	22.9	20	R

Sample ID: 19110024-012ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/11/2019	RunNo: 83649						
Client ID: H-3 4-8'	Batch ID: 32184	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/12/2019	SeqNo: 2092705						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	7.49	0.10						7.39	1.27	20	
Soluble Calcium	0.57	0.02						0.57	0.26	20	
Soluble Magnesium	0.26	0.05						0.26	0.61	20	
Soluble Sodium	4.80	0.25						4.74	1.28	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32200

Sample ID: MB-32200	SampType: MBLK	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83689
Client ID: PBS	Batch ID: 32200	TestNo: LDNR 29-B		Analysis Date: 11/13/2019	SeqNo: 2094254
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium < 50.0 50.0

Sample ID: LCS-32200	SampType: LCS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83689
Client ID: LCSS	Batch ID: 32200	TestNo: LDNR 29-B		Analysis Date: 11/13/2019	SeqNo: 2094255
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 5,090 50.0 5,000 0 102 75 125

Sample ID: LCSD-32200	SampType: LCSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83689
Client ID: LCSS02	Batch ID: 32200	TestNo: LDNR 29-B		Analysis Date: 11/13/2019	SeqNo: 2094256
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,130 50.0 5,000 0 82.5 75 125 5,090 20.9 20 R

Sample ID: 19110004-001AMS	SampType: MS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83689
Client ID: ZZZZZZ	Batch ID: 32200	TestNo: LDNR 29-B		Analysis Date: 11/13/2019	SeqNo: 2094260
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 6,360 48.3 4,826 991.8 111 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32200

Sample ID: 19110004-001AMSD	SampType: MSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83689						
Client ID: ZZZZZZ	Batch ID: 32200	TestNo: LDNR 29-B		Analysis Date: 11/13/2019	SeqNo: 2094261						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	6,070	48.4	4,836	991.8	105	75	125	6,361	4.70	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32202

Sample ID: MB-32202	SampType: MBLK	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83699						
Client ID: PBS	Batch ID: 32202	TestNo: SW6010B	SW3050B	Analysis Date: 11/13/2019	SeqNo: 2094942						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID: LCS-32202	SampType: LCS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83699						
Client ID: LCSS	Batch ID: 32202	TestNo: SW6010B	SW3050B	Analysis Date: 11/13/2019	SeqNo: 2094943						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.6	2.00	50.00	0	105	80	120				
Barium	48.2	1.00	50.00	0	96.4	80	120				
Cadmium	48.1	0.500	50.00	0	96.2	80	120				
Chromium	48.0	1.00	50.00	0	96.0	80	120				
Lead	50.8	1.00	50.00	0	102	80	120				
Strontium	47.1	1.00	50.00	0	94.3	80	120				
Zinc	48.8	1.00	50.00	0	97.6	80	120				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110024

14-Nov-19

Client: ICON Environmental Services

Project: Henning II / 9403-010-0100

BatchID: 32202

Sample ID: LCSD-32202	SampType: LCSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83699						
Client ID: LCSS02	Batch ID: 32202	TestNo: SW6010B	SW3050B	Analysis Date: 11/13/2019	SeqNo: 2094944						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.7	2.00	50.00	0	101	80	120	52.60	3.74	20	
Barium	47.9	1.00	50.00	0	95.8	80	120	48.22	0.645	20	
Cadmium	48.0	0.500	50.00	0	96.0	80	120	48.11	0.208	20	
Chromium	48.0	1.00	50.00	0	96.0	80	120	48.02	0.0208	20	
Lead	50.3	1.00	50.00	0	101	80	120	50.78	0.930	20	
Strontium	47.0	1.00	50.00	0	93.9	80	120	47.13	0.361	20	
Zinc	48.6	1.00	50.00	0	97.2	80	120	48.82	0.493	20	

Sample ID: 19110024-011AMS	SampType: MS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83699						
Client ID: H-3 0-2'	Batch ID: 32202	TestNo: SW6010B	SW3050B	Analysis Date: 11/13/2019	SeqNo: 2094968						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	62.2	1.95	48.83	6.699	114	75	125				
Barium	621	0.977	48.83	675.3	-111	75	125				S
Cadmium	49.3	0.488	48.83	0.08675	101	75	125				
Chromium	68.3	0.977	48.83	12.01	115	75	125				
Lead	67.4	0.977	48.83	14.55	108	75	125				
Strontium	71.7	0.977	48.83	19.02	108	75	125				
Zinc	74.3	0.977	48.83	19.12	113	75	125				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110024

14-Nov-19

Client: ICON Environmental Services

Project: Henning II / 9403-010-0100

BatchID: 32202

Sample ID: 19110024-011AMSD	SampType: MSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/12/2019	RunNo: 83699						
Client ID: H-3 0-2'	Batch ID: 32202	TestNo: SW6010B	SW3050B	Analysis Date: 11/13/2019	SeqNo: 2094969						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	61.1	1.92	47.97	6.699	113	75	125	62.24	1.82	20	
Barium	627	0.959	47.97	675.3	-99.9	75	125	621.2	0.989	20	S
Cadmium	48.7	0.480	47.97	0.08675	101	75	125	49.35	1.32	20	
Chromium	67.0	0.959	47.97	12.01	115	75	125	68.30	1.96	20	
Lead	67.4	0.959	47.97	14.55	110	75	125	67.40	0.0476	20	
Strontium	70.6	0.959	47.97	19.02	107	75	125	71.71	1.58	20	
Zinc	72.9	0.959	47.97	19.12	112	75	125	74.35	1.90	20	

NOTES:

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110024

14-Nov-19

Client: ICON Environmental Services

Project: Henning II / 9403-010-0100

BatchID: 32207

Sample ID: MB-32207	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83721						
Client ID: PBS	Batch ID: 32207	TestNo: 29B/SW7471	SW7471A	Analysis Date: 11/14/2019	SeqNo: 2095666						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.100 0.100

Sample ID: LCS-32207	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83721						
Client ID: LCSS	Batch ID: 32207	TestNo: 29B/SW7471	SW7471A	Analysis Date: 11/14/2019	SeqNo: 2095667						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.910 0.100 0.8330 0 109 80 120

Sample ID: LCSD-32207	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83721						
Client ID: LCSS02	Batch ID: 32207	TestNo: 29B/SW7471	SW7471A	Analysis Date: 11/14/2019	SeqNo: 2095668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.916 0.100 0.8330 0 110 80 120 0.9096 0.727 20

Sample ID: 19110024-013AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83721						
Client ID: H-3 10-12'	Batch ID: 32207	TestNo: 29B/SW7471	SW7471A	Analysis Date: 11/14/2019	SeqNo: 2095671						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.975 0.107 0.8881 0.03004 106 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: 32207

Sample ID: 19110024-013AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83721						
Client ID: H-3 10-12'	Batch ID: 32207	TestNo: 29B/SW7471	SW7471A	Analysis Date: 11/14/2019	SeqNo: 2095672						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.983	0.107	0.8903	0.03004	107	75	125	0.9749	0.876	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 19110024

14-Nov-19

Client: ICON Environmental Services

Project: Henning II / 9403-010-0100

BatchID: R83567

Sample ID: 19110024-012ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 83567						
Client ID: H-3 4-8'	Batch ID: R83567	TestNo: LDNR 29-B		Analysis Date: 11/4/2019	SeqNo: 2090899						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	16.7	1.00						16.40	1.81	20	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6546
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QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: R83570

Sample ID: MB-R83570	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83570						
Client ID: PBS	Batch ID: R83570	TestNo: LDNR 29-B		Analysis Date: 11/8/2019	SeqNo: 2090999						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity	< 0.10	0.10									
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Sample ID: LCS1-R83570	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83570						
Client ID: ZZZZZ	Batch ID: R83570	TestNo: LDNR 29-B		Analysis Date: 11/8/2019	SeqNo: 2091000						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity	0.37	0.10	0.38	0	96.1	90.07	109.9				
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Sample ID: LCS2-R83570	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83570						
Client ID: ZZZZZ	Batch ID: R83570	TestNo: LDNR 29-B		Analysis Date: 11/8/2019	SeqNo: 2091001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity	50.1	0.10	53.00	0	94.5	90	110				
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Sample ID: 19110024-012ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83570						
Client ID: H-3 4-8'	Batch ID: R83570	TestNo: LDNR 29-B		Analysis Date: 11/8/2019	SeqNo: 2091014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity	0.75	0.10						0.74	0.94	20	
-------------------------	------	------	--	--	--	--	--	------	------	----	--

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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

QC SUMMARY REPORT

WO#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: R83662

Sample ID: MBLK	SampType: MBLK	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83662						
Client ID: PBW	Batch ID: R83662	TestNo: SW9056A		Analysis Date: 11/13/2019	SeqNo: 2095022						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride < 0.250 0.250

Sample ID: LCS	SampType: LCS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83662						
Client ID: LCSW	Batch ID: R83662	TestNo: SW9056A		Analysis Date: 11/13/2019	SeqNo: 2095023						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 9.96 0.250 10.00 0 99.6 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83662						
Client ID: LCSS02	Batch ID: R83662	TestNo: SW9056A		Analysis Date: 11/13/2019	SeqNo: 2095024						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 9.78 0.250 10.00 0 97.8 80 120 9.958 1.85 15

Sample ID: 19110446-001DMS	SampType: MS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83662						
Client ID: ZZZZZ	Batch ID: R83662	TestNo: SW9056A		Analysis Date: 11/13/2019	SeqNo: 2095031						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 17,800 250 5,000 12,950 96.5 80 120

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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#: 19110024
 14-Nov-19

Client: ICON Environmental Services
Project: Henning II / 9403-010-0100

BatchID: R83662

Sample ID: 19110446-001DMSD	SampType: MSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83662						
Client ID: ZZZZZZ	Batch ID: R83662	TestNo: SW9056A		Analysis Date: 11/13/2019	SeqNo: 2095032						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	17,700	250	5,000	12,950	94.8	80	120	17,770	0.483	15	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **19110024**

RcptNo: **1**

Logged by:	Tammy Thibodeaux	11/1/2019 2:40:00 PM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	11/1/2019 4:00:03 PM	<i>Tammy Thibodeaux</i>
Reviewed By:	Caitlin Duplantis	11/12/2019 3:13:01 PM	<i>Caitlin Duplantis</i>

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:
 Improper error correction(s) made by client.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
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Chain of Custody

Laboratory Number: A110024

Client Information:		Billing Information:		PO Number:	Project Name/Number:	Page of <u>2</u>
Company Name:				Quote Number:	<u>Henning II</u>	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
Contact Name:				Required QC Level:	<u>9403-010-0100</u>	
Address:	<u>ICON</u>	<u>SAME</u>		Bill Monthly	Sampler's Signature <u>Kath C.</u>	
City, State Zip:				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipping Method:	
Phone Number:	Ext:		Ext:		<u>UPS / FedEx / Airborne</u>	
Fax Number:					<u>DHL / Element / Hand Mail</u>	
E-mail Address:						

Which Regulations Apply:	Turn Time	Collection Information				Container		Pres.	Requested Tests					Comments	
						Quantity	Type P=Plastic, V=Vial G=Glass	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	% Moisture	CEC/ESP/EAR	29 B Metals	Leachate Cl ⁻		
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)													
Sample ID/Description	Date	Time	Grab / Composite	Matrix	Quantity	Type	Pres.	EC	% Moisture	CEC/ESP/EAR	29 B Metals	Leachate Cl ⁻			
H-1	0-2'	10.29.19 1435	G	SO	1	P	-	X	X	X	X				
H-1	6-8'	10.29.19 1450	G	SO	1	P	-	X	X	X	X				
H-1	10-12'	10.29.19 1550	G	SO	1	P	-	X	X	X	X				
H-1	32-34'	10.29.19 1645	G	SO	1	P	-	X	X			X			
H-1	42-44'	10.30.19 0835	G	SO	1	P	-	X	X						
H-2	0-2'	10.30.19 1450	G	SO	1	P	-	X	X	X	X				
H-2	4-8'	10.30.19 1500	G	SO	1	P	-	X	X	X	X				
H-2	10-12'	10.30.19 1510	G	SO	1	P	-	X	X	X	X				
H-2	28-30'	10.30.19 1555	G	SO	1	P	-	X	X			X			

29 B Metals
As, Ba, TTBa,
Cd, Cr, Sr, Zn,
Pb, Hg

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<u>Kath C.</u>	<u>1440/11.1.19</u>	<u>[Signature]</u>	<u>11-1-19 1440</u>	
2					Received at lab on ice?
3					<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:

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.

- 9301 Innovation Drive, Suite 115
Daleville, IN
47334-0569 USA
P 765-378-4103
F 765-378-4109
- 629 Washington St. Suite 300
Columbus, IN
47201-6231 USA
P 812-375-0531
F 812-375-0731
- 2121 East Washington Boulevard
Fort Wayne, IN
46803-1328 USA
P 260-471-7000
F 260-471-7777
- 560 South Zimmer Road
Warsaw, IN
46580-2368 USA
P 574-267-3305
F 574-269-6569
- 3371 Cleveland Road, Suite 100A
South Bend, IN
46628-9780 USA
P 574-277-0707
F 574-273-5699
- 2417 W. Pinhook Rd
Lafayette, LA
70508-3344 USA
P 337-235-0483
F 337-233-6540



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Chain of Custody

Laboratory Number: 19110024

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number: <u>Henning II</u>		Page <u>2 of 2</u>
					Quote Number:	<u>9403-010-0100</u>		Matrix Code
	<u>ICON</u>		<u>SAME</u>		Required QC Level:	Sampler's Signature: <u>Kate C.</u>		DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	Ext:		Ext:		Bill Monthly	Shipping Method:		
					<input type="checkbox"/> Yes	UPS / FedEx / Airborne		
					<input type="checkbox"/> No	DHL / Element / <u>Hand</u> / Mail		

Which Regulations Apply:	Turn Time	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests					Comments		
			Quantity	Type P=Plastic, G=Glass, V=Vial		HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	90 Moisture	CEC/ESP/GAR	29 B Metals		Leachate Cl-	
<input type="checkbox"/> RCRA <input type="checkbox"/> Drinking Water <input type="checkbox"/> POTW <input type="checkbox"/> Distribution <input type="checkbox"/> NPDES <input type="checkbox"/> Special <input type="checkbox"/> USDA/FDA <input type="checkbox"/> State <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other												
Sample ID/Description	Date	Time	Grab / Composite	Matrix	Quantity	Type	Pres.	EC	90 Moisture	CEC/ESP/GAR	29 B Metals	Leachate Cl-	
H-2	34-36'	10.30.19	1610	G	50	P	—	X	X				
H-3	0-2'	10.31.19	1430	G	50	P	—	X	X	X	X		
H-3	4-8'	10.31.19	1440	G	50	P	—	X	X	X	X		
H-3	10-12'	10.31.19	1450	G	50	P	—	X	X	X	X		
H-3	20-22'	10.31.19	1515	G	50	P	—	X	X	X	X		
H-3	38-40'	10.31.19	1600	G	50	P	—	X	X				

29 B Metals
 As, Ba, TTBa,
 Cd, Cr, Sr, Zn,
 Pb, Hg

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<u>Kate C.</u>	<u>11.1.19/1440</u>	<u>[Signature]</u>	<u>11-1-19 1440</u>	
2					Received at lab on ice?
3					<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:

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.

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2121 East Washington Boulevard
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 46803-1328 USA
 P 260-471-7000
 F 260-471-7777

560 South Zimmer Road
 Warsaw, IN
 46580-2368 USA
 P 574-267-3305
 F 574-269-6569

3371 Cleveland Road, Suite 100A
 South Bend, IN
 46628-9780 USA
 P 574-277-0707
 F 574-273-5699

2417 W. Pinhook Rd
 Lafayette, LA
 70508-3344 USA
 P 337-235-0483
 F 337-233-6540



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

November 25, 2019

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX: (225) 344-6654

RE: Henning II/9403-010-0100

Order No.: 19110399

Dear Greg Miller:

Element Materials Technology Lafayette received 39 sample(s) on 11/11/2019 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.

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.: LA180028. 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.

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 that reads '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#: 19110399
Date: 11/25/2019

CLIENT: ICON Environmental Services
Project: Henning II/9403-010-0100

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

Analytical Report

(consolidated)

WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 1:25:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-001 **Matrix:** SOIL
Client Sample ID H-4 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	18.3	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.38	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.32	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	1.66	0.10			1	11/19/2019
Soluble Calcium	1.97	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.61	0.05		meq/L	1	11/19/2019
Soluble Sodium	1.89	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	11/19/2019 7:14:22 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.65	1.92		mg/Kg-dry	1	11/15/2019 8:29:29 PM
Barium	4,540	0.958		mg/Kg-dry	1	11/15/2019 8:29:29 PM
Cadmium	< 0.479	0.479		mg/Kg-dry	1	11/15/2019 8:29:29 PM
Chromium	9.35	0.958		mg/Kg-dry	1	11/15/2019 8:29:29 PM
Lead	11.7	0.958		mg/Kg-dry	1	11/15/2019 8:29:29 PM
Strontium	39.2	0.958		mg/Kg-dry	1	11/15/2019 8:29:29 PM
Zinc	12.3	0.958		mg/Kg-dry	1	11/15/2019 8:29:29 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	12,300	47.2		mg/Kg-dry	1	11/20/2019 11:55:54 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
RL	Reporting Limit
SDL	Sample detection limit
W	Sample container temperature is out of limit as specified at testcode

B	Analyte detected in the associated Method Blank
M	Matrix Interference
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
U	Analyte not detected



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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 1:25:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-001 **Matrix:** SOIL
Client Sample ID H-4 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.7	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 1:35:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-002 **Matrix:** SOIL
Client Sample ID H-4 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	25.7	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.84	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.05	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.38	0.10			1	11/19/2019
Soluble Calcium	0.99	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.49	0.05		meq/L	1	11/19/2019
Soluble Sodium	6.33	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	11/19/2019 7:16:40 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.19	1.97		mg/Kg-dry	1	11/15/2019 8:34:52 PM
Barium	145	0.986		mg/Kg-dry	1	11/15/2019 8:34:52 PM
Cadmium	< 0.493	0.493		mg/Kg-dry	1	11/15/2019 8:34:52 PM
Chromium	9.78	0.986		mg/Kg-dry	1	11/15/2019 8:34:52 PM
Lead	10.3	0.986		mg/Kg-dry	1	11/15/2019 8:34:52 PM
Strontium	15.6	0.986		mg/Kg-dry	1	11/15/2019 8:34:52 PM
Zinc	12.5	0.986		mg/Kg-dry	1	11/15/2019 8:34:52 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	396	47.9		mg/Kg-dry	1	11/20/2019 11:59:19 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 1:35:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-002 **Matrix:** SOIL
Client Sample ID H-4 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	17.4	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 1:45:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-003 **Matrix:** SOIL
Client Sample ID H-4 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	40.5	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.56	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.69	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.22	0.10			1	11/19/2019
Soluble Calcium	7.27	0.02		meq/L	1	11/19/2019
Soluble Magnesium	3.00	0.05		meq/L	1	11/19/2019
Soluble Sodium	16.4	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	0.164	0.101		mg/Kg-dry	1	11/19/2019 7:18:59 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.47	1.93		mg/Kg-dry	1	11/15/2019 8:40:28 PM
Barium	212	0.963		mg/Kg-dry	1	11/15/2019 8:40:28 PM
Cadmium	< 0.481	0.481		mg/Kg-dry	1	11/15/2019 8:40:28 PM
Chromium	18.5	0.963		mg/Kg-dry	1	11/15/2019 8:40:28 PM
Lead	13.4	0.963		mg/Kg-dry	1	11/15/2019 8:40:28 PM
Strontium	28.2	0.963		mg/Kg-dry	1	11/15/2019 8:40:28 PM
Zinc	43.7	0.963		mg/Kg-dry	1	11/15/2019 8:40:28 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	590	47.0		mg/Kg-dry	1	11/21/2019 12:03:03 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 1:45:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-003 **Matrix:** SOIL
Client Sample ID H-4 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	21.9	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 2:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-004 **Matrix:** SOIL
Client Sample ID H-4 16-18'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	0.96	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.5	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 3:55:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-005 **Matrix:** SOIL
Client Sample ID H-5 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	23.2	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.56	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	12.8	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	14.9	0.10	*		1	11/19/2019
Soluble Calcium	0.99	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.43	0.05		meq/L	1	11/19/2019
Soluble Sodium	12.5	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	11/19/2019 7:21:43 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.12	1.89		mg/Kg-dry	1	11/15/2019 8:46:41 PM
Barium	4,440	0.943		mg/Kg-dry	1	11/15/2019 8:46:41 PM
Cadmium	< 0.472	0.472		mg/Kg-dry	1	11/15/2019 8:46:41 PM
Chromium	8.20	0.943		mg/Kg-dry	1	11/15/2019 8:46:41 PM
Lead	10.4	0.943		mg/Kg-dry	1	11/15/2019 8:46:41 PM
Strontium	99.9	0.943		mg/Kg-dry	1	11/15/2019 8:46:41 PM
Zinc	10.6	0.943		mg/Kg-dry	1	11/15/2019 8:46:41 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	12,000	48.0		mg/Kg-dry	1	11/21/2019 12:06:48 AM

Qualifiers:

* Value exceeds Maximum Contaminant Level.
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 RL Reporting Limit
 SDL Sample detection limit
 W Sample container temperature is out of limit as specified at testcode

B Analyte detected in the associated Method Blank
 M Matrix Interference
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits
 U Analyte not detected



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 3:55:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-005 **Matrix:** SOIL
Client Sample ID H-5 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	19.2	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:00:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-006 **Matrix:** SOIL
Client Sample ID H-5 2-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	26.0	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.56	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	25.8	0.10	*	%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	25.2	0.10	*		1	11/19/2019
Soluble Calcium	1.08	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.43	0.05		meq/L	1	11/19/2019
Soluble Sodium	21.9	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	11/19/2019 7:24:04 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.05	1.92		mg/Kg-dry	1	11/15/2019 8:52:15 PM
Barium	393	0.960		mg/Kg-dry	1	11/15/2019 8:52:15 PM
Cadmium	< 0.480	0.480		mg/Kg-dry	1	11/15/2019 8:52:15 PM
Chromium	5.66	0.960		mg/Kg-dry	1	11/15/2019 8:52:15 PM
Lead	7.96	0.960		mg/Kg-dry	1	11/15/2019 8:52:15 PM
Strontium	76.3	0.960		mg/Kg-dry	1	11/15/2019 8:52:15 PM
Zinc	7.48	0.960		mg/Kg-dry	1	11/15/2019 8:52:15 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	667	49.5		mg/Kg-dry	1	11/21/2019 12:18:03 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:00:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-006 **Matrix:** SOIL
Client Sample ID H-5 2-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	16.6	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-007 **Matrix:** SOIL
Client Sample ID H-5 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	22.9	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	4.95	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	26.1	0.10	*	%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	31.3	0.10	*		1	11/19/2019
Soluble Calcium	2.42	0.02		meq/L	1	11/19/2019
Soluble Magnesium	1.05	0.05		meq/L	1	11/19/2019
Soluble Sodium	41.3	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.102	0.102		mg/Kg-dry	1	11/19/2019 7:26:22 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.23	1.98		mg/Kg-dry	1	11/15/2019 9:06:16 PM
Barium	423	0.988		mg/Kg-dry	1	11/15/2019 9:06:16 PM
Cadmium	< 0.494	0.494		mg/Kg-dry	1	11/15/2019 9:06:16 PM
Chromium	6.78	0.988		mg/Kg-dry	1	11/15/2019 9:06:16 PM
Lead	7.90	0.988		mg/Kg-dry	1	11/15/2019 9:06:16 PM
Strontium	52.7	0.988		mg/Kg-dry	1	11/15/2019 9:06:16 PM
Zinc	9.87	0.988		mg/Kg-dry	1	11/15/2019 9:06:16 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	685	47.6		mg/Kg-dry	1	11/21/2019 12:21:47 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-007 **Matrix:** SOIL
Client Sample ID H-5 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.1	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-008 **Matrix:** SOIL
Client Sample ID H-5 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	36.4	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	7.76	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	11.8	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	18.5	0.10	*		1	11/19/2019
Soluble Calcium	14.2	0.02		meq/L	1	11/19/2019
Soluble Magnesium	4.81	0.05		meq/L	1	11/19/2019
Soluble Sodium	57.1	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	11/19/2019 7:28:40 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.48	1.96		mg/Kg-dry	1	11/15/2019 9:11:53 PM
Barium	758	0.981		mg/Kg-dry	1	11/15/2019 9:11:53 PM
Cadmium	0.707	0.491		mg/Kg-dry	1	11/15/2019 9:11:53 PM
Chromium	18.9	0.981		mg/Kg-dry	1	11/15/2019 9:11:53 PM
Lead	14.7	0.981		mg/Kg-dry	1	11/15/2019 9:11:53 PM
Strontium	60.3	0.981		mg/Kg-dry	1	11/15/2019 9:11:53 PM
Zinc	54.9	0.981		mg/Kg-dry	1	11/15/2019 9:11:53 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	762	46.3		mg/Kg-dry	1	11/22/2019 5:27:47 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-008 **Matrix:** SOIL
Client Sample ID H-5 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	19.5	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-009 **Matrix:** SOIL
Client Sample ID H-5 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	40.3	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	11.1	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	18.3	0.10	*	%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	11.7	0.10			1	11/19/2019
Soluble Calcium	39.0	0.02		meq/L	1	11/19/2019
Soluble Magnesium	14.4	0.05		meq/L	1	11/19/2019
Soluble Sodium	60.7	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	11/19/2019 7:30:58 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	8.30	1.88		mg/Kg-dry	1	11/15/2019 9:18:07 PM
Barium	1,940	0.941		mg/Kg-dry	1	11/15/2019 9:18:07 PM
Cadmium	< 0.470	0.470		mg/Kg-dry	1	11/15/2019 9:18:07 PM
Chromium	20.3	0.941		mg/Kg-dry	1	11/15/2019 9:18:07 PM
Lead	13.5	0.941		mg/Kg-dry	1	11/15/2019 9:18:07 PM
Strontium	61.4	0.941		mg/Kg-dry	1	11/15/2019 9:18:07 PM
Zinc	68.3	0.941		mg/Kg-dry	1	11/15/2019 9:18:07 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	4,150	46.0		mg/Kg-dry	1	11/22/2019 5:53:30 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-009 **Matrix:** SOIL
Client Sample ID H-5 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	23.9	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/4/2019 4:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-010 **Matrix:** SOIL
Client Sample ID H-5 14-16'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	7.82	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.0	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
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Analytical Report

(consolidated)

WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:05:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-011 **Matrix:** SOIL
Client Sample ID H-6 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	16.3	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.29	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	32.5	0.10	*	%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	25.3	0.10	*		1	11/19/2019
Soluble Calcium	0.88	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.32	0.05		meq/L	1	11/19/2019
Soluble Sodium	19.7	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	11/19/2019 7:33:16 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.98	1.95		mg/Kg-dry	1	11/15/2019 9:23:12 PM
Barium	1,030	0.974		mg/Kg-dry	1	11/15/2019 9:23:12 PM
Cadmium	< 0.487	0.487		mg/Kg-dry	1	11/15/2019 9:23:12 PM
Chromium	7.90	0.974		mg/Kg-dry	1	11/15/2019 9:23:12 PM
Lead	8.73	0.974		mg/Kg-dry	1	11/15/2019 9:23:12 PM
Strontium	95.9	0.974		mg/Kg-dry	1	11/15/2019 9:23:12 PM
Zinc	9.06	0.974		mg/Kg-dry	1	11/15/2019 9:23:12 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	1,210	46.3		mg/Kg-dry	1	11/22/2019 5:57:57 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:05:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-011 **Matrix:** SOIL
Client Sample ID H-6 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	16.3	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:10:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-012 **Matrix:** SOIL
Client Sample ID H-6 2-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	22.6	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.43	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	27.1	0.10	*	%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	25.4	0.10	*		1	11/19/2019
Soluble Calcium	0.90	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.36	0.05		meq/L	1	11/19/2019
Soluble Sodium	20.1	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	11/19/2019 7:40:39 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.76	1.93		mg/Kg-dry	1	11/15/2019 9:28:34 PM
Barium	343	0.963		mg/Kg-dry	1	11/15/2019 9:28:34 PM
Cadmium	< 0.481	0.481		mg/Kg-dry	1	11/15/2019 9:28:34 PM
Chromium	20.3	0.963		mg/Kg-dry	1	11/15/2019 9:28:34 PM
Lead	8.29	0.963		mg/Kg-dry	1	11/15/2019 9:28:34 PM
Strontium	83.4	0.963		mg/Kg-dry	1	11/15/2019 9:28:34 PM
Zinc	14.9	0.963		mg/Kg-dry	1	11/15/2019 9:28:34 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	394	47.1		mg/Kg-dry	1	11/22/2019 6:02:24 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:10:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-012 **Matrix:** SOIL
Client Sample ID H-6 2-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.0	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:15:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-013 **Matrix:** SOIL
Client Sample ID H-6 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	19.1	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	5.05	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	21.3	0.10	*	%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	24.8	0.10	*		1	11/19/2019
Soluble Calcium	4.10	0.02		meq/L	1	11/19/2019
Soluble Magnesium	1.30	0.05		meq/L	1	11/19/2019
Soluble Sodium	40.8	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	11/19/2019 7:42:57 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.47	1.88		mg/Kg-dry	1	11/15/2019 9:34:18 PM
Barium	118	0.940		mg/Kg-dry	1	11/15/2019 9:34:18 PM
Cadmium	< 0.470	0.470		mg/Kg-dry	1	11/15/2019 9:34:18 PM
Chromium	5.53	0.940		mg/Kg-dry	1	11/15/2019 9:34:18 PM
Lead	6.45	0.940		mg/Kg-dry	1	11/15/2019 9:34:18 PM
Strontium	55.6	0.940		mg/Kg-dry	1	11/15/2019 9:34:18 PM
Zinc	8.23	0.940		mg/Kg-dry	1	11/15/2019 9:34:18 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	164	46.4		mg/Kg-dry	1	11/22/2019 6:06:50 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:15:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-013 **Matrix:** SOIL
Client Sample ID H-6 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	15.9	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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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 Lafayette, LA 70508-3344
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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:20:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-014 **Matrix:** SOIL
Client Sample ID H-6 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	16.7	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	8.83	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	9.73	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	14.3	0.10	*		1	11/19/2019
Soluble Calcium	24.6	0.02		meq/L	1	11/19/2019
Soluble Magnesium	5.86	0.05		meq/L	1	11/19/2019
Soluble Sodium	55.8	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	11/19/2019 7:45:16 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.89	1.98		mg/Kg-dry	1	11/15/2019 9:39:39 PM
Barium	135	0.988		mg/Kg-dry	1	11/15/2019 9:39:39 PM
Cadmium	< 0.494	0.494		mg/Kg-dry	1	11/15/2019 9:39:39 PM
Chromium	6.90	0.988		mg/Kg-dry	1	11/15/2019 9:39:39 PM
Lead	6.56	0.988		mg/Kg-dry	1	11/15/2019 9:39:39 PM
Strontium	32.9	0.988		mg/Kg-dry	1	11/15/2019 9:39:39 PM
Zinc	14.4	0.988		mg/Kg-dry	1	11/15/2019 9:39:39 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	160	48.9		mg/Kg-dry	1	11/22/2019 6:11:16 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:20:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-014 **Matrix:** SOIL
Client Sample ID H-6 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	18.2	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:30:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-015 **Matrix:** SOIL
Client Sample ID H-6 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	38.0	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	8.44	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.18	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	10.4	0.10			1	11/19/2019
Soluble Calcium	27.1	0.02		meq/L	1	11/19/2019
Soluble Magnesium	8.62	0.05		meq/L	1	11/19/2019
Soluble Sodium	43.9	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	11/19/2019 7:47:34 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	8.84	1.95		mg/Kg-dry	1	11/15/2019 9:45:15 PM
Barium	314	0.973		mg/Kg-dry	1	11/15/2019 9:45:15 PM
Cadmium	0.720	0.487		mg/Kg-dry	1	11/15/2019 9:45:15 PM
Chromium	18.3	0.973		mg/Kg-dry	1	11/15/2019 9:45:15 PM
Lead	14.6	0.973		mg/Kg-dry	1	11/15/2019 9:45:15 PM
Strontium	80.1	0.973		mg/Kg-dry	1	11/15/2019 9:45:15 PM
Zinc	60.1	0.973		mg/Kg-dry	1	11/15/2019 9:45:15 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	352	48.0		mg/Kg-dry	1	11/22/2019 6:15:42 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 2417 W. Pinhook Road
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:30:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-015 **Matrix:** SOIL
Client Sample ID H-6 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.6	1.00		wt%	1	11/11/2019 2:30:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 9:40:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-016 **Matrix:** SOIL
Client Sample ID H-6 14-16'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	9.28	0.10	*	mmhos/cm	1	11/14/2019 1:35:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	20.7	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 11:05:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-017 **Matrix:** SOIL
Client Sample ID H-7 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: MRM
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	23.1	0.100		meq/100g	1	11/20/2019
29B SALTS					LDNR 29-B	Analyst: MRM
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.60	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: MRM
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.22	0.10		%	1	11/20/2019
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.13	0.10			1	11/19/2019
Soluble Calcium	0.57	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.32	0.05		meq/L	1	11/19/2019
Soluble Sodium	4.77	0.25		meq/L	1	11/19/2019
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	11/19/2019 7:49:53 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.79	1.88		mg/Kg-dry	1	11/15/2019 9:51:08 PM
Barium	900	0.941		mg/Kg-dry	1	11/15/2019 9:51:08 PM
Cadmium	< 0.470	0.470		mg/Kg-dry	1	11/15/2019 9:51:08 PM
Chromium	10.9	0.941		mg/Kg-dry	1	11/15/2019 9:51:08 PM
Lead	11.8	0.941		mg/Kg-dry	1	11/15/2019 9:51:08 PM
Strontium	55.0	0.941		mg/Kg-dry	1	11/15/2019 9:51:08 PM
Zinc	20.1	0.941		mg/Kg-dry	1	11/15/2019 9:51:08 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	1,030	48.2		mg/Kg-dry	1	11/22/2019 6:20:09 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 11:05:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-017 **Matrix:** SOIL
Client Sample ID H-7 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.9	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 11:15:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-018 **Matrix:** SOIL
Client Sample ID H-7 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	21.7	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.01	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.98	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.18	0.10			1	11/19/2019
Soluble Calcium	1.05	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.60	0.05		meq/L	1	11/19/2019
Soluble Sodium	7.43	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	11/19/2019 7:52:12 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	8.75	1.87		mg/Kg-dry	1	11/20/2019 6:19:40 PM
Barium	153	0.937		mg/Kg-dry	1	11/20/2019 6:19:40 PM
Cadmium	< 0.468	0.468		mg/Kg-dry	1	11/20/2019 6:19:40 PM
Chromium	14.1	0.937		mg/Kg-dry	1	11/20/2019 6:19:40 PM
Lead	11.7	0.937		mg/Kg-dry	1	11/20/2019 6:19:40 PM
Strontium	23.6	0.937		mg/Kg-dry	1	11/20/2019 6:19:40 PM
Zinc	36.5	0.937		mg/Kg-dry	1	11/20/2019 6:19:40 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	192	46.0		mg/Kg-dry	1	11/22/2019 6:24:35 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 11:15:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-018 **Matrix:** SOIL
Client Sample ID H-7 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	17.2	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 11:25:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-019 **Matrix:** SOIL
Client Sample ID H-7 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	15.8	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.46	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.53	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.43	0.10			1	11/19/2019
Soluble Calcium	5.12	0.02		meq/L	1	11/19/2019
Soluble Magnesium	2.84	0.05		meq/L	1	11/19/2019
Soluble Sodium	14.8	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	11/19/2019 8:02:14 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	9.83	1.89		mg/Kg-dry	1	11/20/2019 6:23:30 PM
Barium	212	0.946		mg/Kg-dry	1	11/20/2019 6:23:30 PM
Cadmium	0.539	0.473		mg/Kg-dry	1	11/20/2019 6:23:30 PM
Chromium	15.5	0.946		mg/Kg-dry	1	11/20/2019 6:23:30 PM
Lead	10.6	0.946		mg/Kg-dry	1	11/20/2019 6:23:30 PM
Strontium	86.7	0.946		mg/Kg-dry	1	11/20/2019 6:23:30 PM
Zinc	52.1	0.946		mg/Kg-dry	1	11/20/2019 6:23:30 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	191	45.6		mg/Kg-dry	1	11/22/2019 6:29:02 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 11:25:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-019 **Matrix:** SOIL
Client Sample ID H-7 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.0	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 11:35:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-020 **Matrix:** SOIL
Client Sample ID H-7 14-16'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	3.14	0.10		mmhos/cm	1	11/14/2019 1:35:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	23.6	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 12:45:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-021 **Matrix:** SOIL
Client Sample ID H-8 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	11.8	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.70	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.82	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.63	0.10			1	11/19/2019
Soluble Calcium	3.11	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.84	0.05		meq/L	1	11/19/2019
Soluble Sodium	3.70	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	11/19/2019 8:17:12 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	9.46	1.85		mg/Kg-dry	1	11/20/2019 6:27:22 PM
Barium	7,000	9.27		mg/Kg-dry	10	11/21/2019 9:04:05 PM
Cadmium	< 0.463	0.463		mg/Kg-dry	1	11/20/2019 6:27:22 PM
Chromium	9.58	0.927		mg/Kg-dry	1	11/20/2019 6:27:22 PM
Lead	15.9	0.927		mg/Kg-dry	1	11/20/2019 6:27:22 PM
Strontium	112	0.927		mg/Kg-dry	1	11/20/2019 6:27:22 PM
Zinc	20.5	0.927		mg/Kg-dry	1	11/20/2019 6:27:22 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	22,000	49.0		mg/Kg-dry	1	11/22/2019 6:33:28 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 12:45:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-021 **Matrix:** SOIL
Client Sample ID H-8 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	12.7	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 12:55:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-022 **Matrix:** SOIL
Client Sample ID H-8 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	21.2	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.94	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.47	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.57	0.10			1	11/19/2019
Soluble Calcium	5.95	0.02		meq/L	1	11/19/2019
Soluble Magnesium	3.05	0.05		meq/L	1	11/19/2019
Soluble Sodium	18.2	0.25		meq/L	1	11/19/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	43.9	10.0		mg/Kg	1	11/13/2019 2:19:00 PM
TPH (Oil Range)	14.6	10.0		mg/Kg	1	11/14/2019 1:42:00 PM
Surr: 4-Terphenyl-d14	69.0	33 - 152		%Rec	1	11/13/2019 2:19:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	11/19/2019 8:19:49 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.44	1.95		mg/Kg-dry	1	11/20/2019 6:30:52 PM
Barium	470	0.976		mg/Kg-dry	1	11/20/2019 6:30:52 PM
Cadmium	< 0.488	0.488		mg/Kg-dry	1	11/20/2019 6:30:52 PM
Chromium	13.6	0.976		mg/Kg-dry	1	11/20/2019 6:30:52 PM
Lead	15.4	0.976		mg/Kg-dry	1	11/20/2019 6:30:52 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 12:55:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-022 **Matrix:** SOIL
Client Sample ID H-8 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B
METALS IN SOIL OR SLUDGE BY ICP						Analyst: STS
Strontium	34.1	0.976		mg/Kg-dry	1	11/20/2019 6:30:52 PM
Zinc	22.0	0.976		mg/Kg-dry	1	11/20/2019 6:30:52 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	678	46.3		mg/Kg-dry	1	11/22/2019 6:46:54 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	18.7	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 1:00:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-023 **Matrix:** SOIL
Client Sample ID H-8 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	16.2	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.40	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.96	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.40	0.10			1	11/19/2019
Soluble Calcium	4.88	0.02		meq/L	1	11/19/2019
Soluble Magnesium	2.63	0.05		meq/L	1	11/19/2019
Soluble Sodium	14.3	0.25		meq/L	1	11/19/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	24.5	10.0		mg/Kg	1	11/13/2019 2:35:00 PM
TPH (Oil Range)	10.1	10.0		mg/Kg	1	11/14/2019 1:59:00 PM
Surr: 4-Terphenyl-d14	69.0	33 - 152		%Rec	1	11/13/2019 2:35:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	11/19/2019 8:22:07 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.01	1.86		mg/Kg-dry	1	11/20/2019 6:34:16 PM
Barium	420	0.928		mg/Kg-dry	1	11/20/2019 6:34:16 PM
Cadmium	< 0.464	0.464		mg/Kg-dry	1	11/20/2019 6:34:16 PM
Chromium	16.5	0.928		mg/Kg-dry	1	11/20/2019 6:34:16 PM
Lead	9.29	0.928		mg/Kg-dry	1	11/20/2019 6:34:16 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 1:00:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-023 **Matrix:** SOIL
Client Sample ID H-8 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B
METALS IN SOIL OR SLUDGE BY ICP						Analyst: STS
Strontium	26.1	0.928		mg/Kg-dry	1	11/20/2019 6:34:16 PM
Zinc	30.5	0.928		mg/Kg-dry	1	11/20/2019 6:34:16 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	519	48.4		mg/Kg-dry	1	11/22/2019 6:51:21 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	15.4	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 1:10:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-024 **Matrix:** SOIL
Client Sample ID H-8 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	14.0	0.100		meq/100g	1	11/20/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.29	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.20	0.10		%	1	11/20/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	6.52	0.10			1	11/19/2019
Soluble Calcium	9.67	0.02		meq/L	1	11/19/2019
Soluble Magnesium	4.70	0.05		meq/L	1	11/19/2019
Soluble Sodium	17.5	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0987	0.0987		mg/Kg-dry	1	11/19/2019 8:24:25 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	10.0	1.89		mg/Kg-dry	1	11/20/2019 6:37:39 PM
Barium	129	0.943		mg/Kg-dry	1	11/20/2019 6:37:39 PM
Cadmium	0.594	0.472		mg/Kg-dry	1	11/20/2019 6:37:39 PM
Chromium	14.7	0.943		mg/Kg-dry	1	11/20/2019 6:37:39 PM
Lead	7.02	0.943		mg/Kg-dry	1	11/20/2019 6:37:39 PM
Strontium	239	9.43		mg/Kg-dry	10	11/21/2019 9:08:33 PM
Zinc	40.2	0.943		mg/Kg-dry	1	11/20/2019 6:37:39 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	244	46.6		mg/Kg-dry	1	11/22/2019 6:55:50 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 1:10:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-024 **Matrix:** SOIL
Client Sample ID H-8 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.0	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 1:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-025 **Matrix:** SOIL
Client Sample ID H-8 14-16'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	3.22	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	19.6	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-026 **Matrix:** SOIL
Client Sample ID H-9 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	32.7	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.51	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	15.6	0.10	*	%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.56	0.10			1	11/19/2019
Soluble Calcium	0.30	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.24	0.05		meq/L	1	11/19/2019
Soluble Sodium	4.42	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	11/19/2019 8:26:43 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.80	1.93		mg/Kg-dry	1	11/20/2019 6:41:03 PM
Barium	662	0.965		mg/Kg-dry	1	11/20/2019 6:41:03 PM
Cadmium	< 0.482	0.482		mg/Kg-dry	1	11/20/2019 6:41:03 PM
Chromium	8.16	0.965		mg/Kg-dry	1	11/20/2019 6:41:03 PM
Lead	8.19	0.965		mg/Kg-dry	1	11/20/2019 6:41:03 PM
Strontium	34.5	0.965		mg/Kg-dry	1	11/20/2019 6:41:03 PM
Zinc	15.0	0.965		mg/Kg-dry	1	11/20/2019 6:41:03 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	697	48.0		mg/Kg-dry	1	11/22/2019 7:00:18 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-026 **Matrix:** SOIL
Client Sample ID H-9 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	24.5	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-027 **Matrix:** SOIL
Client Sample ID H-9 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.7	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.39	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	23.6	0.10	*	%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.46	0.10			1	11/19/2019
Soluble Calcium	0.69	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.94	0.05		meq/L	1	11/19/2019
Soluble Sodium	3.13	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	11/19/2019 8:29:02 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.68	2.00		mg/Kg-dry	1	11/20/2019 6:44:27 PM
Barium	370	0.999		mg/Kg-dry	1	11/20/2019 6:44:27 PM
Cadmium	< 0.500	0.500		mg/Kg-dry	1	11/20/2019 6:44:27 PM
Chromium	9.82	0.999		mg/Kg-dry	1	11/20/2019 6:44:27 PM
Lead	9.94	0.999		mg/Kg-dry	1	11/20/2019 6:44:27 PM
Strontium	25.1	0.999		mg/Kg-dry	1	11/20/2019 6:44:27 PM
Zinc	11.9	0.999		mg/Kg-dry	1	11/20/2019 6:44:27 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	373	46.4		mg/Kg-dry	1	11/22/2019 7:04:45 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-027 **Matrix:** SOIL
Client Sample ID H-9 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.7	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-028 **Matrix:** SOIL
Client Sample ID H-9 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	35.0	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.27	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	15.5	0.10	*	%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.02	0.10			1	11/19/2019
Soluble Calcium	0.48	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.47	0.05		meq/L	1	11/19/2019
Soluble Sodium	2.09	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	11/19/2019 8:31:20 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.37	1.99		mg/Kg-dry	1	11/20/2019 6:47:52 PM
Barium	263	0.995		mg/Kg-dry	1	11/20/2019 6:47:52 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	11/20/2019 6:47:52 PM
Chromium	12.9	0.995		mg/Kg-dry	1	11/20/2019 6:47:52 PM
Lead	8.66	0.995		mg/Kg-dry	1	11/20/2019 6:47:52 PM
Strontium	27.9	0.995		mg/Kg-dry	1	11/20/2019 6:47:52 PM
Zinc	34.1	0.995		mg/Kg-dry	1	11/20/2019 6:47:52 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	247	49.7		mg/Kg-dry	1	11/22/2019 7:09:11 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-028 **Matrix:** SOIL
Client Sample ID H-9 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	15.8	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:55:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-029 **Matrix:** SOIL
Client Sample ID H-9 18-20'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	1.65	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	23.0	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:35:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-030 **Matrix:** SOIL
Client Sample ID H-9 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	34.5	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.55	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	11.4	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.91	0.10			1	11/19/2019
Soluble Calcium	0.44	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.23	0.05		meq/L	1	11/19/2019
Soluble Sodium	5.17	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	11/19/2019 8:38:43 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.93	1.99		mg/Kg-dry	1	11/20/2019 7:06:45 PM
Barium	75.1	0.997		mg/Kg-dry	1	11/20/2019 7:06:45 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	11/20/2019 7:06:45 PM
Chromium	13.3	0.997		mg/Kg-dry	1	11/20/2019 7:06:45 PM
Lead	8.40	0.997		mg/Kg-dry	1	11/20/2019 7:06:45 PM
Strontium	71.4	0.997		mg/Kg-dry	1	11/20/2019 7:06:45 PM
Zinc	47.9	0.997		mg/Kg-dry	1	11/20/2019 7:06:45 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	153	46.2		mg/Kg-dry	1	11/22/2019 7:13:39 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/5/2019 3:35:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-030 **Matrix:** SOIL
Client Sample ID H-9 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.2	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 3:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-031 **Matrix:** SOIL
Client Sample ID H-10 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	24.9	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.36	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.21	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.88	0.10			1	11/19/2019
Soluble Calcium	0.49	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.28	0.05		meq/L	1	11/19/2019
Soluble Sodium	3.01	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.101	0.101		mg/Kg-dry	1	11/19/2019 8:41:01 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.81	1.99		mg/Kg-dry	1	11/20/2019 7:10:10 PM
Barium	752	0.994		mg/Kg-dry	1	11/20/2019 7:10:10 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	11/20/2019 7:10:10 PM
Chromium	9.55	0.994		mg/Kg-dry	1	11/20/2019 7:10:10 PM
Lead	10.2	0.994		mg/Kg-dry	1	11/20/2019 7:10:10 PM
Strontium	27.4	0.994		mg/Kg-dry	1	11/20/2019 7:10:10 PM
Zinc	12.4	0.994		mg/Kg-dry	1	11/20/2019 7:10:10 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	850	46.0		mg/Kg-dry	1	11/22/2019 7:18:06 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 Lafayette, LA 70508-3344
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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 3:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-031 **Matrix:** SOIL
Client Sample ID H-10 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	15.8	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 3:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-032 **Matrix:** SOIL
Client Sample ID H-10 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	35.8	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.15	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.18	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	9.09	0.10			1	11/19/2019
Soluble Calcium	1.19	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.67	0.05		meq/L	1	11/19/2019
Soluble Sodium	8.78	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	11/19/2019 8:43:19 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.18	2.00		mg/Kg-dry	1	11/20/2019 7:13:43 PM
Barium	628	0.999		mg/Kg-dry	1	11/20/2019 7:13:43 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	11/20/2019 7:13:43 PM
Chromium	11.1	0.999		mg/Kg-dry	1	11/20/2019 7:13:43 PM
Lead	11.7	0.999		mg/Kg-dry	1	11/20/2019 7:13:43 PM
Strontium	35.2	0.999		mg/Kg-dry	1	11/20/2019 7:13:43 PM
Zinc	19.4	0.999		mg/Kg-dry	1	11/20/2019 7:13:43 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	635	48.0		mg/Kg-dry	1	11/22/2019 7:22:32 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 3:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-032 **Matrix:** SOIL
Client Sample ID H-10 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	18.2	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 3:25:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-033 **Matrix:** SOIL
Client Sample ID H-10 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	26.6	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.11	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.19	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.30	0.10			1	11/19/2019
Soluble Calcium	2.06	0.02		meq/L	1	11/19/2019
Soluble Magnesium	1.20	0.05		meq/L	1	11/19/2019
Soluble Sodium	6.78	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	11/19/2019 8:45:38 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	9.23	1.95		mg/Kg-dry	1	11/20/2019 7:17:09 PM
Barium	57.4	0.976		mg/Kg-dry	1	11/20/2019 7:17:09 PM
Cadmium	< 0.488	0.488		mg/Kg-dry	1	11/20/2019 7:17:09 PM
Chromium	14.6	0.976		mg/Kg-dry	1	11/20/2019 7:17:09 PM
Lead	10.0	0.976		mg/Kg-dry	1	11/20/2019 7:17:09 PM
Strontium	21.7	0.976		mg/Kg-dry	1	11/20/2019 7:17:09 PM
Zinc	40.8	0.976		mg/Kg-dry	1	11/20/2019 7:17:09 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	84.0	46.4		mg/Kg-dry	1	11/22/2019 6:17:21 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 3:25:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-033 **Matrix:** SOIL
Client Sample ID H-10 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	17.3	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110399

Date Reported: 11/25/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 4:25:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-034 **Matrix:** SOIL
Client Sample ID H-10 32-34'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	1.90	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	93.1	2.50		mg/L	10	11/20/2019 10:47:14 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	19.8	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/6/2019 4:40:00 PM
Project: Henning II/9403-010-0100
Lab ID: 19110399-035 **Matrix:** SOIL
Client Sample ID H-10 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	1.72	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.2	1.00		wt%	1	11/11/2019 3:10:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/8/2019 10:45:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-036 **Matrix:** SOIL
Client Sample ID H-9 30-32'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	0.77	0.10		mmhos/cm	1	11/14/2019 2:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	15.8	1.00		wt%	1	11/11/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/8/2019 11:30:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-037 **Matrix:** SOIL
Client Sample ID H-9 48-50'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B	Analyst: MRM	
Electrical Conductivity	15.6	0.10	*	mmhos/cm	1	11/14/2019 2:20:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A	Analyst: SGP	
Chloride	698	12.5		mg/L	50	11/20/2019 11:00:54 AM
PERCENT MOISTURE				LDNR 29-B	Analyst: BXL	
Percent Moisture	17.1	1.00		wt%	1	11/11/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/8/2019 11:35:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-038 **Matrix:** SOIL
Client Sample ID H-9 50-52'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	25.4	0.10	*	mmhos/cm	1	11/14/2019 2:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	19.9	1.00		wt%	1	11/11/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110399**

Date Reported: **11/25/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/8/2019 11:55:00 AM
Project: Henning II/9403-010-0100
Lab ID: 19110399-039 **Matrix:** SOIL
Client Sample ID H-9 58-60'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	16.4	0.10	*	mmhos/cm	1	11/14/2019 2:20:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	30.8	1.00		wt%	1	11/11/2019 4:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32173

Sample ID: LCS-D32173	SampType: LCS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: LCSS	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/12/2019	SeqNo: 2092934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)
 Surr: 4-Terphenyl-d14

70.9
 2.33

10.0
 3.330

100.0
 3.330

0
 0

70.9
 69.8

63.4
 33

109
 152

Sample ID: LCSD-D32173	SampType: LCSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: LCSS02	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/12/2019	SeqNo: 2092935						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)
 Surr: 4-Terphenyl-d14

72.1
 2.15

10.0
 3.330

100.0
 3.330

0
 0

72.1
 64.5

63.4
 33

109
 152

70.88
 0

1.70
 40

21.9
 40

Sample ID: LCSD-M32173	SampType: LCSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: LCSS02	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/12/2019	SeqNo: 2092936						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)
 Surr: 4-Terphenyl-d14

77.9
 2.08

10.0
 3.330

100.0
 3.330

0
 0

77.9
 62.5

63.9
 33

120
 152

77.39
 0

0.683
 40

20.7
 40

Sample ID: LCS-M32173	SampType: LCS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: LCSS	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/12/2019	SeqNo: 2092937						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)

77.4

10.0

100.0

0

77.4

63.9

120

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32173

Sample ID: LCS-M32173	SampType: LCS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: LCSS	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/12/2019	SeqNo: 2092937						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14 2.09 3.330 62.9 33 152

Sample ID: MB-32173	SampType: MBLK	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: PBS	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/12/2019	SeqNo: 2092938						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) < 10.0 10.0
 TPH (Oil Range) < 10.0 10.0
 Surr: 4-Terphenyl-d14 2.18 3.330 65.5 33 152

Sample ID: 19110348-001BMS-D	SampType: MS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/13/2019	SeqNo: 2095278						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 637 50.0 100.0 445.7 191 23.4 123 S
 Surr: 4-Terphenyl-d14 1.86 3.330 55.7 33 152

NOTES:
 S - Spike recovery outside of recovery limits. The method is in control for the analyte as indicated by the LCS/LCSD and sample matrix spike duplicate

Sample ID: 19110348-001BMSD-	SampType: MSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/13/2019	SeqNo: 2095279						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32173

Sample ID: 19110348-001BMSD-	SampType: MSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/13/2019	SeqNo: 2095279						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	555	50.0	100.0	445.7	109	23.4	123	636.6	13.7	35.6	
Surr: 4-Terphenyl-d14	2.17		3.330		65.0	33	152		0	40	

Sample ID: 19110348-002BMS-M	SampType: MS	TestCode: 8015_DO_S	Units: %Rec	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/13/2019	SeqNo: 2095281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14	0		3.330		0	33	152				SD
-----------------------	---	--	-------	--	---	----	-----	--	--	--	----

Sample ID: 19110348-002BMSD-	SampType: MSD	TestCode: 8015_DO_S	Units: %Rec	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/13/2019	SeqNo: 2095282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14	0		3.330		0	33	152		0	40	SD
-----------------------	---	--	-------	--	---	----	-----	--	---	----	----

NOTES:
 SD - Surrogate diluted out due to dilution.

Sample ID: 19110348-002BMS-M	SampType: MS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/14/2019	SeqNo: 2096742						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	1,130	200	100.0	617.3	514	14.5	174				SD
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32173

Sample ID: 19110348-002BMS-M	SampType: MS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/14/2019	SeqNo: 2096742						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

SD - matrix spike diluted out due to dilution.

Sample ID: 19110348-002BMSD-	SampType: MSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/11/2019	RunNo: 83652						
Client ID: ZZZZZZ	Batch ID: 32173	TestNo: SW8015B	SW3550C	Analysis Date: 11/14/2019	SeqNo: 2096743						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	1,450	200	100.0	617.3	835	14.5	174	1,132	24.8	48.8	SD

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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

QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32220

Sample ID: MB-32220	SampType: MBLK	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83773						
Client ID: PBS	Batch ID: 32220	TestNo: SW6010B	SW3050B	Analysis Date: 11/15/2019	SeqNo: 2097500						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID: LCS-32220	SampType: LCS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83773						
Client ID: LCSS	Batch ID: 32220	TestNo: SW6010B	SW3050B	Analysis Date: 11/15/2019	SeqNo: 2097501						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.4	2.00	50.00	0	94.7	80	120				
Barium	46.4	1.00	50.00	0	92.9	80	120				
Cadmium	46.2	0.500	50.00	0	92.4	80	120				
Chromium	46.1	1.00	50.00	0	92.3	80	120				
Lead	47.3	1.00	50.00	0	94.5	80	120				
Strontium	46.9	1.00	50.00	0	93.7	80	120				
Zinc	46.7	1.00	50.00	0	93.3	80	120				

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32220

Sample ID: LCSD-32220	SampType: LCSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83773						
Client ID: LCSS02	Batch ID: 32220	TestNo: SW6010B	SW3050B	Analysis Date: 11/15/2019	SeqNo: 2097502						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.3	2.00	50.00	0	96.5	80	120	47.36	1.88	20	
Barium	46.9	1.00	50.00	0	93.8	80	120	46.43	1.01	20	
Cadmium	46.4	0.500	50.00	0	92.9	80	120	46.20	0.540	20	
Chromium	46.7	1.00	50.00	0	93.3	80	120	46.14	1.10	20	
Lead	47.9	1.00	50.00	0	95.8	80	120	47.26	1.39	20	
Strontium	47.3	1.00	50.00	0	94.6	80	120	46.86	0.956	20	
Zinc	47.1	1.00	50.00	0	94.2	80	120	46.65	1.00	20	

Sample ID: 19110003-008AMS	SampType: MS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83773						
Client ID: ZZZZZ	Batch ID: 32220	TestNo: SW6010B	SW3050B	Analysis Date: 11/15/2019	SeqNo: 2097511						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.9	1.99	49.63	3.971	90.5	75	125				
Barium	78.2	0.993	49.63	24.19	109	75	125				
Cadmium	44.2	0.496	49.63	0.2159	88.7	75	125				
Chromium	57.9	0.993	49.63	6.834	103	75	125				
Lead	52.5	0.993	49.63	5.980	93.7	75	125				
Strontium	57.1	0.993	49.63	6.383	102	75	125				
Zinc	56.4	0.993	49.63	7.331	98.8	75	125				

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32220

Sample ID: 19110003-008AMSD	SampType: MSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/14/2019	RunNo: 83773						
Client ID: ZZZZZZ	Batch ID: 32220	TestNo: SW6010B	SW3050B	Analysis Date: 11/15/2019	SeqNo: 2097512						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.4	1.94	48.57	3.971	91.5	75	125	48.88	0.960	20	
Barium	72.6	0.971	48.57	24.19	99.7	75	125	78.20	7.42	20	
Cadmium	41.7	0.486	48.57	0.2159	85.3	75	125	44.24	6.01	20	
Chromium	54.0	0.971	48.57	6.834	97.1	75	125	57.92	7.05	20	
Lead	49.4	0.971	48.57	5.980	89.5	75	125	52.49	5.96	20	
Strontium	53.6	0.971	48.57	6.383	97.2	75	125	57.13	6.37	20	
Zinc	52.6	0.971	48.57	7.331	93.2	75	125	56.38	6.96	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 32251

Sample ID: 19110399-017ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/15/2019	RunNo: 83860						
Client ID: H-7 0-4'	Batch ID: 32251	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/19/2019	SeqNo: 2101028						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	7.20	0.10						7.13	0.99	20	
Soluble Calcium	0.56	0.02						0.57	2.39	20	
Soluble Magnesium	0.32	0.05						0.32	1.28	20	
Soluble Sodium	4.77	0.25						4.77	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32254

Sample ID: 19110371-001ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/18/2019	RunNo: 83860						
Client ID: ZZZZZZ	Batch ID: 32254	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/19/2019	SeqNo: 2099937						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	26.5	0.10						26.26	0.89	20	*
Soluble Calcium	2.10	0.02						2.09	0.74	20	
Soluble Magnesium	1.18	0.05						1.17	1.05	20	
Soluble Sodium	33.9	0.25						33.50	1.32	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32258

Sample ID: MB-32258	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83837						
Client ID: PBS	Batch ID: 32258	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099354						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.100 0.100

Sample ID: LCS-32258	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83837						
Client ID: LCSS	Batch ID: 32258	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.904 0.100 0.8330 0 109 80 120

Sample ID: LCSD-32258	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83837						
Client ID: LCSS02	Batch ID: 32258	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099356						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.917 0.100 0.8330 0 110 80 120 0.9043 1.34 20

Sample ID: 19110371-001AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83837						
Client ID: ZZZZZ	Batch ID: 32258	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.894 0.104 0.8665 0.07152 95.0 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32258

Sample ID: 19110371-001AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83837						
Client ID: ZZZZZZ	Batch ID: 32258	TestNo: 29B/SW7471 SW7471A	Analysis Date: 11/19/2019	SeqNo: 2099360							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.899	0.105	0.8733	0.07152	94.7	75	125	0.8943	0.482	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32259

Sample ID: MB-32259	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83861						
Client ID: PBS	Batch ID: 32259	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099946						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.100 0.100

Sample ID: LCS-32259	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83861						
Client ID: LCSS	Batch ID: 32259	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099947						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 1.03 0.100 0.8330 0 124 80 120 S

Sample ID: LCSD-32259	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83861						
Client ID: LCSS02	Batch ID: 32259	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099948						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 1.04 0.100 0.8330 0 125 80 120 1.034 0.348 20 S

NOTES:

S* - High recovery(ies) indicate high bias. Data deemed acceptable as the specific target analyte(s) were not observed in the field sample(s).

Sample ID: 19110399-019AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83861						
Client ID: H-7 10-12'	Batch ID: 32259	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099953						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 1.02 0.105 0.8736 0 116 75 125

Qualifiers:

- | | | |
|--|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank | H Holding times for preparation or analysis exceed |
| 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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32259

Sample ID: 19110399-019AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/18/2019	RunNo: 83861						
Client ID: H-7 10-12'	Batch ID: 32259	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/19/2019	SeqNo: 2099954						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.01	0.105	0.8713	0	116	75	125	1.016	0.299	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32281

Sample ID: MB-32281	SampType: MBLK	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83908						
Client ID: PBS	Batch ID: 32281	TestNo: SW6010B	SW3050B	Analysis Date: 11/20/2019	SeqNo: 2101167						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID: LCS-32281	SampType: LCS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83908						
Client ID: LCSS	Batch ID: 32281	TestNo: SW6010B	SW3050B	Analysis Date: 11/20/2019	SeqNo: 2101173						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	46.7	2.00	50.00	0	93.3	80	120				
Barium	47.2	1.00	50.00	0	94.5	80	120				
Cadmium	46.8	0.500	50.00	0	93.6	80	120				
Chromium	47.1	1.00	50.00	0	94.3	80	120				
Lead	48.6	1.00	50.00	0	97.2	80	120				
Strontium	47.8	1.00	50.00	0	95.6	80	120				
Zinc	47.6	1.00	50.00	0	95.3	80	120				

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32281

Sample ID: LCSD-32281	SampType: LCSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83908						
Client ID: LCSS02	Batch ID: 32281	TestNo: SW6010B	SW3050B	Analysis Date: 11/20/2019	SeqNo: 2101174						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.6	2.00	50.00	0	99.3	80	120	46.66	6.19	20	
Barium	47.6	1.00	50.00	0	95.2	80	120	47.24	0.780	20	
Cadmium	47.8	0.500	50.00	0	95.6	80	120	46.82	2.05	20	
Chromium	47.5	1.00	50.00	0	95.0	80	120	47.14	0.782	20	
Lead	48.8	1.00	50.00	0	97.6	80	120	48.60	0.411	20	
Strontium	47.8	1.00	50.00	0	95.6	80	120	47.81	0.0418	20	
Zinc	48.3	1.00	50.00	0	96.7	80	120	47.64	1.46	20	

Sample ID: 19110371-001AMS	SampType: MS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83908						
Client ID: ZZZZZ	Batch ID: 32281	TestNo: SW6010B	SW3050B	Analysis Date: 11/20/2019	SeqNo: 2101176						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	57.4	1.99	49.64	10.41	94.6	75	125				
Barium	297	0.993	49.64	229.0	138	75	125				S
Cadmium	45.1	0.496	49.64	0.4644	90.0	75	125				
Chromium	74.2	0.993	49.64	20.36	108	75	125				
Lead	69.4	0.993	49.64	21.65	96.2	75	125				
Strontium	133	0.993	49.64	79.71	107	75	125				
Zinc	160	0.993	49.64	76.16	169	75	125				S

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32281

Sample ID: 19110371-001AMSD	SampType: MSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83908						
Client ID: ZZZZZZ	Batch ID: 32281	TestNo: SW6010B	SW3050B	Analysis Date: 11/20/2019	SeqNo: 2101177						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.8	1.93	48.27	10.41	89.9	75	125	57.35	6.37	20	
Barium	287	0.965	48.27	229.0	121	75	125	297.3	3.39	20	
Cadmium	43.6	0.483	48.27	0.4644	89.4	75	125	45.14	3.39	20	
Chromium	73.0	0.965	48.27	20.36	109	75	125	74.22	1.62	20	
Lead	67.6	0.965	48.27	21.65	95.2	75	125	69.41	2.65	20	
Strontium	130	0.965	48.27	79.71	104	75	125	133.0	2.49	20	
Zinc	131	0.965	48.27	76.16	114	75	125	160.0	19.9	20	

NOTES:

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
	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#: 19110399
 25-Nov-19

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 32290

Sample ID: 19110399-017ADUP	SampType: DUP	TestCode: ESP_S	Units: %	Prep Date: 11/19/2019	RunNo: 83895						
Client ID: H-7 0-4'	Batch ID: 32290	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/20/2019	SeqNo: 2100647						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %	7.41	0.10						7.22	2.55	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32291

Sample ID: lcs-32291	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 11/19/2019	RunNo: 83895						
Client ID: LCSS	Batch ID: 32291	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/20/2019	SeqNo: 2100601						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	21.0	0.100	25.00	0	83.9	76	124				
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Sample ID: lcsd-32291	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 11/19/2019	RunNo: 83895						
Client ID: LCSS02	Batch ID: 32291	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/20/2019	SeqNo: 2100602						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	21.0	0.100	25.00	0	84.1	76	124	20.98	0.190	20	
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Sample ID: 19110399-017ADUP	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 11/19/2019	RunNo: 83895						
Client ID: H-7 0-4'	Batch ID: 32291	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/20/2019	SeqNo: 2100604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	23.3	0.100						23.07	0.863	20	
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32295

Sample ID: MB-32295	SampType: MBLK	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83923						
Client ID: PBS	Batch ID: 32295	TestNo: LDNR 29-B		Analysis Date: 11/20/2019	SeqNo: 2101624						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium < 50.0 50.0

Sample ID: LCS-32295	SampType: LCS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83923						
Client ID: LCSS	Batch ID: 32295	TestNo: LDNR 29-B		Analysis Date: 11/20/2019	SeqNo: 2101625						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 5,020 50.0 5,000 0 100 75 125

Sample ID: LCSD-32295	SampType: LCSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83923						
Client ID: LCSS02	Batch ID: 32295	TestNo: LDNR 29-B		Analysis Date: 11/20/2019	SeqNo: 2101626						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 4,980 50.0 5,000 0 99.6 75 125 5,015 0.690 20

Sample ID: 19110349-003AMS	SampType: MS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83923						
Client ID: ZZZZZ	Batch ID: 32295	TestNo: LDNR 29-B		Analysis Date: 11/20/2019	SeqNo: 2101630						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 9,460 46.4 4,643 4,446 108 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32295

Sample ID: 19110349-003AMSD	SampType: MSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83923						
Client ID: ZZZZZZ	Batch ID: 32295	TestNo: LDNR 29-B		Analysis Date: 11/20/2019	SeqNo: 2101631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	9,630	47.7	4,771	4,446	109	75	125	9,457	1.79	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32296

Sample ID: MB-32296	SampType: MBLK	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: PBS	Batch ID: 32296	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2103285						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium < 50.0 50.0

Sample ID: LCS-32296	SampType: LCS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: LCSS	Batch ID: 32296	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2103286						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 4,910 50.0 5,000 0 98.2 75 125

Sample ID: LCSD-32296	SampType: LCSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: LCSS02	Batch ID: 32296	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2103287						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 4,810 50.0 5,000 0 96.1 75 125 4,912 2.20 20

Sample ID: 19110399-008AMS	SampType: MS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: H-5 8-10'	Batch ID: 32296	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2103289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 5,480 49.4 4,936 762.5 95.6 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 32296

Sample ID: 19110399-008AMSD	SampType: MSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: H-5 8-10'	Batch ID: 32296	TestNo: LDNR 29-B	Analysis Date: 11/22/2019	SeqNo: 2103290							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	5,320	47.3	4,730	762.5	96.4	75	125	5,479	2.91	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32297

Sample ID: MB-32297	SampType: MBLK	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 84016
Client ID: PBS	Batch ID: 32297	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2105178
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium < 50.0 50.0

Sample ID: LCS-32297	SampType: LCS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 84016
Client ID: LCSS	Batch ID: 32297	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2105179
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,840 50.0 5,000 0 96.9 75 125

Sample ID: LCSD-32297	SampType: LCSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 84016
Client ID: LCSS02	Batch ID: 32297	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2105180
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,860 50.0 5,000 0 97.3 75 125 4,842 0.464 20

Sample ID: 19110399-033AMS	SampType: MS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 84016
Client ID: H-10 8-10'	Batch ID: 32297	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2105182
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,650 48.2 4,817 84.03 94.8 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32297

Sample ID: 19110399-033AMSD	SampType: MSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 84016						
Client ID: H-10 8-10'	Batch ID: 32297	TestNo: LDNR 29-B		Analysis Date: 11/22/2019	SeqNo: 2105183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	4,630	49.5	4,946	84.03	92.0	75	125	4,653	0.391	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 32331

Sample ID: LCS-32331	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: LCSS	Batch ID: 32331	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105218						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	22.3	0.100	25.00	0	89.1	76	124				
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Sample ID: LCSD-32331	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: LCSS02	Batch ID: 32331	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105219						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	22.3	0.100	25.00	0	89.1	76	124	22.26	0.0391	20	
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R83691

Sample ID: 19110371-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 83691						
Client ID: ZZZZZ	Batch ID: R83691	TestNo: LDNR 29-B		Analysis Date: 11/11/2019	SeqNo: 2097252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	44.5	1.00						43.30	2.73	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R83694

Sample ID: 19110399-017ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 83694						
Client ID: H-7 0-4'	Batch ID: R83694	TestNo: LDNR 29-B		Analysis Date: 11/11/2019	SeqNo: 2094513						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	22.3	1.00						21.90	1.81	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R83695

Sample ID: 19110399-037ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 83695						
Client ID: H-9 48-50'	Batch ID: R83695	TestNo: LDNR 29-B		Analysis Date: 11/11/2019	SeqNo: 2094534						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	18.0	1.00						17.10	5.13	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R83716

Sample ID: MB-R83716	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83716						
Client ID: PBS	Batch ID: R83716	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095597						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity < 0.10 0.10

Sample ID: LCS1-R83716	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83716						
Client ID: ZZZZZ	Batch ID: R83716	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095598						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 0.39 0.10 0.38 0 102 90.07 109.9

Sample ID: LCS2-R83716	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83716						
Client ID: ZZZZZ	Batch ID: R83716	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095599						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 48.1 0.10 53.00 0 90.8 90 110

Sample ID: 19110399-017ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83716						
Client ID: H-7 0-4'	Batch ID: R83716	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095617						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 0.50 0.10 0.60 19.0 20

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R83717

Sample ID: MB-R83717	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83717						
Client ID: PBS	Batch ID: R83717	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095734						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity < 0.10 0.10

Sample ID: LCS1-R83717	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83717						
Client ID: ZZZZZ	Batch ID: R83717	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095735						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 0.40 0.10 0.38 0 103 90.07 109.9

Sample ID: LCS2-R83717	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83717						
Client ID: ZZZZZ	Batch ID: R83717	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095736						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 48.0 0.10 53.00 0 90.6 90 110

Sample ID: 19110399-037ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83717						
Client ID: H-9 48-50'	Batch ID: R83717	TestNo: LDNR 29-B		Analysis Date: 11/14/2019	SeqNo: 2095754						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 13.7 0.10 15.58 13.1 20 *

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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

QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R83899

Sample ID: MBLK	SampType: MBLK	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83899						
Client ID: PBW	Batch ID: R83899	TestNo: SW9056A		Analysis Date: 11/20/2019	SeqNo: 2100808						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride < 0.250 0.250

Sample ID: LCS	SampType: LCS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83899						
Client ID: LCSW	Batch ID: R83899	TestNo: SW9056A		Analysis Date: 11/20/2019	SeqNo: 2100809						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 9.85 0.250 10.00 0 98.5 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83899						
Client ID: LCSS02	Batch ID: R83899	TestNo: SW9056A		Analysis Date: 11/20/2019	SeqNo: 2100810						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 9.84 0.250 10.00 0 98.4 80 120 9.852 0.0699 15

Sample ID: 19110750-001BMS	SampType: MS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83899						
Client ID: ZZZZZ	Batch ID: R83899	TestNo: SW9056A		Analysis Date: 11/20/2019	SeqNo: 2100821						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 17.2 0.250 5.000 12.86 86.8 80 120

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110399
 25-Nov-19

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R83899

Sample ID: 19110750-001BMSD	SampType: MSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 83899						
Client ID: ZZZZZZ	Batch ID: R83899	TestNo: SW9056A		Analysis Date: 11/20/2019	SeqNo: 2100822						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	17.2	0.250	5.000	12.86	87.3	80	120	17.20	0.131	15	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **19110399**

RcptNo: **1**

Logged by:	Tammy Thibodeaux	11/11/2019 9:40:00 AM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	11/11/2019 10:46:49 AM	<i>Tammy Thibodeaux</i>
Reviewed By:	Caitlin Duplantis	11/13/2019 9:22:00 AM	<i>Caitlin Duplantis</i>

Chain of Custody

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

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Not Present			



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Chain of Custody

Laboratory Number: **19110399**

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number:		Page 1 of 5
					Quote Number:	Hanning II 9403-010-0100		Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	ICON		SAME		Required QC Level	Sampler's Signature Kath G.		
	Ext:		Ext:		Bill Monthly	Shipping Method:		
					<input type="checkbox"/> Yes	UPS / FedEx / Airborne		
					<input type="checkbox"/> No	DHL / Element <u>Hand</u> / Mail		

Which Regulations Apply:		Turn Time		(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests				Comments	
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> RUSH		Quantity	Type P=Plastic, G=Glass, V=Vial	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	Moisture	29 B Metals	CECL/ESP/SAR		
		Collection Information											
Sample ID/Description		Date	Time	Grab / Composite	Matrix								
H-4	0-2'	11.4.19	1325	G	SO	1	P	---	X	X	X	X	<u>Metals</u> As, Ba, TTBa, Cd, Cr, Sr, Zn. Pb, Hg
H-4	4-6'	11.4.19	1335	G	SO	1	P	---	X	X	X	X	
H-4	8-10'	11.4.19	1345	G	SO	1	P	---	X	X	X	X	
H-4	14-18'	11.4.19	1405	G	SO	1	P	---	X	X			
H-5	0-2'	11.4.19	1555	G	SO	1	P	---	X	X	X	X	
H-5	2-4'	11.4.19	1600	G	SO	1	P	---	X	X	X	X	
H-5	4-6'	11.4.19	1605	G	SO	1	P	---	X	X	X	X	
H-5	8-10'	11.4.19	1615	G	SO	1	P	---	X	X	X	X	
H-5	10-12'	11.4.19	1620	G	SO	1	P	---	X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Kath G.	11.8.19/1600	_____	11-8-19/1600	
2					Received at lab on ice?
3	_____	11-11-19/0940	Mubredant	11-11-19/0940	<input type="checkbox"/> Yes <input type="checkbox"/> No Temp: 4.0

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.

- 9301 Innovation Drive, Suite 115
Daleville, IN
47334-0569 USA
P 765-378-4103
F 765-378-4109
- 629 Washington St. Suite 300
Columbus, IN
47201-6231 USA
P 812-375-0531
F 812-375-0731
- 2121 East Washington Boulevard
Fort Wayne, IN
46803-1328 USA
P 260-471-7000
F 260-471-7777
- 560 South Zimmer Road
Warsaw, IN
46580-2368 USA
P 574-267-3305
F 574-269-6569
- 3371 Cleveland Road, Suite 100A
South Bend, IN
46628-9780 USA
P 574-277-0707
F 574-273-5699
- 2417 W. Pinhook Rd
Lafayette, LA
70508-3344 USA
P 337-235-0483
F 337-233-6540



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Chain of Custody

Laboratory Number:

19110399

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number: Henning II	Page 2 of 5
					Quote Number:	9403-010-0100	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	ICON		SAME		Required QC Level	Sampler's Signature Katr C.	
	Ext:		Ext:		Bill Monthly	Shipping Method:	
					<input type="checkbox"/> Yes	UPS / FedEx / NOW	
					<input type="checkbox"/> No	DHL / Element / <u>Hand</u> / Mail	

Which Regulations Apply:	Turn Time	Collection Information	Container	Pres.	Requested Tests				Comments				
					Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC		90 Moisture	CEC/ESP/SAR	29 B Metals	
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	<input type="checkbox"/> Grab / Composite <input type="checkbox"/> Matrix							Metals see page 1				
Sample ID/Description	Date	Time	Grab / Composite	Matrix	Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	90 Moisture	CEC/ESP/SAR	29 B Metals		
H-5	14-16'	11.4.19	1630	G	50	1	P	—	X	X			
H-6	0-2'	11.5.19	0905	G	50	1	P	—	X	X	X	X	
H-6	2-4'	11.5.19	0910	G	50	1	P	—	X	X	X	X	
H-6	4-6'	11.5.19	0915	G	50	1	P	—	X	X	X	X	
H-6	6-8'	11.5.19	0920	G	50	1	P	—	X	X	X	X	
H-6	10-12'	11.5.19	0930	G	50	1	P	—	X	X	X	X	
H-6	14-16'	11.5.19	0940	G	50	1	P	—	X	X			
H-7	0-4'	11.5.19	1105	G	50	1	P	—	X	X	X	X	
H-7	6-8'	11.5.19	1115	G	50	1	P	—	X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Katr C.	11.8.19/1600	[Signature]	11-8-19/1600	
2					Received at lab on ice?
3	[Signature]	11-11-19/0940	[Signature]	11-11-19/0940	<input type="checkbox"/> Yes <input type="checkbox"/> No Temp: 4.2

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.

8800 North US 31
Columbus, IN
47201 USA
P 812-375-0531
F 812-375-0731

328 Ley Road, Suite 100
Fort Wayne, IN
46825 USA
P 260-471-7000
F 260-471-7777

909 Executive Dr
Warsaw, IN
46580 USA
P 574-267-3305
F 574-269-6569

3371 Cleveland Road, Suite 100A
South Bend, IN
46628 USA
P 574-277-0707
F 574-273-5699

2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540



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Chain of Custody

Laboratory Number:

19110399

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number:	Page 3 of 5 Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
					Quote Number:	Hennina II 9403-010-0100	
	ICON		SAME		Required QC Level:	Sampler's Signature Kathie	
	Ext:		Ext:		Bill Monthly:	Shipping Method:	
					<input type="checkbox"/> Yes	UPS / FedEx / NOW	
					<input type="checkbox"/> No	DHL / Element / Hand / Mail	

Which Regulations Apply:	Turn Time	Collection Information	Container	Pres.	Requested Tests						Comments	
					Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	% Moisture	CEC/ESP/GAR		Zn B Metals
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Date: Time: Grab / Composite: Matrix:									<u>Metals</u> See page 1	
H-7	10-12'	11.5.19 1125	G	SO	1	P	—	X	X	X		X
H-7	14-16'	11.5.19 1135	G	SO	1	P	—	X	X			
H-8	0-2'	11.5.19 1245	G	SO	1	P	—	X	X	X		X
H-8	4-6'	11.5.19 1255	G	SO	1	G	—	X	X	X		X
H-8	6-8'	11.5.19 1300	G	SO	1	G	—	X	X	X		X
H-8	10-12'	11.5.19 1310	G	SO	1	P	—	X	X	X		X
H-8	14-16'	11.5.19 1320	G	SO	1	P	—	X	X			
H-9	0-4'	11.5.19 1515	G	SO	1	P	—	X	X	X		X
H-9	4-6'	11.5.19 1520	G	SO	1	P	—	X	X	X		X

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Kathie	11.8.19/1600	[Signature]	11-8-19/1600	
2					Received at lab on ice?
3	[Signature]	11-11-19/0940	[Signature]	11-11-19/0940	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 42

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. IRN

8800 North US 31 Columbus, IN 47201 USA P 812-375-0531 F 812-375-0731	328 Ley Road, Suite 100 Fort Wayne, IN 46825 USA P 260-471-7000 F 260-471-7777	909 Executive Dr Warsaw, IN 46580 USA P 574-267-3305 F 574-269-6569	3371 Cleveland Road, Suite 100A South Bend, IN 46628 USA P 574-277-0707 F 574-273-5699	2417 W. Pinhook Rd Lafayette, LA 70508 USA P 337-235-0483 F 337-233-6540
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Chain of Custody

Laboratory Number:

19110399

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number: Hennina II	Page 4 of 5
					Quote Number:	9403-010-0100	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	Address: <u>ICON</u>		Address: <u>SAME</u>		Required QC Level:	Sampler's Signature: <u>Kath</u>	
	City, State Zip:		City, State Zip:		Bill Monthly:	Shipping Method:	
	Phone Number:		Ext:		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		UPS / FedEx / NOW
	Fax Number:		Ext:				DHL / Element / <u>Hand</u> Mail
E-mail Address:							

Which Regulations Apply:	Turn Time	Collection Information	Container	Pres.	Requested Tests						Comments		
					Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	% Moisture	CEC/ESP/SAR		29 B Metals	Leachate Cl
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Date, Time, Grab/Composite, Matrix										<u>Metals</u> <u>See page 1</u>	
H-9	8-10'	11.5.19 1530	G	SO	1	P	---	X	X	X	X		
H-9	18-20'	11.5.19 1555	G	SO	1	P	---	X	X				
H-9	10-12'	11.5.19 1535	G	SO	1	P	---	X	X	X	X		
H-10	0-2'	11.6.19 1505	G	SO	1	P	---	X	X	X	X		
H-10	4-6'	11.6.19 1515	G	SO	1	P	---	X	X	X	X		
H-10	8-10'	11.6.19 1525	G	SO	1	P	---	X	X	X	X		
H-10	32-34'	11.6.19 1625	G	SO	1	P	---	X	X		X		
H-10	38-40'	11.6.19 1640	G	SO	1	P	---	X	X				
H-9	30-32'	11.8.19 1045	G	SO	1	P	---	X	X				

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<u>Kath</u>	11.8.19 / 1600	<u>[Signature]</u>	11-8-19 / 1600	
2					Received at lab on ice?
3	<u>[Signature]</u>	11-11-19 / 0940	<u>Dubrodan</u>	11-11-19 / 0940	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 4.2

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.

8800 North US 31 Columbus, IN 47201 USA P 812-375-0531 F 812-375-0731	328 Ley Road, Suite 100 Fort Wayne, IN 46825 USA P 260-471-7000 F 260-471-7777	909 Executive Dr Warsaw, IN 46580 USA P 574-267-3305 F 574-269-6569	3371 Cleveland Road, Suite 100A South Bend, IN 46628 USA P 574-277-0707 F 574-273-5699	2417 W. Pinhook Rd Lafayette, LA 70508 USA P 337-235-0483 F 337-233-6540
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Chain of Custody

Laboratory Number: **19110313** ³⁹⁹ ₄₈

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number: Henning II 9403-010-0100	Page 5 of 5 ^{11/11/19}
					Quote Number:		
	ICON		SAME		Required QC Level:	Shipping Method: UPS / FedEx / NOW DHL / Element / Hand / Mail	
	Ext:		Ext:		Bill Monthly:		
	<input type="checkbox"/> Yes		<input type="checkbox"/> No				

Matrix Code

DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge SOL = Solid
 O = Oil SO = Soil
 F = Food SW = Swab
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Which Regulations Apply:		Turn Time		(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests				Comments
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> RUSH		Quantity	Type P=Plastic, G=Glass, V=Vial	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	Moisture	Leachate CI		
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	<input type="checkbox"/> 1 Day	<input type="checkbox"/> 2 Day									
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> Other										
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State											
<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other											
Sample ID/Description		Date	Time	Grab / Composite	Matrix							
H-9	48-50'	11.8.19	1130	G	SO	1	P	—	X	X	X	
H-9	50-52'	11.8.19	1135	G	SO	1	P	—	X	X		
H-9	58-60'	11.8.19	1155	G	SO	1	P	—	X	X		

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<i>Kate C</i>	11.8.19 / 1600	<i>[Signature]</i>	11-8-19 / 1600	
2					Received at lab on ice?
3	<i>[Signature]</i>	11-11-19 / 0940	<i>[Signature]</i>	11-11-19 / 0940	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 4°C

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.

8800 North US 31 Columbus, IN 47201 USA P 812-375-0531 F 812-375-0731	328 Ley Road, Suite 100 Fort Wayne, IN 46825 USA P 260-471-7000 F 260-471-7777	909 Executive Dr Warsaw, IN 46580 USA P 574-267-3305 F 574-269-6569	3371 Cleveland Road, Suite 100A South Bend, IN 46628 USA P 574-277-0707 F 574-273-5699	2417 W. Pinhook Rd Lafayette, LA 70508 USA P 337-235-0483 F 337-233-6540
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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 02, 2019

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX: (225) 344-6654

RE: Henning II 9403-010-0100

Order No.: 19110677

Dear Greg Miller:

Element Materials Technology Lafayette received 16 sample(s) on 11/15/2019 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.

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.: LA180028. 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.

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 that reads 'Cristina Thibeaux'.

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



Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
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Case Narrative

WO#: 19110677
Date: 12/2/2019

CLIENT: ICON Environmental Services
Project: Henning II 9403-010-0100

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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 9:20:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-001 **Matrix:** SOIL
Client Sample ID H-11 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	29.2	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.15	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.28	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.63	0.10			1	11/19/2019
Soluble Calcium	3.31	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.77	0.05		meq/L	1	11/19/2019
Soluble Sodium	6.61	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	11/25/2019 4:16:07 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.89	1.99		mg/Kg-dry	1	11/22/2019 12:36:57 AM
Barium	2,740	0.995		mg/Kg-dry	1	11/22/2019 12:36:57 AM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	11/22/2019 12:36:57 AM
Chromium	9.83	0.995		mg/Kg-dry	1	11/22/2019 12:36:57 AM
Lead	32.4	0.995		mg/Kg-dry	1	11/22/2019 12:36:57 AM
Strontium	110	0.995		mg/Kg-dry	1	11/22/2019 12:36:57 AM
Zinc	121	0.995		mg/Kg-dry	1	11/22/2019 12:36:57 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	3,180	47.1		mg/Kg-dry	1	11/26/2019 10:27:07 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110677**

Date Reported: **12/2/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 9:20:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-001 **Matrix:** SOIL
Client Sample ID H-11 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	17.7	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 9:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-002 **Matrix:** SOIL
Client Sample ID H-11 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	40.3	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.58	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.40	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	10.2	0.10			1	11/19/2019
Soluble Calcium	1.62	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.51	0.05		meq/L	1	11/19/2019
Soluble Sodium	10.6	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	11/25/2019 4:31:09 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.27	2.00		mg/Kg-dry	1	11/22/2019 1:24:17 AM
Barium	251	0.999		mg/Kg-dry	1	11/22/2019 1:24:17 AM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	11/22/2019 1:24:17 AM
Chromium	10.6	0.999		mg/Kg-dry	1	11/22/2019 1:24:17 AM
Lead	11.0	0.999		mg/Kg-dry	1	11/22/2019 1:24:17 AM
Strontium	26.7	0.999		mg/Kg-dry	1	11/22/2019 1:24:17 AM
Zinc	13.5	0.999		mg/Kg-dry	1	11/22/2019 1:24:17 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	349	49.1		mg/Kg-dry	1	11/26/2019 10:31:36 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 9:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-002 **Matrix:** SOIL
Client Sample ID H-11 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	21.3	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 9:40:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-003 **Matrix:** SOIL
Client Sample ID H-11 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	37.7	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.04	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.09	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.26	0.10			1	11/19/2019
Soluble Calcium	1.21	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.61	0.05		meq/L	1	11/19/2019
Soluble Sodium	6.91	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.102	0.102		mg/Kg-dry	1	11/25/2019 4:33:27 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.35	1.99		mg/Kg-dry	1	11/22/2019 1:30:13 AM
Barium	503	0.997		mg/Kg-dry	1	11/22/2019 1:30:13 AM
Cadmium	0.568	0.498		mg/Kg-dry	1	11/22/2019 1:30:13 AM
Chromium	15.5	0.997		mg/Kg-dry	1	11/22/2019 1:30:13 AM
Lead	13.9	0.997		mg/Kg-dry	1	11/22/2019 1:30:13 AM
Strontium	35.1	0.997		mg/Kg-dry	1	11/22/2019 1:30:13 AM
Zinc	32.7	0.997		mg/Kg-dry	1	11/22/2019 1:30:13 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	519	47.1		mg/Kg-dry	1	11/26/2019 11:18:13 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110677**

Date Reported: **12/2/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 9:40:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-003 **Matrix:** SOIL
Client Sample ID H-11 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	17.5	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 10:55:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-004 **Matrix:** SOIL
Client Sample ID H-11 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: BXL
Electrical Conductivity	6.45	0.10	*	mmhos/cm	1	11/19/2019 12:22:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: MRM
Percent Moisture	19.0	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2019 11:45:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-005 **Matrix:** SOIL
Client Sample ID H-11 58-60'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: BXL
Electrical Conductivity	0.94	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: MRM
Percent Moisture	24.6	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 12:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-006 **Matrix:** SOIL
Client Sample ID H-12 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.8	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.33	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	11.8	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	14.4	0.10	*		1	11/19/2019
Soluble Calcium	2.09	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.84	0.05		meq/L	1	11/19/2019
Soluble Sodium	17.4	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	11/25/2019 4:35:45 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	< 1.99	1.99		mg/Kg-dry	1	11/22/2019 1:36:18 AM
Barium	290	0.995		mg/Kg-dry	1	11/22/2019 1:36:18 AM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	11/22/2019 1:36:18 AM
Chromium	10.1	0.995		mg/Kg-dry	1	11/22/2019 1:36:18 AM
Lead	10.5	0.995		mg/Kg-dry	1	11/22/2019 1:36:18 AM
Strontium	20.0	0.995		mg/Kg-dry	1	11/22/2019 1:36:18 AM
Zinc	15.6	0.995		mg/Kg-dry	1	11/22/2019 1:36:18 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	334	47.8		mg/Kg-dry	1	11/26/2019 11:22:41 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 12:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-006 **Matrix:** SOIL
Client Sample ID H-12 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	19.6	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 12:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-007 **Matrix:** SOIL
Client Sample ID H-12 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	31.0	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.11	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	15.8	0.10	*	%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	15.2	0.10	*		1	11/19/2019
Soluble Calcium	3.08	0.02		meq/L	1	11/19/2019
Soluble Magnesium	1.24	0.05		meq/L	1	11/19/2019
Soluble Sodium	22.4	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	11/25/2019 4:38:03 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.44	1.99		mg/Kg-dry	1	11/22/2019 1:42:16 AM
Barium	422	0.993		mg/Kg-dry	1	11/22/2019 1:42:16 AM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	11/22/2019 1:42:16 AM
Chromium	8.95	0.993		mg/Kg-dry	1	11/22/2019 1:42:16 AM
Lead	8.63	0.993		mg/Kg-dry	1	11/22/2019 1:42:16 AM
Strontium	23.9	0.993		mg/Kg-dry	1	11/22/2019 1:42:16 AM
Zinc	14.5	0.993		mg/Kg-dry	1	11/22/2019 1:42:16 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	520	48.3		mg/Kg-dry	1	11/26/2019 11:27:09 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: **19110677**

Date Reported: **12/2/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 12:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-007 **Matrix:** SOIL
Client Sample ID H-12 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	17.8	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-008 **Matrix:** SOIL
Client Sample ID H-12 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	34.0	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.56	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.78	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	9.22	0.10			1	11/19/2019
Soluble Calcium	7.07	0.02		meq/L	1	11/19/2019
Soluble Magnesium	2.76	0.05		meq/L	1	11/19/2019
Soluble Sodium	20.4	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0997	0.0997		mg/Kg-dry	1	11/25/2019 4:40:22 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.62	1.99		mg/Kg-dry	1	11/22/2019 1:48:13 AM
Barium	220	0.997		mg/Kg-dry	1	11/22/2019 1:48:13 AM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	11/22/2019 1:48:13 AM
Chromium	14.0	0.997		mg/Kg-dry	1	11/22/2019 1:48:13 AM
Lead	9.52	0.997		mg/Kg-dry	1	11/22/2019 1:48:13 AM
Strontium	28.4	0.997		mg/Kg-dry	1	11/22/2019 1:48:13 AM
Zinc	34.0	0.997		mg/Kg-dry	1	11/22/2019 1:48:13 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	349	45.9		mg/Kg-dry	1	11/26/2019 11:31:37 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-008 **Matrix:** SOIL
Client Sample ID H-12 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	16.4	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 1:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-009 **Matrix:** SOIL
Client Sample ID H-12 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: BXL
Electrical Conductivity	6.09	0.10	*	mmhos/cm	1	11/19/2019 12:22:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: MRM
Percent Moisture	19.7	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 1:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-010 **Matrix:** SOIL
Client Sample ID H-12 48-50'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: BXL
Electrical Conductivity	37.3	0.10	*	mmhos/cm	1	11/19/2019 12:22:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	1,700	25.0		mg/L	100	11/26/2019 12:03:42 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: MRM
Percent Moisture	22.1	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/13/2019 2:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-011 **Matrix:** SOIL
Client Sample ID H-12 52-54'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: BXL
Electrical Conductivity	63.7	0.10	*	mmhos/cm	1	11/19/2019 12:22:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: MRM
Percent Moisture	19.6	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 10:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-012 **Matrix:** SOIL
Client Sample ID H-13 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	32.1	0.100		meq/100g	1	11/25/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.28	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
LDNR 29-B Analyst: BXL						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.67	0.10		%	1	11/25/2019
LDNR 29-B LDNR 29-B Analyst: BXL						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	6.40	0.10			1	11/19/2019
Soluble Calcium	2.91	0.02		meq/L	1	11/19/2019
Soluble Magnesium	0.88	0.05		meq/L	1	11/19/2019
Soluble Sodium	8.81	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	11/25/2019 4:42:43 PM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.34	2.00		mg/Kg-dry	1	11/22/2019 1:54:13 AM
Barium	1,360	1.00		mg/Kg-dry	1	11/22/2019 1:54:13 AM
Cadmium	< 0.500	0.500		mg/Kg-dry	1	11/22/2019 1:54:13 AM
Chromium	11.3	1.00		mg/Kg-dry	1	11/22/2019 1:54:13 AM
Lead	11.7	1.00		mg/Kg-dry	1	11/22/2019 1:54:13 AM
Strontium	55.9	1.00		mg/Kg-dry	1	11/22/2019 1:54:13 AM
Zinc	31.6	1.00		mg/Kg-dry	1	11/22/2019 1:54:13 AM
LDNR 29-B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	1,610	47.3		mg/Kg-dry	1	11/26/2019 11:36:05 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 10:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-012 **Matrix:** SOIL
Client Sample ID H-13 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	17.4	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 11:00:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-013 **Matrix:** SOIL
Client Sample ID H-13 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	43.7	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.94	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.48	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	10.9	0.10			1	11/19/2019
Soluble Calcium	4.46	0.02		meq/L	1	11/19/2019
Soluble Magnesium	1.56	0.05		meq/L	1	11/19/2019
Soluble Sodium	18.9	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	11/25/2019 4:45:01 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.04	2.00		mg/Kg-dry	1	11/22/2019 1:59:47 AM
Barium	250	0.999		mg/Kg-dry	1	11/22/2019 1:59:47 AM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	11/22/2019 1:59:47 AM
Chromium	8.36	0.999		mg/Kg-dry	1	11/22/2019 1:59:47 AM
Lead	9.23	0.999		mg/Kg-dry	1	11/22/2019 1:59:47 AM
Strontium	30.4	0.999		mg/Kg-dry	1	11/22/2019 1:59:47 AM
Zinc	14.3	0.999		mg/Kg-dry	1	11/22/2019 1:59:47 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	417	49.1		mg/Kg-dry	1	11/26/2019 11:40:34 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110677**

Date Reported: **12/2/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 11:00:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-013 **Matrix:** SOIL
Client Sample ID H-13 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	20.3	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 11:10:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-014 **Matrix:** SOIL
Client Sample ID H-13 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	38.6	0.100		meq/100g	1	11/25/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.74	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.42	0.10		%	1	11/25/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.79	0.10			1	11/19/2019
Soluble Calcium	8.35	0.02		meq/L	1	11/19/2019
Soluble Magnesium	2.92	0.05		meq/L	1	11/19/2019
Soluble Sodium	11.4	0.25		meq/L	1	11/19/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	11/25/2019 4:47:19 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.09	1.98		mg/Kg-dry	1	11/22/2019 2:05:45 AM
Barium	363	0.992		mg/Kg-dry	1	11/22/2019 2:05:45 AM
Cadmium	0.506	0.496		mg/Kg-dry	1	11/22/2019 2:05:45 AM
Chromium	13.0	0.992		mg/Kg-dry	1	11/22/2019 2:05:45 AM
Lead	12.6	0.992		mg/Kg-dry	1	11/22/2019 2:05:45 AM
Strontium	31.7	0.992		mg/Kg-dry	1	11/22/2019 2:05:45 AM
Zinc	30.8	0.992		mg/Kg-dry	1	11/22/2019 2:05:45 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	366	46.0		mg/Kg-dry	1	11/26/2019 11:45:02 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 11:10:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-014 **Matrix:** SOIL
Client Sample ID H-13 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: MRM	
Percent Moisture	17.6	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 11:55:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110677-015 **Matrix:** SOIL
Client Sample ID H-13 12-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: BXL
Electrical Conductivity	2.36	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: MRM
Percent Moisture	22.4	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 19110677

Date Reported: 12/2/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/14/2019 1:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110677-016 **Matrix:** SOIL
Client Sample ID H-13 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: BXL
Electrical Conductivity	0.66	0.10		mmhos/cm	1	11/19/2019 12:22:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: MRM
Percent Moisture	19.6	1.00		wt%	1	11/15/2019 5:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6546
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QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32277

Sample ID: 19110518-001ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/18/2019	RunNo: 83860						
Client ID: ZZZZZZ	Batch ID: 32277	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/19/2019	SeqNo: 2101066						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	1.19	0.10						0.97	20.7	20	R
Soluble Calcium	1.25	0.02						0.93	29.2	20	R
Soluble Magnesium	0.77	0.05						0.58	29.5	20	R
Soluble Sodium	1.20	0.25						0.84	35.2	20	R

NOTES:

R - High RPD due to low analyte concentration. In this range, high RPD's may be expected. The method is in control as indicated by the LCS/LCSD.

Sample ID: 19110648-003ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/18/2019	RunNo: 83860						
Client ID: ZZZZZZ	Batch ID: 32277	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/19/2019	SeqNo: 2101070						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	4.36	0.10						4.38	0.40	20	
Soluble Calcium	9.14	0.02						9.06	0.88	20	
Soluble Magnesium	3.17	0.05						3.17	0.05	20	
Soluble Sodium	10.8	0.25						10.84	0.08	20	

Sample ID: 19110677-006ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/18/2019	RunNo: 83860						
Client ID: H-12 0-4'	Batch ID: 32277	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/19/2019	SeqNo: 2101079						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	14.4	0.10						14.41	0.15	20	*
Soluble Calcium	2.11	0.02						2.09	0.76	20	
Soluble Magnesium	0.84	0.05						0.84	0.69	20	
Soluble Sodium	17.5	0.25						17.43	0.52	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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

QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32277

Sample ID: 19110677-006ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 11/18/2019	RunNo: 83860						
Client ID: H-12 0-4'	Batch ID: 32277	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/19/2019	SeqNo: 2101079						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32292

Sample ID: MB-32292	SampType: MBLK	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: PBS	Batch ID: 32292	TestNo: SW6010B	SW3050B	Analysis Date: 11/21/2019	SeqNo: 2103222						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID: LCS-32292	SampType: LCS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: LCSS	Batch ID: 32292	TestNo: SW6010B	SW3050B	Analysis Date: 11/21/2019	SeqNo: 2103223						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.3	2.00	50.00	0	101	80	120				
Barium	50.7	1.00	50.00	0	101	80	120				
Cadmium	50.5	0.500	50.00	0	101	80	120				
Chromium	51.1	1.00	50.00	0	102	80	120				
Lead	48.3	1.00	50.00	0	96.6	80	120				
Strontium	53.0	1.00	50.00	0	106	80	120				
Zinc	50.5	1.00	50.00	0	101	80	120				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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

QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32292

Sample ID: LCSD-32292	SampType: LCSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: LCSS02	Batch ID: 32292	TestNo: SW6010B	SW3050B	Analysis Date: 11/22/2019	SeqNo: 2103228						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.2	2.00	50.00	0	96.4	80	120	50.31	4.30	20	
Barium	49.8	1.00	50.00	0	99.7	80	120	50.72	1.73	20	
Cadmium	50.4	0.500	50.00	0	101	80	120	50.53	0.317	20	
Chromium	50.2	1.00	50.00	0	100	80	120	51.10	1.78	20	
Lead	48.8	1.00	50.00	0	97.7	80	120	48.28	1.15	20	
Strontium	52.3	1.00	50.00	0	105	80	120	52.97	1.23	20	
Zinc	49.7	1.00	50.00	0	99.5	80	120	50.54	1.62	20	

Sample ID: 19110677-001AMS	SampType: MS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: H-11 0-2'	Batch ID: 32292	TestNo: SW6010B	SW3050B	Analysis Date: 11/22/2019	SeqNo: 2103233						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.8	1.99	49.84	5.891	96.1	75	125				
Barium	2,560	0.997	49.84	2,745	-361	75	125				S
Cadmium	48.2	0.498	49.84	0.3284	96.0	75	125				
Chromium	63.6	0.997	49.84	9.832	108	75	125				
Lead	77.4	0.997	49.84	32.37	90.4	75	125				
Strontium	153	0.997	49.84	110.0	85.8	75	125				
Zinc	104	0.997	49.84	120.5	-33.2	75	125				S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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

QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32292

Sample ID: 19110677-001AMSD	SampType: MSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 11/19/2019	RunNo: 83956						
Client ID: H-11 0-2'	Batch ID: 32292	TestNo: SW6010B	SW3050B	Analysis Date: 11/22/2019	SeqNo: 2103234						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	53.3	1.98	49.53	5.891	95.7	75	125	53.78	0.876	20	
Barium	2,550	0.991	49.53	2,745	-399	75	125	2,565	0.694	20	S
Cadmium	47.5	0.495	49.53	0.3284	95.3	75	125	48.17	1.30	20	
Chromium	62.5	0.991	49.53	9.832	106	75	125	63.62	1.78	20	
Lead	76.2	0.991	49.53	32.37	88.5	75	125	77.43	1.60	20	
Strontium	151	0.991	49.53	110.0	82.6	75	125	152.7	1.21	20	
Zinc	102	0.991	49.53	120.5	-36.9	75	125	104.0	1.68	20	S

NOTES:

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32313

Sample ID: MB-32313	SampType: MBLK	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/20/2019	RunNo: 84067
Client ID: PBS	Batch ID: 32313	TestNo: LDNR 29-B		Analysis Date: 11/26/2019	SeqNo: 2106859
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium < 50.0 50.0

Sample ID: LCS-32313	SampType: LCS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/20/2019	RunNo: 84067
Client ID: LCSS	Batch ID: 32313	TestNo: LDNR 29-B		Analysis Date: 11/26/2019	SeqNo: 2106860
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,840 50.0 5,000 0 96.8 75 125

Sample ID: LCSD-32313	SampType: LCSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/20/2019	RunNo: 84067
Client ID: LCSS02	Batch ID: 32313	TestNo: LDNR 29-B		Analysis Date: 11/26/2019	SeqNo: 2106861
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,840 50.0 5,000 0 96.8 75 125 4,842 0.0620 20

Sample ID: 19110514-004AMS	SampType: MS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/20/2019	RunNo: 84067
Client ID: ZZZZZ	Batch ID: 32313	TestNo: LDNR 29-B		Analysis Date: 11/26/2019	SeqNo: 2106863
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,910 49.3 4,931 161.4 96.3 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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
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QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32313

Sample ID: 19110514-004AMSD	SampType: MSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 11/20/2019	RunNo: 84067						
Client ID: ZZZZZZ	Batch ID: 32313	TestNo: LDNR 29-B	Analysis Date: 11/26/2019	SeqNo: 2106864							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	4,660	48.8	4,878	161.4	92.1	75	125	4,911	5.33	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32334

Sample ID: 19110648-003ADUP	SampType: DUP	TestCode: ESP_S	Units: %	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: ZZZZZZ	Batch ID: 32334	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105302						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Exchangeable Sodium %	2.93	0.10						2.80	4.48	20	
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Sample ID: 19110677-006ADUP	SampType: DUP	TestCode: ESP_S	Units: %	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: H-12 0-4'	Batch ID: 32334	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105311						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Exchangeable Sodium %	12.0	0.10						11.83	1.03	20	
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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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) 233-6546
 Website: www.element.com

QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32335

Sample ID: 19110648-003ADUP	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: ZZZZZZ	Batch ID: 32335	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105250						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	38.4	0.100						38.58	0.384	20	

Sample ID: LCS-32335	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: LCSS	Batch ID: 32335	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105255						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	20.9	0.100	25.00	0	83.4	76	124				

Sample ID: LCSD-32335	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: LCSS02	Batch ID: 32335	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105256						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	21.3	0.100	25.00	0	85.4	76	124	20.85	2.31	20	

Sample ID: 19110677-006ADUP	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 11/21/2019	RunNo: 84017						
Client ID: H-12 0-4'	Batch ID: 32335	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 11/25/2019	SeqNo: 2105261						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	30.7	0.100						30.79	0.396	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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

QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32359

Sample ID: MB-32359	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/25/2019	RunNo: 84035						
Client ID: PBS	Batch ID: 32359	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/25/2019	SeqNo: 2105924						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.100 0.100

Sample ID: LCS-32359	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/25/2019	RunNo: 84035						
Client ID: LCSS	Batch ID: 32359	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/25/2019	SeqNo: 2105925						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.871 0.100 0.8330 0 105 80 120

Sample ID: LCSD-32359	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/25/2019	RunNo: 84035						
Client ID: LCSS02	Batch ID: 32359	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/25/2019	SeqNo: 2105926						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.864 0.100 0.8330 0 104 80 120 0.8713 0.801 20

Sample ID: 19110677-001AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/25/2019	RunNo: 84035						
Client ID: H-11 0-2'	Batch ID: 32359	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/25/2019	SeqNo: 2105929						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 1.11 0.105 0.8706 0 128 75 125 S

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32359

Sample ID: 19110677-001AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/25/2019	RunNo: 84035						
Client ID: H-11 0-2'	Batch ID: 32359	TestNo: 29B/SW7471 SW7471A		Analysis Date: 11/25/2019	SeqNo: 2105932						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	1.13	0.105	0.8739	0	130	75	125	1.115	1.72	20	S
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NOTES:

MS/MSD recoveries were outside of QC limits. PDS/PDSD recoveries were within the acceptance limits. The method is in control as indicated by the Lab Control Sample(s).

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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
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QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R83826

Sample ID: MB-R83826	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83826						
Client ID: PBS	Batch ID: R83826	TestNo: LDNR 29-B		Analysis Date: 11/19/2019	SeqNo: 2099603						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity < 0.10 0.10

Sample ID: LCS1-R83826	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83826						
Client ID: ZZZZZ	Batch ID: R83826	TestNo: LDNR 29-B		Analysis Date: 11/19/2019	SeqNo: 2099605						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 0.39 0.10 0.38 0 103 90.07 109.9

Sample ID: LCS2-R83826	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83826						
Client ID: ZZZZZ	Batch ID: R83826	TestNo: LDNR 29-B		Analysis Date: 11/19/2019	SeqNo: 2099607						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 56.2 0.10 53.00 0 106 90 110

Sample ID: 19110677-006ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 83826						
Client ID: H-12 0-4'	Batch ID: R83826	TestNo: LDNR 29-B		Analysis Date: 11/19/2019	SeqNo: 2099620						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 2.34 0.10 2.33 0.30 20

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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

QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: R83836

Sample ID: 19110677-006ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 83836						
Client ID: H-12 0-4'	Batch ID: R83836	TestNo: LDNR 29-B		Analysis Date: 11/15/2019	SeqNo: 2099281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.3	1.00						19.60	1.54	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84079

Sample ID: MBLK	SampType: MBLK	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84079						
Client ID: PBW	Batch ID: R84079	TestNo: SW9056A		Analysis Date: 11/26/2019	SeqNo: 2107615						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride < 0.250 0.250

Sample ID: LCS	SampType: LCS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84079						
Client ID: LCSW	Batch ID: R84079	TestNo: SW9056A		Analysis Date: 11/26/2019	SeqNo: 2107616						
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 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84079						
Client ID: LCSS02	Batch ID: R84079	TestNo: SW9056A		Analysis Date: 11/26/2019	SeqNo: 2107617						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 9.96 0.250 10.00 0 99.6 80 120 9.944 0.185 15

Sample ID: 19110822-004AMS	SampType: MS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84079						
Client ID: ZZZZZ	Batch ID: R84079	TestNo: SW9056A		Analysis Date: 11/26/2019	SeqNo: 2107625						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 2,050 25.0 500.0 1,592 92.4 80 120

Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

QC SUMMARY REPORT

WO#: 19110677
 02-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84079

Sample ID: 19110822-004AMSD	SampType: MSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84079						
Client ID: ZZZZZ	Batch ID: R84079	TestNo: SW9056A	Analysis Date: 11/26/2019	SeqNo: 2107626							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2,060	25.0	500.0	1,592	92.9	80	120	2,053	0.125	15	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **19110677**

RcptNo: **1**

Logged by:	Danielle Hollier	11/15/2019 3:50:00 PM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	11/15/2019 4:35:23 PM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	11/25/2019 4:35:04 PM	<i>Caitlin Duplantis</i>

Chain of Custody

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

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
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Chain of Custody

Laboratory Number: 19110677

Client Information:		Billing Information:		PO Number:	Project Name/Number:	Page 1 of 2
Company Name:					Henning II	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
Contact Name:				Quote Number:	9403-010-0100	
Address: ICON		SAME		Required QC Level:	Kath C.	
City, State Zip:				Bill Monthly:		
Phone Number:		Ext:		Shipping Method:		
Fax Number:		Ext:		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
E-mail Address:				UPS / FedEx / NOW DHL / Element / <u>Hand</u> / Mail		

Which Regulations Apply:		Turn Time		(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.		Requested Tests				Comments				
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> RUSH		Quantity	Type P=Plastic, G=Glass, V=Vial	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	% Moisture	CEC/ESP/SAR	29 B Metals	Leachate					
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	<input type="checkbox"/> 1 Day	<input type="checkbox"/> 2 Day										Metals As, Ba, Cd, Cr, Sr, Zn, Hg, Tl, Ba, Pb				
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> Other		Sample ID/Description	Date	Time	Grab / Composite	Matrix									
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State			H-11	0-2'	11.12.19	0920	G	50	1	P	—		X	X	X	X
<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other			H-11	4-6'	11.12.19	0930	G	50	1	P	—		X	X	X	X
				H-11	8-10'	11.12.19	0940	G	50	1	P	—		X	X	X	X
				H-11	38-40'	11.12.19	1055	G	50	1	P	—		X	X		
				H-11	58-60'	11.12.19	1145	G	50	1	P	—		X	X		
				H-12	0-4'	11.13.19	1200	G	50	1	P	—		X	X	X	X
				H-12	4-6'	11.13.19	1205	G	50	1	P	—		X	X	X	X
				H-12	8-10'	11.13.19	1215	G	50	1	P	—		X	X	X	X
				H-12	38-40'	11.13.19	1330	G	50	1	P	—	X	X			

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Kath C.	11.15.19 / 1500		11-15-19 / 1500	
2					Received at lab on ice?
3		11-15-19 / 1550		11-15-19 / 1550	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:

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.

8800 North US 31 Columbus, IN 47201 USA P 812-375-0531 F 812-375-0731	328 Ley Road, Suite 100 Fort Wayne, IN 46825 USA P 260-471-7000 F 260-471-7777	909 Executive Dr Warsaw, IN 46580 USA P 574-267-3305 F 574-269-6569	3371 Cleveland Road, Suite 100A South Bend, IN 46628 USA P 574-277-0707 F 574-273-5699	2417 W. Pinhook Rd Lafayette, LA 70508 USA P 337-235-0483 F 337-233-6540
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Chain of Custody

Laboratory Number: 19110677

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number: <u>Henning II</u> <u>9403-810-0100</u>	Page <u>2</u> of <u>2</u>
					Quote Number:	Sampler's Signature: <u>Kath C.</u>	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	<u>ICON</u>		<u>SAME</u>		Required QC Level:		
	Ext:		Ext:		Bill Monthly:	Shipping Method: <u>UPS / FedEx / NOW</u> <u>DHL / Element / Hand / Mail</u>	
					<input type="checkbox"/> Yes		
					<input type="checkbox"/> No		

Which Regulations Apply:	Turn Time	Collection Information	Container	Pres.	Requested Tests						Comments			
					Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	% Moisture	CEC/ESP/SAR		29 B Metals	Leachate Cl ⁻	
<input type="checkbox"/> RCRA <input type="checkbox"/> Drinking Water <input type="checkbox"/> POTW <input type="checkbox"/> Distribution <input type="checkbox"/> NPDES <input type="checkbox"/> Special <input type="checkbox"/> USDA/FDA <input type="checkbox"/> State <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)										<u>Metals</u> <u>See page 1</u>		
Sample ID/Description	Date	Time	Grab / Composite	Matrix										
H-12	48-50'	11.13.19	1355	G	50	I	P	—	X	X				
H-12	52-54'	11.13.19	1405	G	50	I	P	—	X	X				
H-13	0-2'	11.14.19	1050	G	50	I	P	—	X	X	X		X	
H-13	4-6'	11.14.19	1100	G	50	I	P	—	X	X	X		X	
H-13	8-10'	11.14.19	1110	G	50	I	P	—	X	X	X		X	
H-13	12-14'	11.14.19	1155	G	50	I	P	—	X	X				
H-13	38-40'	11.14.19	1310	G	50	I	P	—	X	X				

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<u>Kath C.</u>	<u>11.15.19 / 1500</u>	<u>[Signature]</u>	<u>11-15-19 / 1500</u>	
2					Received at lab on ice?
3	<u>[Signature]</u>	<u>11-15-19 / 1550</u>	<u>[Signature]</u>	<u>11-15-19 / 1550</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No Temp:

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.

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December 11, 2019

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX: (225) 344-6654

RE: Henning II 9403-010-0100

Order No.: 19110969

Dear Greg Miller:

Element Materials Technology Lafayette received 37 sample(s) on 11/22/2019 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.

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.: LA180028. 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.

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 that reads 'Cristina Thibeaux'.

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



Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
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Case Narrative

WO#: 19110969
Date: 12/11/2019

CLIENT: ICON Environmental Services
Project: Henning II 9403-010-0100

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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 Website: www.element.com

Analytical Report

(consolidated)

WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 1:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-001 **Matrix:** SOIL
Client Sample ID H-14 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	25.8	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.48	0.10		mmhos/cm	1	12/3/2019 4:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.94	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	9.04	0.10			1	12/5/2019
Soluble Calcium	1.52	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.53	0.05		meq/L	1	12/5/2019
Soluble Sodium	9.13	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:04:43 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.40	1.95		mg/Kg-dry	1	12/5/2019 11:26:35 PM
Barium	862	0.977		mg/Kg-dry	1	12/5/2019 11:26:35 PM
Cadmium	< 0.488	0.488		mg/Kg-dry	1	12/5/2019 11:26:35 PM
Chromium	8.43	0.977		mg/Kg-dry	1	12/5/2019 11:26:35 PM
Lead	10.3	0.977		mg/Kg-dry	1	12/5/2019 11:26:35 PM
Strontium	41.4	0.977		mg/Kg-dry	1	12/5/2019 11:26:35 PM
Zinc	15.5	0.977		mg/Kg-dry	1	12/5/2019 11:26:35 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	891	46.0		mg/Kg-dry	1	12/4/2019 12:23:42 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 1:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-001 **Matrix:** SOIL
Client Sample ID H-14 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.2	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 1:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-002 **Matrix:** SOIL
Client Sample ID H-14 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	34.8	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	4.48	0.10	*	mmhos/cm	1	12/3/2019 4:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	14.4	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	14.9	0.10	*		1	12/5/2019
Soluble Calcium	5.33	0.02		meq/L	1	12/5/2019
Soluble Magnesium	1.46	0.05		meq/L	1	12/5/2019
Soluble Sodium	27.4	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.101	0.101		mg/Kg-dry	1	12/5/2019 12:07:01 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.53	1.98		mg/Kg-dry	1	12/5/2019 11:52:03 PM
Barium	397	0.989		mg/Kg-dry	1	12/5/2019 11:52:03 PM
Cadmium	< 0.494	0.494		mg/Kg-dry	1	12/5/2019 11:52:03 PM
Chromium	7.28	0.989		mg/Kg-dry	1	12/5/2019 11:52:03 PM
Lead	9.21	0.989		mg/Kg-dry	1	12/5/2019 11:52:03 PM
Strontium	30.0	0.989		mg/Kg-dry	1	12/5/2019 11:52:03 PM
Zinc	11.1	0.989		mg/Kg-dry	1	12/5/2019 11:52:03 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	388	48.0		mg/Kg-dry	1	12/4/2019 12:27:27 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 1:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-002 **Matrix:** SOIL
Client Sample ID H-14 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.5	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 1:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-003 **Matrix:** SOIL
Client Sample ID H-14 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	36.0	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	4.78	0.10	*	mmhos/cm	1	12/3/2019 4:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.41	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	6.93	0.10			1	12/5/2019
Soluble Calcium	13.6	0.02		meq/L	1	12/5/2019
Soluble Magnesium	3.83	0.05		meq/L	1	12/5/2019
Soluble Sodium	20.5	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	12/5/2019 12:09:19 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.62	1.90		mg/Kg-dry	1	12/5/2019 11:57:23 PM
Barium	259	0.949		mg/Kg-dry	1	12/5/2019 11:57:23 PM
Cadmium	< 0.475	0.475		mg/Kg-dry	1	12/5/2019 11:57:23 PM
Chromium	11.0	0.949		mg/Kg-dry	1	12/5/2019 11:57:23 PM
Lead	8.39	0.949		mg/Kg-dry	1	12/5/2019 11:57:23 PM
Strontium	29.7	0.949		mg/Kg-dry	1	12/5/2019 11:57:23 PM
Zinc	19.5	0.949		mg/Kg-dry	1	12/5/2019 11:57:23 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	283	46.6		mg/Kg-dry	1	12/4/2019 12:31:12 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
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Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 1:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-003 **Matrix:** SOIL
Client Sample ID H-14 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	17.0	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	H	Holding times for preparation or analysis exceeded	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
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Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 1:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-004 **Matrix:** SOIL
Client Sample ID H-14 16-18'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	5.31	0.10	*	mmhos/cm	1	12/3/2019 4:35:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	22.1	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2019 2:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-005 **Matrix:** SOIL
Client Sample ID H-14 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	1.09	0.10		mmhos/cm	1	12/3/2019 4:35:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.1	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:05:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-006 **Matrix:** SOIL
Client Sample ID H-15 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.6	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.44	0.10		mmhos/cm	1	12/3/2019 4:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.07	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	6.69	0.10			1	12/5/2019
Soluble Calcium	2.06	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.90	0.05		meq/L	1	12/5/2019
Soluble Sodium	8.14	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	0.114	0.108		mg/Kg-dry	1	12/5/2019 12:11:37 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.68	1.98		mg/Kg-dry	1	12/6/2019 12:03:03 AM
Barium	1,270	0.988		mg/Kg-dry	1	12/6/2019 12:03:03 AM
Cadmium	< 0.494	0.494		mg/Kg-dry	1	12/6/2019 12:03:03 AM
Chromium	10.7	0.988		mg/Kg-dry	1	12/6/2019 12:03:03 AM
Lead	16.9	0.988		mg/Kg-dry	1	12/6/2019 12:03:03 AM
Strontium	80.2	0.988		mg/Kg-dry	1	12/6/2019 12:03:03 AM
Zinc	18.1	0.988		mg/Kg-dry	1	12/6/2019 12:03:03 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	1,420	45.7		mg/Kg-dry	1	12/4/2019 12:34:57 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:05:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-006 **Matrix:** SOIL
Client Sample ID H-15 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	15.6	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:15:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-007 **Matrix:** SOIL
Client Sample ID H-15 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	35.9	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.33	0.10		mmhos/cm	1	12/3/2019 4:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	13.5	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	12.0	0.10	*		1	12/5/2019
Soluble Calcium	3.68	0.02		meq/L	1	12/5/2019
Soluble Magnesium	1.83	0.05		meq/L	1	12/5/2019
Soluble Sodium	20.0	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	216	50.0		mg/Kg	5	12/2/2019 11:29:00 AM
TPH (Oil Range)	38.5	10.0		mg/Kg	1	11/27/2019 6:58:00 PM
Surr: 4-Terphenyl-d14	75.8	33 - 152		%Rec	1	11/27/2019 6:58:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	12/5/2019 12:14:18 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.50	1.87		mg/Kg-dry	1	12/6/2019 12:08:31 AM
Barium	772	0.934		mg/Kg-dry	1	12/6/2019 12:08:31 AM
Cadmium	< 0.467	0.467		mg/Kg-dry	1	12/6/2019 12:08:31 AM
Chromium	10.7	0.934		mg/Kg-dry	1	12/6/2019 12:08:31 AM
Lead	12.9	0.934		mg/Kg-dry	1	12/6/2019 12:08:31 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:15:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-007 **Matrix:** SOIL
Client Sample ID H-15 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Strontium	51.8	0.934		mg/Kg-dry	1	12/6/2019 12:08:31 AM
Zinc	22.1	0.934		mg/Kg-dry	1	12/6/2019 12:08:31 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	660	46.7		mg/Kg-dry	1	12/4/2019 12:38:42 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	16.8	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:20:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-008 **Matrix:** SOIL
Client Sample ID H-15 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	33.9	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.52	0.10		mmhos/cm	1	12/3/2019 4:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	13.1	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	12.1	0.10	*		1	12/5/2019
Soluble Calcium	3.79	0.02		meq/L	1	12/5/2019
Soluble Magnesium	1.96	0.05		meq/L	1	12/5/2019
Soluble Sodium	20.4	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	291	50.0		mg/Kg	5	12/2/2019 11:45:00 AM
TPH (Oil Range)	32.0	10.0		mg/Kg	1	11/27/2019 7:46:00 PM
Surr: 4-Terphenyl-d14	79.9	33 - 152		%Rec	1	11/27/2019 7:46:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	12/5/2019 12:16:36 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.78	1.96		mg/Kg-dry	1	12/6/2019 12:14:33 AM
Barium	259	0.982		mg/Kg-dry	1	12/6/2019 12:14:33 AM
Cadmium	< 0.491	0.491		mg/Kg-dry	1	12/6/2019 12:14:33 AM
Chromium	16.2	0.982		mg/Kg-dry	1	12/6/2019 12:14:33 AM
Lead	10.0	0.982		mg/Kg-dry	1	12/6/2019 12:14:33 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:20:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-008 **Matrix:** SOIL
Client Sample ID H-15 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B
METALS IN SOIL OR SLUDGE BY ICP						Analyst: STS
Strontium	47.2	0.982		mg/Kg-dry	1	12/6/2019 12:14:33 AM
Zinc	38.8	0.982		mg/Kg-dry	1	12/6/2019 12:14:33 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	282	49.1		mg/Kg-dry	1	12/4/2019 12:42:28 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	15.5	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:25:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-009 **Matrix:** SOIL
Client Sample ID H-15 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	26.5	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	5.64	0.10	*	mmhos/cm	1	12/3/2019 4:35:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	14.5	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	11.4	0.10			1	12/5/2019
Soluble Calcium	9.22	0.02		meq/L	1	12/5/2019
Soluble Magnesium	4.56	0.05		meq/L	1	12/5/2019
Soluble Sodium	30.0	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	588	50.0		mg/Kg	5	12/2/2019 12:34:00 PM
TPH (Oil Range)	27.2	10.0		mg/Kg	1	11/27/2019 8:34:00 PM
Surr: 4-Terphenyl-d14	75.2	33 - 152		%Rec	1	11/27/2019 8:34:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	12/5/2019 12:18:54 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.22	1.93		mg/Kg-dry	1	12/6/2019 12:20:21 AM
Barium	159	0.965		mg/Kg-dry	1	12/6/2019 12:20:21 AM
Cadmium	0.502	0.483		mg/Kg-dry	1	12/6/2019 12:20:21 AM
Chromium	15.6	0.965		mg/Kg-dry	1	12/6/2019 12:20:21 AM
Lead	9.80	0.965		mg/Kg-dry	1	12/6/2019 12:20:21 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:25:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-009 **Matrix:** SOIL
Client Sample ID H-15 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Strontium	45.7	0.965		mg/Kg-dry	1	12/6/2019 12:20:21 AM
Zinc	41.2	0.965		mg/Kg-dry	1	12/6/2019 12:20:21 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	175	49.5		mg/Kg-dry	1	12/4/2019 12:53:47 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	17.6	1.00		wt%	1	11/25/2019 2:55:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-010 **Matrix:** SOIL
Client Sample ID H-15 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	21.2	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	7.80	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	15.1	0.10	*	%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	11.6	0.10			1	12/5/2019
Soluble Calcium	15.3	0.02		meq/L	1	12/5/2019
Soluble Magnesium	8.01	0.05		meq/L	1	12/5/2019
Soluble Sodium	39.6	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	207	20.0		mg/Kg	2	12/2/2019 12:50:00 PM
TPH (Oil Range)	31.8	10.0		mg/Kg	1	11/27/2019 8:50:00 PM
Surr: 4-Terphenyl-d14	72.3	33 - 152		%Rec	1	11/27/2019 8:50:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:26:18 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.29	1.97		mg/Kg-dry	1	12/6/2019 12:26:30 AM
Barium	97.1	0.984		mg/Kg-dry	1	12/6/2019 12:26:30 AM
Cadmium	0.551	0.492		mg/Kg-dry	1	12/6/2019 12:26:30 AM
Chromium	12.8	0.984		mg/Kg-dry	1	12/6/2019 12:26:30 AM
Lead	7.95	0.984		mg/Kg-dry	1	12/6/2019 12:26:30 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
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Analytical Report

(consolidated)

WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-010 **Matrix:** SOIL
Client Sample ID H-15 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B
METALS IN SOIL OR SLUDGE BY ICP						Analyst: STS
Strontium	136	9.84		mg/Kg-dry	10	12/9/2019 9:28:34 PM
Zinc	38.8	0.984		mg/Kg-dry	1	12/6/2019 12:26:30 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	213	46.4		mg/Kg-dry	1	12/4/2019 12:57:52 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	16.8	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 11:35:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-011 **Matrix:** SOIL
Client Sample ID H-15 12-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	5.93	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
TPH-D/O IN SOIL BY SW8015				SW8015B		Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015				SW3550C		
TPH (Diesel Range)	< 10.0	10.0		mg/Kg	1	11/27/2019 9:06:00 PM
TPH (Oil Range)	< 15.0	15.0		mg/Kg	1	11/27/2019 9:06:00 PM
Surr: 4-Terphenyl-d14	75.9	33 - 152		%Rec	1	11/27/2019 9:06:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	19.0	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2019 12:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-012 **Matrix:** SOIL
Client Sample ID H-15 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	1.57	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	19.2	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 8:25:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-013 **Matrix:** SOIL
Client Sample ID H-16 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	29.1	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.28	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.81	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.94	0.10			1	12/5/2019
Soluble Calcium	1.39	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.62	0.05		meq/L	1	12/5/2019
Soluble Sodium	7.96	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	0.150	0.108		mg/Kg-dry	1	12/9/2019 3:23:57 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.79	1.96		mg/Kg-dry	1	12/6/2019 12:31:55 AM
Barium	4,390	0.982		mg/Kg-dry	1	12/6/2019 12:31:55 AM
Cadmium	< 0.491	0.491		mg/Kg-dry	1	12/6/2019 12:31:55 AM
Chromium	19.7	0.982		mg/Kg-dry	1	12/6/2019 12:31:55 AM
Lead	54.5	0.982		mg/Kg-dry	1	12/6/2019 12:31:55 AM
Strontium	148	9.82		mg/Kg-dry	10	12/9/2019 9:31:57 PM
Zinc	98.6	0.982		mg/Kg-dry	1	12/6/2019 12:31:55 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	6,540	48.6		mg/Kg-dry	1	12/4/2019 1:01:58 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 8:25:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-013 **Matrix:** SOIL
Client Sample ID H-16 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	16.6	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 8:35:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-014 **Matrix:** SOIL
Client Sample ID H-16 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	37.4	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	4.27	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	9.37	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	9.23	0.10			1	12/5/2019
Soluble Calcium	7.86	0.02		meq/L	1	12/5/2019
Soluble Magnesium	3.32	0.05		meq/L	1	12/5/2019
Soluble Sodium	21.8	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:36:21 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.59	1.99		mg/Kg-dry	1	12/6/2019 12:37:45 AM
Barium	487	0.993		mg/Kg-dry	1	12/6/2019 12:37:45 AM
Cadmium	< 0.496	0.496		mg/Kg-dry	1	12/6/2019 12:37:45 AM
Chromium	12.6	0.993		mg/Kg-dry	1	12/6/2019 12:37:45 AM
Lead	11.0	0.993		mg/Kg-dry	1	12/6/2019 12:37:45 AM
Strontium	30.6	0.993		mg/Kg-dry	1	12/6/2019 12:37:45 AM
Zinc	24.2	0.993		mg/Kg-dry	1	12/6/2019 12:37:45 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	490	47.3		mg/Kg-dry	1	12/4/2019 1:05:43 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 8:35:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-014 **Matrix:** SOIL
Client Sample ID H-16 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.5	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 8:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-015 **Matrix:** SOIL
Client Sample ID H-16 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	37.3	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	11.1	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	14.9	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	17.4	0.10	*		1	12/5/2019
Soluble Calcium	20.0	0.02		meq/L	1	12/5/2019
Soluble Magnesium	8.10	0.05		meq/L	1	12/5/2019
Soluble Sodium	65.1	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	< 10.0	10.0		mg/Kg	1	11/27/2019 9:22:00 PM
TPH (Oil Range)	< 15.0	15.0		mg/Kg	1	11/27/2019 9:22:00 PM
Surr: 4-Terphenyl-d14	79.3	33 - 152		%Rec	1	11/27/2019 9:22:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:38:44 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	9.80	1.94		mg/Kg-dry	1	12/6/2019 12:51:52 AM
Barium	108	0.970		mg/Kg-dry	1	12/6/2019 12:51:52 AM
Cadmium	0.621	0.485		mg/Kg-dry	1	12/6/2019 12:51:52 AM
Chromium	17.5	0.970		mg/Kg-dry	1	12/6/2019 12:51:52 AM
Lead	13.4	0.970		mg/Kg-dry	1	12/6/2019 12:51:52 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 8:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-015 **Matrix:** SOIL
Client Sample ID H-16 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B
METALS IN SOIL OR SLUDGE BY ICP						Analyst: STS
Strontium	157	9.70		mg/Kg-dry	10	12/9/2019 9:35:21 PM
Zinc	61.2	0.970		mg/Kg-dry	1	12/6/2019 12:51:52 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	223	46.9		mg/Kg-dry	1	12/4/2019 1:09:28 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	19.7	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 9:00:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-016 **Matrix:** SOIL
Client Sample ID H-16 14-16'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	20.7	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
TPH-D/O IN SOIL BY SW8015				SW8015B		Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015				SW3550C		
TPH (Diesel Range)	< 10.0	10.0		mg/Kg	1	11/27/2019 9:38:00 PM
TPH (Oil Range)	< 15.0	15.0		mg/Kg	1	11/27/2019 9:38:00 PM
Surr: 4-Terphenyl-d14	76.5	33 - 152		%Rec	1	11/27/2019 9:38:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	20.6	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 9:05:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-017 **Matrix:** SOIL
Client Sample ID H-16 16-18'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	25.8	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.9	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 9:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-018 **Matrix:** SOIL
Client Sample ID H-16 34-36'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	11.6	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	597	12.5		mg/L	50	12/9/2019 2:00:54 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	19.1	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 10:00:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-019 **Matrix:** SOIL
Client Sample ID H-16 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	21.7	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	23.1	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-020 **Matrix:** SOIL
Client Sample ID H-17 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	17.9	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.06	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.97	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.10	0.10			1	12/5/2019
Soluble Calcium	1.07	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.54	0.05		meq/L	1	12/5/2019
Soluble Sodium	6.39	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:41:02 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.02	1.87		mg/Kg-dry	1	12/6/2019 12:57:21 AM
Barium	987	0.936		mg/Kg-dry	1	12/6/2019 12:57:21 AM
Cadmium	< 0.468	0.468		mg/Kg-dry	1	12/6/2019 12:57:21 AM
Chromium	9.89	0.936		mg/Kg-dry	1	12/6/2019 12:57:21 AM
Lead	19.4	0.936		mg/Kg-dry	1	12/6/2019 12:57:21 AM
Strontium	76.7	0.936		mg/Kg-dry	1	12/6/2019 12:57:21 AM
Zinc	21.8	0.936		mg/Kg-dry	1	12/6/2019 12:57:21 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	1,090	48.2		mg/Kg-dry	1	12/4/2019 1:13:15 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 Lafayette, LA 70508-3344
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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-020 **Matrix:** SOIL
Client Sample ID H-17 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	16.7	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-021 **Matrix:** SOIL
Client Sample ID H-17 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	29.3	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.59	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	20.9	0.10	*	%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	13.4	0.10	*		1	12/5/2019
Soluble Calcium	0.84	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.41	0.05		meq/L	1	12/5/2019
Soluble Sodium	10.5	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	556	50.0		mg/Kg	5	12/2/2019 1:06:00 PM
TPH (Oil Range)	26.3	10.0		mg/Kg	1	11/27/2019 9:54:00 PM
Surr: 4-Terphenyl-d14	71.8	33 - 152		%Rec	1	11/27/2019 9:54:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:43:40 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.88	1.94		mg/Kg-dry	1	12/6/2019 1:02:49 AM
Barium	201	0.972		mg/Kg-dry	1	12/6/2019 1:02:49 AM
Cadmium	< 0.486	0.486		mg/Kg-dry	1	12/6/2019 1:02:49 AM
Chromium	10.1	0.972		mg/Kg-dry	1	12/6/2019 1:02:49 AM
Lead	10.6	0.972		mg/Kg-dry	1	12/6/2019 1:02:49 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-021 **Matrix:** SOIL
Client Sample ID H-17 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B
METALS IN SOIL OR SLUDGE BY ICP						Analyst: STS
Strontium	69.9	0.972		mg/Kg-dry	1	12/6/2019 1:02:49 AM
Zinc	18.5	0.972		mg/Kg-dry	1	12/6/2019 1:02:49 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	213	46.2		mg/Kg-dry	1	12/9/2019 11:13:21 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	15.4	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-022 **Matrix:** SOIL
Client Sample ID H-17 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	22.0	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.06	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	24.9	0.10	*	%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	19.1	0.10	*		1	12/5/2019
Soluble Calcium	1.69	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.64	0.05		meq/L	1	12/5/2019
Soluble Sodium	20.6	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	168	10.0		mg/Kg	1	11/27/2019 10:58:00 PM
TPH (Oil Range)	13.4	10.0		mg/Kg	1	11/27/2019 10:58:00 PM
Surr: 4-Terphenyl-d14	74.0	33 - 152		%Rec	1	11/27/2019 10:58:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:46:00 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.67	1.94		mg/Kg-dry	1	12/6/2019 1:08:15 AM
Barium	140	0.968		mg/Kg-dry	1	12/6/2019 1:08:15 AM
Cadmium	< 0.484	0.484		mg/Kg-dry	1	12/6/2019 1:08:15 AM
Chromium	6.48	0.968		mg/Kg-dry	1	12/6/2019 1:08:15 AM
Lead	6.79	0.968		mg/Kg-dry	1	12/6/2019 1:08:15 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-022 **Matrix:** SOIL
Client Sample ID H-17 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Strontium	53.3	0.968		mg/Kg-dry	1	12/6/2019 1:08:15 AM
Zinc	12.7	0.968		mg/Kg-dry	1	12/6/2019 1:08:15 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	177	47.3		mg/Kg-dry	1	12/9/2019 11:30:19 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	13.1	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-023 **Matrix:** SOIL
Client Sample ID H-17 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	33.3	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	4.15	0.10	*	mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	14.2	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	13.6	0.10	*		1	12/5/2019
Soluble Calcium	4.73	0.02		meq/L	1	12/5/2019
Soluble Magnesium	2.10	0.05		meq/L	1	12/5/2019
Soluble Sodium	25.1	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	92.9	10.0		mg/Kg	1	11/27/2019 11:14:00 PM
TPH (Oil Range)	12.2	10.0		mg/Kg	1	11/27/2019 11:14:00 PM
Surr: 4-Terphenyl-d14	69.9	33 - 152		%Rec	1	11/27/2019 11:14:00 PM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:48:18 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	9.53	1.94		mg/Kg-dry	1	12/6/2019 1:13:35 AM
Barium	466	0.972		mg/Kg-dry	1	12/6/2019 1:13:35 AM
Cadmium	0.486	0.486		mg/Kg-dry	1	12/6/2019 1:13:35 AM
Chromium	12.8	0.972		mg/Kg-dry	1	12/6/2019 1:13:35 AM
Lead	10.4	0.972		mg/Kg-dry	1	12/6/2019 1:13:35 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-023 **Matrix:** SOIL
Client Sample ID H-17 10-12'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B
METALS IN SOIL OR SLUDGE BY ICP						Analyst: STS
Strontium	45.9	0.972		mg/Kg-dry	1	12/6/2019 1:13:35 AM
Zinc	43.7	0.972		mg/Kg-dry	1	12/6/2019 1:13:35 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	361	46.0		mg/Kg-dry	1	12/9/2019 11:33:40 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	15.7	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-024 **Matrix:** SOIL
Client Sample ID H-17 12-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	3.87	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
TPH-D/O IN SOIL BY SW8015				SW8015B		Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015				SW3550C		
TPH (Diesel Range)	26.8	10.0		mg/Kg	1	11/27/2019 11:30:00 PM
TPH (Oil Range)	11.9	10.0		mg/Kg	1	11/27/2019 11:30:00 PM
Surr: 4-Terphenyl-d14	81.2	33 - 152		%Rec	1	11/27/2019 11:30:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.9	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-025 **Matrix:** SOIL
Client Sample ID H-17 14-16'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	3.61	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
TPH-D/O IN SOIL BY SW8015				SW8015B		Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015				SW3550C		
TPH (Diesel Range)	59.6	10.0		mg/Kg	1	11/27/2019 11:46:00 PM
TPH (Oil Range)	13.3	10.0		mg/Kg	1	11/27/2019 11:46:00 PM
Surr: 4-Terphenyl-d14	71.4	33 - 152		%Rec	1	11/27/2019 11:46:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	17.8	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 3:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-026 **Matrix:** SOIL
Client Sample ID H-17 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	0.75	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	16.3	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-027 **Matrix:** SOIL
Client Sample ID H-17 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	16.3	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.67	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	27.3	0.10	*	%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	19.1	0.10	*		1	12/5/2019
Soluble Calcium	1.26	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.53	0.05		meq/L	1	12/5/2019
Soluble Sodium	18.0	0.25		meq/L	1	12/5/2019
TPH-D/O IN SOIL BY SW8015						
TPH DRO/ORO IN SOIL BY SW8015						
TPH (Diesel Range)	617	50.0		mg/Kg	5	12/2/2019 1:22:00 PM
TPH (Oil Range)	24.6	10.0		mg/Kg	1	11/28/2019 12:02:00 AM
Surr: 4-Terphenyl-d14	74.7	33 - 152		%Rec	1	11/28/2019 12:02:00 AM
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:55:42 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.76	1.95		mg/Kg-dry	1	12/6/2019 1:19:21 AM
Barium	106	0.976		mg/Kg-dry	1	12/6/2019 1:19:21 AM
Cadmium	< 0.488	0.488		mg/Kg-dry	1	12/6/2019 1:19:21 AM
Chromium	5.39	0.976		mg/Kg-dry	1	12/6/2019 1:19:21 AM
Lead	5.28	0.976		mg/Kg-dry	1	12/6/2019 1:19:21 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/20/2019 2:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 19110969-027 **Matrix:** SOIL
Client Sample ID H-17 6-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Strontium	51.0	0.976		mg/Kg-dry	1	12/6/2019 1:19:21 AM
Zinc	11.4	0.976		mg/Kg-dry	1	12/6/2019 1:19:21 AM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	125	47.5		mg/Kg-dry	1	12/9/2019 11:37:03 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXL
Percent Moisture	12.9	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 9:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-028 **Matrix:** SOIL
Client Sample ID H-18 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	34.4	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.64	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	17.6	0.10	*	%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	14.6	0.10	*		1	12/5/2019
Soluble Calcium	0.79	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.45	0.05		meq/L	1	12/5/2019
Soluble Sodium	11.5	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 12:58:00 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.33	1.97		mg/Kg-dry	1	12/6/2019 1:24:43 AM
Barium	6,390	9.87		mg/Kg-dry	10	12/9/2019 10:59:39 PM
Cadmium	< 0.493	0.493		mg/Kg-dry	1	12/6/2019 1:24:43 AM
Chromium	24.8	0.987		mg/Kg-dry	1	12/6/2019 1:24:43 AM
Lead	27.6	0.987		mg/Kg-dry	1	12/6/2019 1:24:43 AM
Strontium	124	0.987		mg/Kg-dry	1	12/6/2019 1:24:43 AM
Zinc	30.2	0.987		mg/Kg-dry	1	12/6/2019 1:24:43 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	10,900	47.1		mg/Kg-dry	1	12/9/2019 11:40:25 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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

Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 9:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-028 **Matrix:** SOIL
Client Sample ID H-18 0-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	18.5	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 9:35:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-029 **Matrix:** SOIL
Client Sample ID H-18 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.8	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.98	0.10		mmhos/cm	1	12/3/2019 4:45:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	31.5	0.10	*	%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	10.7	0.10			1	12/5/2019
Soluble Calcium	0.44	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.31	0.05		meq/L	1	12/5/2019
Soluble Sodium	6.56	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 1:00:40 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.47	2.00		mg/Kg-dry	1	12/6/2019 1:30:20 AM
Barium	226	0.998		mg/Kg-dry	1	12/6/2019 1:30:20 AM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	12/6/2019 1:30:20 AM
Chromium	11.2	0.998		mg/Kg-dry	1	12/6/2019 1:30:20 AM
Lead	9.74	0.998		mg/Kg-dry	1	12/6/2019 1:30:20 AM
Strontium	23.8	0.998		mg/Kg-dry	1	12/6/2019 1:30:20 AM
Zinc	22.5	0.998		mg/Kg-dry	1	12/6/2019 1:30:20 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	419	48.2		mg/Kg-dry	1	12/9/2019 11:43:46 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 9:35:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-029 **Matrix:** SOIL
Client Sample ID H-18 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	15.5	1.00		wt%	1	11/25/2019 4:00:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 9:45:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-030 **Matrix:** SOIL
Client Sample ID H-18 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	19.2	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	5.75	0.10	*	mmhos/cm	1	12/3/2019 5:05:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	10.8	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.08	0.10			1	12/5/2019
Soluble Calcium	13.7	0.02		meq/L	1	12/5/2019
Soluble Magnesium	9.32	0.05		meq/L	1	12/5/2019
Soluble Sodium	24.0	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	12/5/2019 1:02:59 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.88	1.99		mg/Kg-dry	1	12/6/2019 1:35:21 AM
Barium	91.6	0.997		mg/Kg-dry	1	12/6/2019 1:35:21 AM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	12/6/2019 1:35:21 AM
Chromium	8.82	0.997		mg/Kg-dry	1	12/6/2019 1:35:21 AM
Lead	8.02	0.997		mg/Kg-dry	1	12/6/2019 1:35:21 AM
Strontium	16.5	0.997		mg/Kg-dry	1	12/6/2019 1:35:21 AM
Zinc	20.3	0.997		mg/Kg-dry	1	12/6/2019 1:35:21 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	88.2	46.6		mg/Kg-dry	1	12/9/2019 11:47:08 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 9:45:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-030 **Matrix:** SOIL
Client Sample ID H-18 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	13.4	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 10:00:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-031 **Matrix:** SOIL
Client Sample ID H-18 14-16'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	8.02	0.10	*	mmhos/cm	1	12/3/2019 5:05:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	19.4	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 11:10:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-032 **Matrix:** SOIL
Client Sample ID H-18 42-44'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	1.58	0.10		mmhos/cm	1	12/3/2019 5:05:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	105	2.50		mg/L	10	12/9/2019 2:14:38 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	14.2	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/21/2019 11:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-033 **Matrix:** SOIL
Client Sample ID H-18 58-60'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	0.75	0.10		mmhos/cm	1	12/3/2019 5:05:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	21.4	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/22/2019 7:45:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-034 **Matrix:** SOIL
Client Sample ID H-19 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	25.5	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.34	0.10		mmhos/cm	1	12/3/2019 5:05:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.82	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.78	0.10			1	12/5/2019
Soluble Calcium	2.25	0.02		meq/L	1	12/5/2019
Soluble Magnesium	0.92	0.05		meq/L	1	12/5/2019
Soluble Sodium	7.29	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	12/5/2019 1:12:57 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.87	1.98		mg/Kg-dry	1	12/6/2019 1:40:42 AM
Barium	3,750	0.992		mg/Kg-dry	1	12/6/2019 1:40:42 AM
Cadmium	< 0.496	0.496		mg/Kg-dry	1	12/6/2019 1:40:42 AM
Chromium	24.0	0.992		mg/Kg-dry	1	12/6/2019 1:40:42 AM
Lead	34.0	0.992		mg/Kg-dry	1	12/6/2019 1:40:42 AM
Strontium	77.1	0.992		mg/Kg-dry	1	12/6/2019 1:40:42 AM
Zinc	14.5	0.992		mg/Kg-dry	1	12/6/2019 1:40:42 AM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	9,360	45.6		mg/Kg-dry	1	12/9/2019 11:50:32 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/22/2019 7:45:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-034 **Matrix:** SOIL
Client Sample ID H-19 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	16.0	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/22/2019 7:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-035 **Matrix:** SOIL
Client Sample ID H-19 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	32.4	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.65	0.10		mmhos/cm	1	12/3/2019 5:05:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	9.47	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.56	0.10			1	12/5/2019
Soluble Calcium	7.81	0.02		meq/L	1	12/5/2019
Soluble Magnesium	3.83	0.05		meq/L	1	12/5/2019
Soluble Sodium	18.2	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	12/5/2019 1:28:01 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.94	1.99		mg/Kg-dry	1	12/9/2019 9:10:41 PM
Barium	144	0.993		mg/Kg-dry	1	12/9/2019 9:10:41 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	12/9/2019 9:10:41 PM
Chromium	9.58	0.993		mg/Kg-dry	1	12/9/2019 9:10:41 PM
Lead	12.2	0.993		mg/Kg-dry	1	12/9/2019 9:10:41 PM
Strontium	25.1	0.993		mg/Kg-dry	1	12/9/2019 9:10:41 PM
Zinc	18.9	0.993		mg/Kg-dry	1	12/9/2019 9:10:41 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	233	48.9		mg/Kg-dry	1	12/9/2019 11:53:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/22/2019 7:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-035 **Matrix:** SOIL
Client Sample ID H-19 4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		LDNR 29-B			Analyst: BXL	
Percent Moisture	16.9	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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#: 19110969

Date Reported: 12/11/2019

CLIENT: ICON Environmental Services **Collection Date:** 11/22/2019 8:00:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-036 **Matrix:** SOIL
Client Sample ID H-19 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	22.8	0.100		meq/100g	1	12/5/2019
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.97	0.10		mmhos/cm	1	12/3/2019 5:05:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.00	0.10		%	1	12/5/2019
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.25	0.10			1	12/5/2019
Soluble Calcium	7.42	0.02		meq/L	1	12/5/2019
Soluble Magnesium	3.68	0.05		meq/L	1	12/5/2019
Soluble Sodium	12.4	0.25		meq/L	1	12/5/2019
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	12/5/2019 1:30:20 PM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.27	1.88		mg/Kg-dry	1	12/9/2019 9:21:58 PM
Barium	32.6	0.942		mg/Kg-dry	1	12/9/2019 9:21:58 PM
Cadmium	< 0.471	0.471		mg/Kg-dry	1	12/9/2019 9:21:58 PM
Chromium	9.41	0.942		mg/Kg-dry	1	12/9/2019 9:21:58 PM
Lead	7.08	0.942		mg/Kg-dry	1	12/9/2019 9:21:58 PM
Strontium	18.7	0.942		mg/Kg-dry	1	12/9/2019 9:21:58 PM
Zinc	23.2	0.942		mg/Kg-dry	1	12/9/2019 9:21:58 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	79.9	47.3		mg/Kg-dry	1	12/10/2019 12:04:09 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Limit
- SDL Sample detection limit
- W Sample container temperature is out of limit as specified at testcode

- B Analyte detected in the associated Method Blank
- M Matrix Interference
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- U Analyte not detected



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/22/2019 8:00:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-036 **Matrix:** SOIL
Client Sample ID H-19 8-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	14.8	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **19110969**

Date Reported: **12/11/2019**

CLIENT: ICON Environmental Services **Collection Date:** 11/22/2019 9:15:00 AM
Project: Henning II 9403-010-0100
Lab ID: 19110969-037 **Matrix:** SOIL
Client Sample ID H-19 38-40'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: MRM
Electrical Conductivity	3.86	0.10		mmhos/cm	1	12/3/2019 5:05:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXL
Percent Moisture	18.3	1.00		wt%	1	11/25/2019 4:40:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32360

Sample ID: MB-32360	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: PBS	Batch ID: 32360	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112245						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.100 0.100

Sample ID: LCS-32360	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: LCSS	Batch ID: 32360	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112246						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.893 0.100 0.8330 0 107 80 120

Sample ID: LCSD-32360	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: LCSS02	Batch ID: 32360	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112247						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.892 0.100 0.8330 0 107 80 120 0.8924 0 20

Sample ID: 19110969-010AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/25/2019	RunNo: 84275						
Client ID: H-15 10-12'	Batch ID: 32360	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112259						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.976 0.100 0.8330 0 117 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32360

Sample ID: 19110969-010AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 11/25/2019	RunNo: 84275						
Client ID: H-15 10-12'	Batch ID: 32360	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112260						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.978	0.100	0.8330	0	117	75	125	0.9757	0.195	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32362

Sample ID: 19110969-007BMS-M	SampType: MS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: H-15 4-6'	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108210						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)
 Surr: 4-Terphenyl-d14

92.4
 2.14

10.0
 3.330

100.0
 38.51

53.9
 64.1

14.5
 33

174
 152

Sample ID: 19110969-007BMSD-	SampType: MSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: H-15 4-6'	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)
 Surr: 4-Terphenyl-d14

126
 2.81

10.0
 3.330

100.0
 38.51

87.4
 84.4

14.5
 33

174
 152

92.40
 30.7

48.8
 40

Sample ID: LCS-D32362	SampType: LCS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: LCSS	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108224						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)
 Surr: 4-Terphenyl-d14

65.3
 1.93

10.0
 3.330

100.0
 0

65.3
 58.0

63.4
 33

109
 152

Sample ID: LCSD-D32362	SampType: LCSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: LCSS02	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108225						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)

78.5

10.0

100.0

0

78.5

63.4

109

65.33

18.3

21.9

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32362

Sample ID: LCSD-D32362	SampType: LCSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: LCSS02	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108225						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14	2.43		3.330		73.0	33	152		0	40	
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Sample ID: LCSD-M32362	SampType: LCSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: LCSS02	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108226						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	84.7	10.0	100.0	0	84.7	63.9	120	92.75	9.13	20.7	
Surr: 4-Terphenyl-d14	2.27		3.330		68.1	33	152		0	40	

Sample ID: LCS-M32362	SampType: LCS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: LCSS	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108227						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	92.8	10.0	100.0	0	92.8	63.9	120				
Surr: 4-Terphenyl-d14	2.44		3.330		73.3	33	152				

Sample ID: MB-32362	SampType: MBLK	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: PBS	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108228						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	< 10.0	10.0									
TPH (Oil Range)	< 10.0	10.0									

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32362

Sample ID: MB-32362	SampType: MBLK	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: PBS	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 11/27/2019	SeqNo: 2108228						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14 2.32 3.330 69.6 33 152

Sample ID: 19110969-008BMS-D	SampType: MS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: H-15 6-8'	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 12/2/2019	SeqNo: 2109271						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 475 50.0 100.0 291.3 184 23.4 123
 Surr: 4-Terphenyl-d14 2.55 3.330 76.4 33 152

Sample ID: 19110969-008BMSD-	SampType: MSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/25/2019	RunNo: 84124						
Client ID: H-15 6-8'	Batch ID: 32362	TestNo: SW8015B	SW3550C	Analysis Date: 12/2/2019	SeqNo: 2109272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 470 50.0 100.0 291.3 179 23.4 123 475.1 1.10 35.6 MS
 Surr: 4-Terphenyl-d14 2.38 3.330 71.4 33 152 0 40

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32426

Sample ID: MB-32426	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: PBS	Batch ID: 32426	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112207						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury < 0.100 0.100

Sample ID: LCS-32426	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: LCSS	Batch ID: 32426	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.913 0.100 0.8330 0 110 80 120

Sample ID: LCSD-32426	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: LCSS02	Batch ID: 32426	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.913 0.100 0.8330 0 110 80 120 0.9130 0.0347 20

Sample ID: 19110969-034AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: H-19 0-2'	Batch ID: 32426	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112212						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.983 0.108 0.9014 0.04272 104 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32426

Sample ID: 19110969-034AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/5/2019	RunNo: 84275						
Client ID: H-19 0-2'	Batch ID: 32426	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/5/2019	SeqNo: 2112215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.983	0.108	0.9027	0.04272	104	75	125	0.9827	0.000955	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32427

Sample ID: MB-32427	SampType: MBLK	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/3/2019	RunNo: 84211
Client ID: PBS	Batch ID: 32427	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110607
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium < 50.0 50.0

Sample ID: LCS-32427	SampType: LCS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/3/2019	RunNo: 84211
Client ID: LCSS	Batch ID: 32427	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110608
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,650 50.0 5,000 0 93.1 75 125

Sample ID: LCSD-32427	SampType: LCSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/3/2019	RunNo: 84211
Client ID: LCSS02	Batch ID: 32427	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110609
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 5,080 50.0 5,000 0 102 75 125 4,654 8.65 20

Sample ID: 19110959-019AMS	SampType: MS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/3/2019	RunNo: 84211
Client ID: ZZZZZ	Batch ID: 32427	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110611
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 5,120 48.6 4,864 159.9 102 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32427

Sample ID: 19110959-019AMSD	SampType: MSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/3/2019	RunNo: 84211						
Client ID: ZZZZZZ	Batch ID: 32427	TestNo: LDNR 29-B	Analysis Date: 12/3/2019	SeqNo: 2110612							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	5,020	48.6	4,859	159.9	100	75	125	5,117	1.92	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32427

Sample ID: 19110451-023ADUP	SampType: DUP	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/3/2019	RunNo: 84240						
Client ID: ZZZZZZ	Batch ID: 32427	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2111246						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	146	46.7						93.93	43.2	20	R

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32439

Sample ID: MB-32439	SampType: MBLK	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/4/2019	RunNo: 84297						
Client ID: PBS	Batch ID: 32439	TestNo: SW6010B	SW3050B	Analysis Date: 12/5/2019	SeqNo: 2113417						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID: LCS-32439	SampType: LCS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/4/2019	RunNo: 84297						
Client ID: LCSS	Batch ID: 32439	TestNo: SW6010B	SW3050B	Analysis Date: 12/5/2019	SeqNo: 2113418						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.0	2.00	50.00	0	98.1	80	120				
Barium	49.6	1.00	50.00	0	99.2	80	120				
Cadmium	49.1	0.500	50.00	0	98.2	80	120				
Chromium	49.6	1.00	50.00	0	99.3	80	120				
Lead	49.8	1.00	50.00	0	99.5	80	120				
Strontium	50.7	1.00	50.00	0	101	80	120				
Zinc	49.4	1.00	50.00	0	98.9	80	120				

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32439

Sample ID: LCSD-32439	SampType: LCSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/4/2019	RunNo: 84297						
Client ID: LCSS02	Batch ID: 32439	TestNo: SW6010B	SW3050B	Analysis Date: 12/5/2019	SeqNo: 2113419						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.5	2.00	50.00	0	103	80	120	49.04	4.85	20	
Barium	50.1	1.00	50.00	0	100	80	120	49.62	1.00	20	
Cadmium	49.4	0.500	50.00	0	98.8	80	120	49.10	0.569	20	
Chromium	50.1	1.00	50.00	0	100	80	120	49.63	0.903	20	
Lead	49.8	1.00	50.00	0	99.6	80	120	49.76	0.121	20	
Strontium	50.9	1.00	50.00	0	102	80	120	50.72	0.335	20	
Zinc	50.0	1.00	50.00	0	100	80	120	49.45	1.07	20	

Sample ID: 19110969-001AMS	SampType: MS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/4/2019	RunNo: 84297						
Client ID: H-14 0-2'	Batch ID: 32439	TestNo: SW6010B	SW3050B	Analysis Date: 12/5/2019	SeqNo: 2113421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.2	1.99	49.82	3.399	97.9	75	125				
Barium	875	0.996	49.82	862.2	25.0	75	125				S
Cadmium	47.2	0.498	49.82	0.2539	94.3	75	125				
Chromium	62.7	0.996	49.82	8.429	109	75	125				
Lead	58.2	0.996	49.82	10.26	96.2	75	125				
Strontium	92.0	0.996	49.82	41.45	102	75	125				
Zinc	68.1	0.996	49.82	15.48	106	75	125				

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32439

Sample ID: 19110969-001AMSD	SampType: MSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/4/2019	RunNo: 84297						
Client ID: H-14 0-2'	Batch ID: 32439	TestNo: SW6010B	SW3050B	Analysis Date: 12/5/2019	SeqNo: 2113424						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	45.3	1.84	45.96	3.399	91.2	75	125	52.15	14.0	20	
Barium	828	0.919	45.96	862.2	-74.2	75	125	874.7	5.47	20	S
Cadmium	41.9	0.460	45.96	0.2539	90.6	75	125	47.21	11.9	20	
Chromium	55.6	0.919	45.96	8.429	103	75	125	62.67	12.0	20	
Lead	52.5	0.919	45.96	10.26	91.9	75	125	58.21	10.3	20	
Strontium	84.2	0.919	45.96	41.45	93.0	75	125	92.03	8.90	20	
Zinc	60.8	0.919	45.96	15.48	98.6	75	125	68.10	11.4	20	

NOTES:

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32447

Sample ID: 19110969-002ADUP	SampType: DUP	TestCode: ESP_S	Units: %	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: H-14 4-6'	Batch ID: 32447	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112672						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %	15.1	0.10						14.41	4.67	20	*

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32448

Sample ID: 19110969-002ADUP	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: H-14 4-6'	Batch ID: 32448	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112658						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	33.3	0.100						34.83	4.61	20	

Sample ID: lcs-32448	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: LCSS	Batch ID: 32448	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112664						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	21.9	0.100	25.00	0	87.5	76	124				

Sample ID: lcsd-32448	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: LCSS02	Batch ID: 32448	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112665						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cation Exchange Capacity	21.6	0.100	25.00	0	86.6	76	124	21.88	1.10	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32449

Sample ID: 19110969-034ADUP	SampType: DUP	TestCode: ESP_S	Units: %	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: H-19 0-2'	Batch ID: 32449	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112618						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Exchangeable Sodium %	4.86	0.10						4.82	0.83	20	
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Sample ID: 19110969-028ADUP	SampType: DUP	TestCode: ESP_S	Units: %	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: H-18 0-4'	Batch ID: 32449	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112702						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Exchangeable Sodium %	17.6	0.10						17.56	0.45	20	*
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32450

Sample ID: 19110969-034ADUP	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: H-19 0-2'	Batch ID: 32450	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112610						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	24.9	0.100						25.46	2.38	20	
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Sample ID: 19110969-028ADUP	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: H-18 0-4'	Batch ID: 32450	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112688						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	34.4	0.100						34.39	0.174	20	
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Sample ID: lcs-32450	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: LCSS	Batch ID: 32450	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112690						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	21.6	0.100	25.00	0	86.4	76	124				
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Sample ID: lcsd-32450	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 12/4/2019	RunNo: 84286						
Client ID: LCSS02	Batch ID: 32450	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112691						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	21.5	0.100	25.00	0	86.2	76	124	21.61	0.324	20	
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32455

Sample ID: 19110969-002ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 12/4/2019	RunNo: 84271						
Client ID: H-14 4-6'	Batch ID: 32455	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112165						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	14.8	0.10						14.90	0.75	20	*
Soluble Calcium	5.29	0.02						5.33	0.66	20	
Soluble Magnesium	1.45	0.05						1.46	0.85	20	
Soluble Sodium	27.1	0.25						27.45	1.10	20	

Sample ID: 19110969-028ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 12/4/2019	RunNo: 84271						
Client ID: H-18 0-4'	Batch ID: 32455	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	14.5	0.10						14.61	0.55	20	*
Soluble Calcium	0.79	0.02						0.79	0	20	
Soluble Magnesium	0.45	0.05						0.45	0	20	
Soluble Sodium	11.4	0.25						11.52	0.61	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969

11-Dec-19

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 32456

Sample ID: 19110969-034ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 12/4/2019	RunNo: 84271						
Client ID: H-19 0-2'	Batch ID: 32456	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112198						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	5.77	0.10						5.78	0.17	20	
Soluble Calcium	2.26	0.02						2.25	0.44	20	
Soluble Magnesium	0.92	0.05						0.92	0	20	
Soluble Sodium	7.29	0.25						7.29	0	20	

Sample ID: 19111133-001ADUP	SampType: DUP	TestCode: SAR_S	Units:	Prep Date: 12/4/2019	RunNo: 84271						
Client ID: ZZZZZ	Batch ID: 32456	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 12/5/2019	SeqNo: 2112563						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio	6.46	0.10						6.41	0.77	20	
Soluble Calcium	21.3	0.02						21.14	0.92	20	
Soluble Magnesium	5.85	0.05						5.76	1.50	20	
Soluble Sodium	23.8	0.25						23.52	1.29	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32491

Sample ID: MB-32491	SampType: MBLK	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84391
Client ID: PBS	Batch ID: 32491	TestNo: LDNR 29-B		Analysis Date: 12/9/2019	SeqNo: 2116057
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium < 50.0 50.0

Sample ID: LCS-32491	SampType: LCS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84391
Client ID: LCSS	Batch ID: 32491	TestNo: LDNR 29-B		Analysis Date: 12/9/2019	SeqNo: 2116058
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,840 50.0 5,000 0 96.7 75 125

Sample ID: LCSD-32491	SampType: LCSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84391
Client ID: LCSS02	Batch ID: 32491	TestNo: LDNR 29-B		Analysis Date: 12/9/2019	SeqNo: 2116059
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 5,100 50.0 5,000 0 102 75 125 4,836 5.31 20

Sample ID: 19110969-021AMS	SampType: MS	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84391
Client ID: H-17 4-6'	Batch ID: 32491	TestNo: LDNR 29-B		Analysis Date: 12/9/2019	SeqNo: 2116063
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

True Total Barium 4,980 46.5 4,647 213.3 103 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32491

Sample ID: 19110969-021AMSD	SampType: MSD	TestCode: TTBA	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84391						
Client ID: H-17 4-6'	Batch ID: 32491	TestNo: LDNR 29-B		Analysis Date: 12/9/2019	SeqNo: 2116064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium	4,870	46.5	4,651	213.3	100	75	125	4,977	2.08	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32492

Sample ID: MB-32492	SampType: MBLK	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84375						
Client ID: PBS	Batch ID: 32492	TestNo: SW6010B SW3050B		Analysis Date: 12/9/2019	SeqNo: 2115545						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID: LCS-32492	SampType: LCS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84375						
Client ID: LCSS	Batch ID: 32492	TestNo: SW6010B SW3050B		Analysis Date: 12/9/2019	SeqNo: 2115546						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.6	2.00	50.00	0	101	80	120				
Barium	49.8	1.00	50.00	0	99.6	80	120				
Cadmium	48.8	0.500	50.00	0	97.7	80	120				
Chromium	49.7	1.00	50.00	0	99.4	80	120				
Lead	49.1	1.00	50.00	0	98.1	80	120				
Strontium	50.3	1.00	50.00	0	101	80	120				
Zinc	49.6	1.00	50.00	0	99.2	80	120				

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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) 233-6546
 Website: www.element.com

QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32492

Sample ID: LCSD-32492	SampType: LCSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84375						
Client ID: LCSS02	Batch ID: 32492	TestNo: SW6010B	SW3050B	Analysis Date: 12/9/2019	SeqNo: 2115547						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.6	2.00	50.00	0	101	80	120	50.57	0.0396	20	
Barium	49.8	1.00	50.00	0	99.5	80	120	49.82	0.121	20	
Cadmium	48.8	0.500	50.00	0	97.6	80	120	48.85	0.123	20	
Chromium	49.6	1.00	50.00	0	99.3	80	120	49.69	0.121	20	
Lead	49.1	1.00	50.00	0	98.1	80	120	49.07	0	20	
Strontium	50.3	1.00	50.00	0	101	80	120	50.25	0.0597	20	
Zinc	49.4	1.00	50.00	0	98.9	80	120	49.58	0.303	20	

Sample ID: 19110969-035AMS	SampType: MS	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84375						
Client ID: H-19 4-6'	Batch ID: 32492	TestNo: SW6010B	SW3050B	Analysis Date: 12/9/2019	SeqNo: 2115552						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.2	1.90	47.43	6.943	87.0	75	125				
Barium	210	0.949	47.43	143.9	140	75	125				S
Cadmium	41.1	0.474	47.43	0.1887	86.3	75	125				
Chromium	58.8	0.949	47.43	9.576	104	75	125				
Lead	53.6	0.949	47.43	12.25	87.3	75	125				
Strontium	70.2	0.949	47.43	25.05	95.2	75	125				
Zinc	68.1	0.949	47.43	18.85	104	75	125				

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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 Website: www.element.com

QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32492

Sample ID: 19110969-035AMSD	SampType: MSD	TestCode: 6010_S_29B	Units: mg/Kg-dry	Prep Date: 12/6/2019	RunNo: 84375						
Client ID: H-19 4-6'	Batch ID: 32492	TestNo: SW6010B	SW3050B	Analysis Date: 12/9/2019	SeqNo: 2115553						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.4	1.86	46.39	6.943	95.9	75	125	48.19	6.45	20	
Barium	194	0.928	46.39	143.9	108	75	125	210.2	7.99	20	
Cadmium	43.3	0.464	46.39	0.1887	92.9	75	125	41.13	5.08	20	
Chromium	60.9	0.928	46.39	9.576	111	75	125	58.81	3.43	20	
Lead	55.3	0.928	46.39	12.25	92.8	75	125	53.64	3.05	20	
Strontium	71.9	0.928	46.39	25.05	101	75	125	70.20	2.40	20	
Zinc	69.8	0.928	46.39	18.85	110	75	125	68.06	2.54	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32503

Sample ID: MB-32503	SampType: MBLK	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/9/2019	RunNo: 84369
Client ID: PBS	Batch ID: 32503	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/9/2019	SeqNo: 2115328
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury < 0.100 0.100

Sample ID: LCS-32503	SampType: LCS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/9/2019	RunNo: 84369
Client ID: LCSS	Batch ID: 32503	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/9/2019	SeqNo: 2115329
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury 0.942 0.100 0.8330 0 113 80 120

Sample ID: LCSD-32503	SampType: LCSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/9/2019	RunNo: 84369
Client ID: LCSS02	Batch ID: 32503	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/9/2019	SeqNo: 2115330
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury 0.943 0.100 0.8330 0 113 80 120 0.9420 0.0901 20

Sample ID: 19110969-013AMS	SampType: MS	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/9/2019	RunNo: 84369
Client ID: H-16 0-2'	Batch ID: 32503	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/9/2019	SeqNo: 2115333
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury 1.08 0.108 0.8970 0.1502 104 75 125

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 32503

Sample ID: 19110969-013AMSD	SampType: MSD	TestCode: HG_S_29B	Units: mg/Kg-dry	Prep Date: 12/9/2019	RunNo: 84369						
Client ID: H-16 0-2'	Batch ID: 32503	TestNo: 29B/SW7471 SW7471A		Analysis Date: 12/9/2019	SeqNo: 2115334						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.09	0.108	0.9001	0.1502	104	75	125	1.081	0.554	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84166

Sample ID: 19110969-002ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 84166						
Client ID: H-14 4-6'	Batch ID: R84166	TestNo: LDNR 29-B		Analysis Date: 11/25/2019	SeqNo: 2108976						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.5	1.00						17.50	0	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84167

Sample ID: 19110969-028ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 84167						
Client ID: H-18 0-4'	Batch ID: R84167	TestNo: LDNR 29-B		Analysis Date: 11/25/2019	SeqNo: 2109003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	18.6	1.00						18.50	0.54	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84168

Sample ID: 19110969-034ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 84168						
Client ID: H-19 0-2'	Batch ID: R84168	TestNo: LDNR 29-B		Analysis Date: 11/25/2019	SeqNo: 2109010						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.3	1.00						16.00	7.81	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84194

Sample ID: MB-R84194	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84194						
Client ID: PBS	Batch ID: R84194	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2109966						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity < 0.10 0.10

Sample ID: LCS1-R84194	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84194						
Client ID: ZZZZZ	Batch ID: R84194	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2109967						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 0.38 0.10 0.38 0 99.2 90.07 109.9

Sample ID: LCS2-R84194	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84194						
Client ID: ZZZZZ	Batch ID: R84194	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2109968						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 48.5 0.10 53.00 0 91.5 90 110

Sample ID: 19110969-002ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84194						
Client ID: H-14 4-6'	Batch ID: R84194	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2109982						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 4.22 0.10 4.48 5.98 20 *

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969

11-Dec-19

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: R84195

Sample ID: MB-R84195	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84195						
Client ID: PBS	Batch ID: R84195	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2109992						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity < 0.10 0.10

Sample ID: LCS1-R84195	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84195						
Client ID: ZZZZZ	Batch ID: R84195	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2109993						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 0.36 0.10 0.38 0 95.3 90.07 109.9

Sample ID: LCS2-R84195	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84195						
Client ID: ZZZZZ	Batch ID: R84195	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2109994						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 54.0 0.10 53.00 0 102 90 110

Sample ID: 19110969-028ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84195						
Client ID: H-18 0-4'	Batch ID: R84195	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 1.66 0.10 1.64 1.27 20

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84196

Sample ID: MB-R84196	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84196						
Client ID: PBS	Batch ID: R84196	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110018						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity < 0.10 0.10

Sample ID: LCS1-R84196	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84196						
Client ID: ZZZZZ	Batch ID: R84196	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110019						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 0.37 0.10 0.38 0 97.4 90.07 109.9

Sample ID: LCS2-R84196	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84196						
Client ID: ZZZZZ	Batch ID: R84196	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110020						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 53.6 0.10 53.00 0 101 90 110

Sample ID: 19110969-034ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 84196						
Client ID: H-19 0-2'	Batch ID: R84196	TestNo: LDNR 29-B		Analysis Date: 12/3/2019	SeqNo: 2110026						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Electrical Conductivity 1.36 0.10 1.34 1.63 20

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84366

Sample ID: MBLK	SampType: MBLK	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84366						
Client ID: PBW	Batch ID: R84366	TestNo: SW9056A		Analysis Date: 12/9/2019	SeqNo: 2115263						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride < 0.250 0.250

Sample ID: LCS	SampType: LCS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84366						
Client ID: LCSW	Batch ID: R84366	TestNo: SW9056A		Analysis Date: 12/9/2019	SeqNo: 2115264						
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 80 120

Sample ID: LCSD	SampType: LCSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84366						
Client ID: LCSS02	Batch ID: R84366	TestNo: SW9056A		Analysis Date: 12/9/2019	SeqNo: 2115265						
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 80 120 10.10 0.557 15

Sample ID: 19120207-004BMS	SampType: MS	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84366						
Client ID: ZZZZZ	Batch ID: R84366	TestNo: SW9056A		Analysis Date: 12/9/2019	SeqNo: 2115267						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 539 25.0 500.0 58.68 96.1 80 120

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 19110969
 11-Dec-19

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R84366

Sample ID: 19120207-004BMSD	SampType: MSD	TestCode: 9056_LEACH	Units: mg/L	Prep Date:	RunNo: 84366						
Client ID: ZZZZZZ	Batch ID: R84366	TestNo: SW9056A		Analysis Date: 12/9/2019	SeqNo: 2115268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	538	25.0	500.0	58.68	95.8	80	120	539.2	0.244	15	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	H Holding times for preparation or analysis exceed
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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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **19110969**

RcptNo: **1**

Logged by:	Danielle Hollier	11/22/2019 3:40:00 PM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	11/22/2019 5:01:14 PM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	11/26/2019 2:58:12 PM	<i>Caitlin Duplantis</i>

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:
 Improper error correction(s) made by client

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Not Present			



element™

Chain of Custody

Laboratory Number: 19110969

Company Name:
Contact Name:
Address:
City, State Zip:
Phone Number:
Fax Number:
E-mail Address:

Client Information:
ICON Environmental
Jason Sills
2049 Commercial Dr.
Port Allen, LA 70767
225.344.8490
jsills@iconenv.com

Billing Information:
Att: Robin Gremillion
SAME

PO Number:
Quote Number:
Required QC Level:
Bill Monthly
 Yes
 No

Project Name/Number:
Henning II
9403-010-0100
Sampler's Signature
Kate C.
Shipping Method:
UPS / FedEx / NOW
DHL / Element Hand Mail

Page 1 of 5
Matrix Code
DW = Drinking Water
WW = Waste Water
GW = Ground Water
AQ = Aqueous
OT = Other
SL = Sludge SOL = Solid
O = Oil SO = Soil
F = Food SW = Swab
NG = Natural Gas
NGL = Natural Gas Liquid
PW = Produced Water
CF = Completion Fluid

Which Regulations Apply:		Turn Time		Collection Information	Matrix	Container		Pres.	Requested Tests					Comments
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> RUSH			Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	% Moisture	29 B Metals	CEC/ESP/SAR	TPH D ₅₀	
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	<input type="checkbox"/> 1 Day		Date		P=Plastic, G=Glass, V=Vial								Metals As, Ba, TTBa, Cd, Cr, Sr, Zn Hg, Pb
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> 2 Day		Time	Grab / Composite									
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State	<input type="checkbox"/> Other												
<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other													

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Kate C.	11.22.19 / 1345	_____	11-22-19 / 1345	
2	_____		_____		Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 12°C
3	_____	11-22-19 / 1540	_____	11-22-19 / 1540	

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F 812-375-0731

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Warsaw, IN
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Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540



element™

Chain of Custody

Laboratory Number: 19110969

Company Name:
Contact Name:
Address:
City, State Zip:
Phone Number:
Fax Number:
E-mail Address:

Client Information:

Address: ICON

Ext: _____

Billing Information:

Address: GAME

Ext: _____

PO Number: _____

Quote Number: _____

Required QC Level: _____

Bill Monthly
 Yes
 No

Project Name/Number:
Henning II
9403-010-0100

Sampler's Signature:
Kathleen

Shipping Method:
UPS / FedEx / NOW
DHL / Element (Hand) Mail

Page 2 of 5

Matrix Code

DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge SOL = Solid
 O = Oil SO = Soil
 F = Food SW = Swab
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Which Regulations Apply:		Turn Time		(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests						Comments	
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> RUSH		Quantity	Type P=Plastic, G=Glass, V=Vial	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	Moisture	29 B Metals	CFC/ESP/SAR	TPH D ₉₀	Leachate Cl-		
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	<input type="checkbox"/> 1 Day	<input type="checkbox"/> 2 Day												
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> Other													
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State														
<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other														
Sample ID/Description		Collection Information			Matrix	Quantity	Type	Pres.	EC	Moisture	29 B Metals	CFC/ESP/SAR	TPH D ₉₀	Leachate Cl-	Comments
H-15	10-12'	11.19.19	1130	G	SO	2	P,G	---	X	X	X	X	X		<u>Metals</u> <u>See page 1</u>
H-15	12-14'	11.19.19	1135	G	SO	2	P,G	---	X	X			X		
H-15	38-40'	11.19.19	1240	G	SO	1	P	---	X	X					
H-16	0-2'	11.20.19	0825	G	SO	1	P		X	X	X	X			
H-16	4-6'	11.20.19	0835	G	SO	1	P		X	X	X	X			
H-16	10-12'	11.20.19	0850	G	SO	2	P,G		X	X	X	X	X		
H-16	14-16'	11.20.19	0900	G	SO	2	P,G		X	X			X		
H-16	16-18'	11.20.19	0905	G	SO	1	P		X	X					
H-16	34-36'	11.20.19	0950	G	SO	1	P		X	X			X		

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<u>Kathleen</u>	11.22.19/1345	<u>[Signature]</u>	11-22-19/1345	
2					Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: <u>1.2°C</u>
3	<u>[Signature]</u>	11-22-19/1540	<u>[Signature]</u>	11-22-19/1540	

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Chain of Custody

Laboratory Number: | 9110969

Page 3 of 5

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number: Henning II 9403-010-0100		Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
					Quote Number:	Sampler's Signature Kathleen		
	ICON		SAME		Required QC Level:			
	Ext:		Ext:		Bill Monthly	Shipping Method: UPS / FedEx / NOW DHL / Element / Hand / Mail		
					<input type="checkbox"/> Yes			
					<input type="checkbox"/> No			

Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> Drinking Water <input type="checkbox"/> POTW <input type="checkbox"/> Distribution <input type="checkbox"/> NPDES <input type="checkbox"/> Special <input type="checkbox"/> USDA/FDA <input type="checkbox"/> State <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Other	Turn Time <input checked="" type="checkbox"/> Standard RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)		Container		Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests					Comments		
				Quantity	Type P=Plastic, G=Glass, V=Vial		EC	90 Moisture	29 B Metals	CEC/ESP/SAR	TPH D90			
Collection Information		Date	Time	Grab / Composite	Matrix									
Sample ID/Description														
H-16 38-40'		11.20.19	1000	G	SO	1	P	—	X	X				Metals See page 1
H-17 0-2'		11.20.19	1410	G	SO	1	P	—	X	X	X	X		
H-17 4-6'		11.20.19	1420	G	SO	1	G	—	X	X	X	X	X	
H-17 8-10'		11.20.19	14 30 ³⁰	G	SO	2	GP	—	X	X	X	X	X	
H-17 10-12'		11.20.19	14 30 ³⁰	G	SO	2	P/G	—	X	X	X	X	X	
H-17 12-14'		11.20.19	14 30 ⁴⁰	G	SO	2	P/G	—	X	X			X	
H-17 14-16'		11.20.19	1445	G	SO	2	P/G	—	X	X			X	
H-17 38-40'		11.20.19	1540	G	SO	1	P	—	X	X				
H-17 6-8'		11.20.19	1425	G	SO	1	G	—	X	X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Kathleen	11.22.19/1345	[Signature]	11-22-19/1345	Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 1.2°C
2	[Signature]		[Signature]		
3	[Signature]	11-22-19/1510	[Signature]	11-22-19/1510	

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Chain of Custody

Laboratory Number: 19110969

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Client Information:	Billing Information:	PO Number:	Project Name/Number:	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
Company Name:		Quote Number:	Henning II 9403-010-0100	
Contact Name:		Required QC Level:	Sampler's Signature Kath C.	
Address:		Bill Monthly:	Shipping Method:	
City, State Zip:	ICON	SAME	UPS / FedEx / NOW DHL / Element / <u>Hand</u> / Mail	
Phone Number:	Ext:	Ext:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Fax Number:				
E-mail Address:				

Which Regulations Apply:	Turn Time	Collection Information	Container	Pres.	Requested Tests						Comments	
					Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EL	90 Moisture	CEC/ESP/SAR		29 B Metals
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.) Date: Time: Grab / Composite: Matrix:	<input type="checkbox"/> P=Plastic, G=Glass, V=Vial	<input type="checkbox"/> HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	<input type="checkbox"/> EL	<input type="checkbox"/> 90 Moisture	<input type="checkbox"/> CEC/ESP/SAR	<input type="checkbox"/> 29 B Metals	<input type="checkbox"/> Leachate C1-			
H-18	0-4'	11.21.19 0930	G	SO	1	P	—	X	X	X	X	
H-18	4-6'	11.21.19 0935	G	SO	1	P	—	X	X	X	X	
H-18	8-10'	11.21.19 0945	G	SO	1	P	—	X	X	X	X	
H-18	14-16'	11.21.19 1000	G	SO	1	P	—	X	X			
H-18	42-44'	11.21.19 1110	G	SO	1	P	—	X	X		X	
H-18	58-60'	11.21.19 1150	G	SO	1	P	—	X	X			
H-19	0-2'	11.22.19 0745	G	SO	1	P	—	X	X	X	X	
H-19	4-6'	11.22.19 0750	G	SO	1	P	—	X	X	X	X	
H-19	8-10'	11.22.19 0800	G	SO	1	P	—	X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Kath C.	11.22.19/1345		11-22-19/1345	
2					Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 1.2°C
3		11-22-19/1510		11-22-19/1510	

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Chain of Custody

Laboratory Number: 19110969

Page 5 of 5

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:		Billing Information:		PO Number:	Project Name/Number:		Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
					Quote Number:	Henning II 9403-010-0100		
	ICON		SAME		Required QC Level	Sampler's Signature Katr C		
					Bill Monthly	Shipping Method:		
	Ext:		Ext:		<input type="checkbox"/> Yes	UPS / FedEx / NOW		
					<input type="checkbox"/> No	DHL / Element / <u>Hand</u> / Mail		

Which Regulations Apply:		Turn Time		Collection Information	Matrix	Container		Pres.	Requested Tests										Comments			
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> RUSH			Date	Time		Grab / Composite	Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Ec	Moisture								
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	<input type="checkbox"/> 1 Day					1	P		X	X											
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> 2 Day																				
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State	<input type="checkbox"/> Other																				
<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other																					

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	Katr C.	11.22.19/1345	[Signature]	11-22-19/1345	
2					Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 1.2
3	[Signature]	11-22-19/1540	[Signature]	11-22-19/1540	

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

March 20, 2020

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX: (225) 344-6654

RE: Henning 9403-010-0100

Order No.: 20030314

Dear Greg Miller:

Element Materials Technology Lafayette received 9 sample(s) on 3/6/2020 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.

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 that reads '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#: 20030314
Date: 3/20/2020

CLIENT: ICON Environmental Services
Project: Henning 9403-010-0100

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.

Exception: TPH 8015 Diesel/Oil Range Organics (DRO/ORO): The sample volume submitted for client sample "H-16" (Lab ID: 20030314-005) was broken during internal transport before the 8015 DRO/ORO extraction could be completed. The client was notified on 3/10/2020 and the lab was instructed to pull volume from the plastic TDS bottle to satisfy the analytical requirements. At the time of instruction, the client was notified of the improper containers for the 8015 extraction and the lab was authorized to proceed.

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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/5/2020 11:05:00 AM
Project: Henning 9403-010-0100
Lab ID: 20030314-001 **Matrix:** AQUEOUS
Client Sample ID H-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: AB
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.127	0.127		mg/L	1	3/8/2020 9:22:00 AM
TPH (Oil Range)	< 0.118	0.118		mg/L	1	3/8/2020 9:22:00 AM
Surr: 4-Terphenyl-d14	57.1	51.4 - 146		%Rec	1	3/8/2020 9:22:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: AB
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	0.209	0.150		mg/L	1	3/11/2020 8:45:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	98.2	70 - 130		%Rec	1	3/11/2020 8:45:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: AB
BTEX IN WATER BY SW8021						
Benzene	0.0700	0.00500		mg/L	1	3/11/2020 8:45:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/11/2020 8:45:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/11/2020 8:45:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/11/2020 8:45:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/11/2020 8:45:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/11/2020 8:45:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	93.4	70 - 130		%Rec	1	3/11/2020 8:45:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:06:51 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	39,200	500		mg/L	2000	3/13/2020 9:53:31 AM
Sulfate	56.4	50.0		mg/L	200	3/13/2020 8:44:38 AM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Arsenic	< 0.100	0.100		mg/L	10	3/18/2020 5:50:44 PM
Barium	2.11	0.100		mg/L	10	3/18/2020 5:50:44 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/5/2020 11:05:00 AM
Project: Henning 9403-010-0100
Lab ID: 20030314-001 **Matrix:** AQUEOUS
Client Sample ID H-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Cadmium	< 0.0500	0.0500		mg/L	10	3/18/2020 5:50:44 PM
Calcium	1,830	50.0		mg/L	100	3/18/2020 6:04:13 PM
Chromium	< 0.100	0.100		mg/L	10	3/18/2020 5:50:44 PM
Iron	6.93	0.100		mg/L	10	3/18/2020 5:50:44 PM
Lead	< 0.100	0.100		mg/L	10	3/18/2020 5:50:44 PM
Magnesium	558	5.00		mg/L	10	3/18/2020 5:50:44 PM
Manganese	14.4	1.00		mg/L	100	3/18/2020 6:04:13 PM
Potassium	58.7	50.0		mg/L	10	3/18/2020 5:50:44 PM
Sodium	17,800	500		mg/L	100	3/18/2020 6:04:13 PM
Strontium	46.3	1.00		mg/L	100	3/18/2020 6:04:13 PM
Zinc	< 0.100	0.100		mg/L	10	3/18/2020 5:50:44 PM

NOTES:

Note: Sample was analyzed at a dilution due to matrix interference. The reporting limit was raised accordingly.

ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: BXB
Alkalinity, Bicarbonate (As CaCO3)	295	10.0		mgCaCO3/L	1	3/10/2020 7:40:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:40:00 AM
Alkalinity, Total (As CaCO3)	295	10.0		mgCaCO3/L	1	3/10/2020 7:40:00 AM

TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	63,600	4,000		mg/L	200	3/9/2020 9:12:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/5/2020 1:35:00 PM
Project: Henning 9403-010-0100
Lab ID: 20030314-002 **Matrix:** AQUEOUS
Client Sample ID H-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: AB
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.133	0.133		mg/L	1	3/12/2020 4:28:00 AM
TPH (Oil Range)	< 0.123	0.123		mg/L	1	3/12/2020 4:28:00 AM
Surr: 4-Terphenyl-d14	105	51.4 - 146		%Rec	1	3/12/2020 4:28:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: AB
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/11/2020 9:12:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	98.6	70 - 130		%Rec	1	3/11/2020 9:12:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: AB
BTEX IN WATER BY SW8021						
Benzene	0.0119	0.00500		mg/L	1	3/11/2020 9:12:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/11/2020 9:12:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/11/2020 9:12:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/11/2020 9:12:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/11/2020 9:12:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/11/2020 9:12:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	95.4	70 - 130		%Rec	1	3/11/2020 9:12:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:24:58 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	22,300	250		mg/L	1000	3/12/2020 11:54:13 AM
Sulfate	472	250		mg/L	1000	3/12/2020 11:54:13 AM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Arsenic	< 0.100	0.100		mg/L	10	3/18/2020 6:45:51 PM
Barium	0.257	0.0100		mg/L	1	3/18/2020 6:41:53 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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
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Analytical Report

(consolidated)

WO#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/5/2020 1:35:00 PM

Project: Henning 9403-010-0100

Lab ID: 20030314-002

Matrix: AQUEOUS

Client Sample ID H-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER				SW6010B	Analyst: STS	
METALS IN WATER BY ICP, TOTALS						
Cadmium	< 0.00500	0.00500		mg/L	1	3/18/2020 6:41:53 PM
Calcium	2,650	5.00		mg/L	10	3/18/2020 6:45:51 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/18/2020 6:41:53 PM
Iron	5.53	0.100		mg/L	10	3/18/2020 6:45:51 PM
Lead	< 0.0100	0.0100		mg/L	1	3/18/2020 6:41:53 PM
Magnesium	1,030	5.00		mg/L	10	3/18/2020 6:45:51 PM
Manganese	14.6	0.100		mg/L	10	3/18/2020 6:45:51 PM
Potassium	37.3	5.00		mg/L	1	3/18/2020 6:41:53 PM
Sodium	7,390	50.0		mg/L	10	3/18/2020 6:45:51 PM
Strontium	20.2	0.100		mg/L	10	3/18/2020 6:45:51 PM
Zinc	< 0.0100	0.0100		mg/L	1	3/18/2020 6:41:53 PM

ALKALINITY; TOTAL, CARB, BICARB				SM2320 B	Analyst: BXB	
Alkalinity, Bicarbonate (As CaCO3)	258	10.0		mgCaCO3/L	1	3/10/2020 7:40:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:40:00 AM
Alkalinity, Total (As CaCO3)	258	10.0		mgCaCO3/L	1	3/10/2020 7:40:00 AM

TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	32,700	2,000		mg/L	100	3/9/2020 9:12:00 AM

Qualifiers:						
B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/5/2020 3:30:00 PM
Project: Henning 9403-010-0100
Lab ID: 20030314-003 **Matrix:** AQUEOUS
Client Sample ID H-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: AB
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.138	0.138		mg/L	1	3/12/2020 4:58:00 AM
TPH (Oil Range)	< 0.127	0.127		mg/L	1	3/12/2020 4:58:00 AM
Surr: 4-Terphenyl-d14	107	51.4 - 146		%Rec	1	3/12/2020 4:58:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: AB
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/11/2020 9:39:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	98.6	70 - 130		%Rec	1	3/11/2020 9:39:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: AB
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	3/11/2020 9:39:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/11/2020 9:39:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/11/2020 9:39:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/11/2020 9:39:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/11/2020 9:39:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/11/2020 9:39:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	94.8	70 - 130		%Rec	1	3/11/2020 9:39:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:27:17 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	1,200	25.0		mg/L	100	3/12/2020 12:07:56 PM
Sulfate	906	25.0		mg/L	100	3/12/2020 12:07:56 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Arsenic	< 0.0100	0.0100		mg/L	1	3/18/2020 6:50:34 PM
Barium	0.0279	0.0100		mg/L	1	3/18/2020 6:50:34 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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
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Analytical Report

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WO#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/5/2020 3:30:00 PM

Project: Henning 9403-010-0100

Lab ID: 20030314-003

Matrix: AQUEOUS

Client Sample ID H-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER				SW6010B	Analyst: STS	
METALS IN WATER BY ICP, TOTALS						
Cadmium	< 0.00500	0.00500		mg/L	1	3/18/2020 6:50:34 PM
Calcium	432	5.00		mg/L	10	3/18/2020 6:54:37 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/18/2020 6:50:34 PM
Iron	0.902	0.0100		mg/L	1	3/18/2020 6:50:34 PM
Lead	< 0.0100	0.0100		mg/L	1	3/18/2020 6:50:34 PM
Magnesium	189	5.00		mg/L	10	3/18/2020 6:54:37 PM
Manganese	1.32	0.100		mg/L	10	3/18/2020 6:54:37 PM
Potassium	6.19	5.00		mg/L	1	3/18/2020 6:50:34 PM
Sodium	360	50.0		mg/L	10	3/18/2020 6:54:37 PM
Strontium	2.31	0.100		mg/L	10	3/18/2020 6:54:37 PM
Zinc	< 0.0100	0.0100		mg/L	1	3/18/2020 6:50:34 PM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B	Analyst: BXB	
Alkalinity, Bicarbonate (As CaCO3)	262	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Total (As CaCO3)	262	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	3,320	200		mg/L	10	3/9/2020 9:12:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

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WO#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/5/2020 4:55:00 PM
Project: Henning 9403-010-0100
Lab ID: 20030314-004 **Matrix:** AQUEOUS
Client Sample ID H-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015						
TPH DRO/ORO IN WATER BY SW8015						
TPH (Diesel Range)	< 0.134	0.134		mg/L	1	3/12/2020 5:28:00 AM
TPH (Oil Range)	< 0.123	0.123		mg/L	1	3/12/2020 5:28:00 AM
Surr: 4-Terphenyl-d14	111	51.4 - 146		%Rec	1	3/12/2020 5:28:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015						
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/11/2020 10:06:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	101	70 - 130		%Rec	1	3/11/2020 10:06:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015						
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	3/11/2020 10:06:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/11/2020 10:06:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/11/2020 10:06:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/11/2020 10:06:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/11/2020 10:06:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/11/2020 10:06:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	95.2	70 - 130		%Rec	1	3/11/2020 10:06:00 PM
METALS IN GROUND WATER						
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:29:35 PM
INORGANIC ANIONS IN WATER BY IC						
Chloride	1,220	25.0		mg/L	100	3/12/2020 12:21:40 PM
Sulfate	668	25.0		mg/L	100	3/12/2020 12:21:40 PM
METALS IN GROUND WATER						
METALS IN WATER BY ICP, TOTALS						
Arsenic	< 0.0100	0.0100		mg/L	1	3/18/2020 6:58:49 PM
Barium	0.0234	0.0100		mg/L	1	3/18/2020 6:58:49 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/5/2020 4:55:00 PM

Project: Henning 9403-010-0100

Lab ID: 20030314-004

Matrix: AQUEOUS

Client Sample ID H-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Cadmium	< 0.00500	0.00500		mg/L	1	3/18/2020 6:58:49 PM
Calcium	330	5.00		mg/L	10	3/18/2020 7:03:32 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/18/2020 6:58:49 PM
Iron	0.104	0.0100		mg/L	1	3/18/2020 6:58:49 PM
Lead	< 0.0100	0.0100		mg/L	1	3/18/2020 6:58:49 PM
Magnesium	137	5.00		mg/L	10	3/18/2020 7:03:32 PM
Manganese	1.13	0.100		mg/L	10	3/18/2020 7:03:32 PM
Potassium	6.22	5.00		mg/L	1	3/18/2020 6:58:49 PM
Sodium	478	50.0		mg/L	10	3/18/2020 7:03:32 PM
Strontium	1.72	0.100		mg/L	10	3/18/2020 7:03:32 PM
Zinc	< 0.0100	0.0100		mg/L	1	3/18/2020 6:58:49 PM

ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: BXB
Alkalinity, Bicarbonate (As CaCO3)	292	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Total (As CaCO3)	292	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM

TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	3,230	200		mg/L	10	3/9/2020 9:12:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/6/2020 8:15:00 AM
Project: Henning 9403-010-0100
Lab ID: 20030314-005 **Matrix:** AQUEOUS
Client Sample ID H-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: AB
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.415	0.129		mg/L	1	3/12/2020 5:58:00 AM
TPH (Oil Range)	0.156	0.119		mg/L	1	3/12/2020 5:58:00 AM
Surr: 4-Terphenyl-d14	111	51.4 - 146		%Rec	1	3/12/2020 5:58:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: AB
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/11/2020 10:33:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	98.6	70 - 130		%Rec	1	3/11/2020 10:33:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: AB
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	3/11/2020 10:33:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/11/2020 10:33:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/11/2020 10:33:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/11/2020 10:33:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/11/2020 10:33:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/11/2020 10:33:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	94.8	70 - 130		%Rec	1	3/11/2020 10:33:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:31:52 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	11,900	125		mg/L	500	3/12/2020 12:35:24 PM
Sulfate	585	125		mg/L	500	3/12/2020 12:35:24 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Arsenic	< 0.0100	0.0100		mg/L	1	3/18/2020 7:07:45 PM
Barium	0.102	0.0100		mg/L	1	3/18/2020 7:07:45 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/6/2020 8:15:00 AM

Project: Henning 9403-010-0100

Lab ID: 20030314-005

Matrix: AQUEOUS

Client Sample ID H-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER				SW6010B	Analyst: STS	
METALS IN WATER BY ICP, TOTALS						
Cadmium	0.00750	0.00500		mg/L	1	3/18/2020 7:07:45 PM
Calcium	2,210	50.0		mg/L	100	3/18/2020 7:25:45 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/18/2020 7:07:45 PM
Iron	0.435	0.0100		mg/L	1	3/18/2020 7:07:45 PM
Lead	< 0.0100	0.0100		mg/L	1	3/18/2020 7:07:45 PM
Magnesium	744	5.00		mg/L	10	3/18/2020 7:12:07 PM
Manganese	8.96	0.100		mg/L	10	3/18/2020 7:12:07 PM
Potassium	22.4	5.00		mg/L	1	3/18/2020 7:07:45 PM
Sodium	3,140	500		mg/L	100	3/18/2020 7:25:45 PM
Strontium	28.4	1.00		mg/L	100	3/18/2020 7:25:45 PM
Zinc	< 0.0100	0.0100		mg/L	1	3/18/2020 7:07:45 PM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B	Analyst: BXB	
Alkalinity, Bicarbonate (As CaCO3)	265	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Total (As CaCO3)	265	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	24,900	2,000		mg/L	100	3/9/2020 9:12:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

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WO#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/6/2020 9:50:00 AM
Project: Henning 9403-010-0100
Lab ID: 20030314-006 **Matrix:** AQUEOUS
Client Sample ID H-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: AB
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.130	0.130		mg/L	1	3/8/2020 11:23:00 AM
TPH (Oil Range)	< 0.120	0.120		mg/L	1	3/8/2020 11:23:00 AM
Surr: 4-Terphenyl-d14	105	51.4 - 146		%Rec	1	3/8/2020 11:23:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: AB
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/11/2020 11:00:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	100	70 - 130		%Rec	1	3/11/2020 11:00:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: AB
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	3/11/2020 11:00:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/11/2020 11:00:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/11/2020 11:00:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/11/2020 11:00:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/11/2020 11:00:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/11/2020 11:00:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	97.4	70 - 130		%Rec	1	3/11/2020 11:00:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:34:11 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	3,650	50.0		mg/L	200	3/12/2020 12:49:07 PM
Sulfate	372	50.0		mg/L	200	3/12/2020 12:49:07 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Arsenic	< 0.0100	0.0100		mg/L	1	3/18/2020 7:39:16 PM
Barium	0.0707	0.0100		mg/L	1	3/18/2020 7:39:16 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/6/2020 9:50:00 AM

Project: Henning 9403-010-0100

Lab ID: 20030314-006

Matrix: AQUEOUS

Client Sample ID H-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Cadmium	0.00730	0.00500		mg/L	1	3/18/2020 7:39:16 PM
Calcium	749	5.00		mg/L	10	3/18/2020 7:30:20 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/18/2020 7:39:16 PM
Iron	0.111	0.0100		mg/L	1	3/18/2020 7:39:16 PM
Lead	< 0.0100	0.0100		mg/L	1	3/18/2020 7:39:16 PM
Magnesium	364	5.00		mg/L	10	3/18/2020 7:30:20 PM
Manganese	4.94	0.100		mg/L	10	3/18/2020 7:30:20 PM
Potassium	11.0	5.00		mg/L	1	3/18/2020 7:39:16 PM
Sodium	813	50.0		mg/L	10	3/18/2020 7:30:20 PM
Strontium	4.50	0.100		mg/L	10	3/18/2020 7:30:20 PM
Zinc	< 0.0100	0.0100		mg/L	1	3/18/2020 7:39:16 PM

ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: BXB
Alkalinity, Bicarbonate (As CaCO3)	245	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Total (As CaCO3)	245	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM

TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	7,600	500		mg/L	25	3/9/2020 9:12:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/6/2020 11:10:00 AM
Project: Henning 9403-010-0100
Lab ID: 20030314-007 **Matrix:** AQUEOUS
Client Sample ID H-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: AB
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.130	0.130		mg/L	1	3/8/2020 11:54:00 AM
TPH (Oil Range)	< 0.120	0.120		mg/L	1	3/8/2020 11:54:00 AM
Surr: 4-Terphenyl-d14	109	51.4 - 146		%Rec	1	3/8/2020 11:54:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: AB
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/12/2020 11:27:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	100	70 - 130		%Rec	1	3/12/2020 11:27:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: AB
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	3/12/2020 11:27:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/12/2020 11:27:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/12/2020 11:27:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/12/2020 11:27:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/12/2020 11:27:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/12/2020 11:27:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	95.8	70 - 130		%Rec	1	3/12/2020 11:27:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:36:29 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	1,690	25.0		mg/L	100	3/12/2020 1:02:50 PM
Sulfate	153	25.0		mg/L	100	3/12/2020 1:02:50 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Arsenic	< 0.0100	0.0100		mg/L	1	3/18/2020 7:43:22 PM
Barium	0.142	0.0100		mg/L	1	3/18/2020 7:43:22 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/6/2020 11:10:00 AM

Project: Henning 9403-010-0100

Lab ID: 20030314-007

Matrix: AQUEOUS

Client Sample ID H-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER				SW6010B	Analyst: STS	
METALS IN WATER BY ICP, TOTALS						
Cadmium	< 0.00500	0.00500		mg/L	1	3/18/2020 7:43:22 PM
Calcium	397	5.00		mg/L	10	3/18/2020 7:47:26 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/18/2020 7:43:22 PM
Iron	0.808	0.0100		mg/L	1	3/18/2020 7:43:22 PM
Lead	< 0.0100	0.0100		mg/L	1	3/18/2020 7:43:22 PM
Magnesium	166	5.00		mg/L	10	3/18/2020 7:47:26 PM
Manganese	2.18	0.100		mg/L	10	3/18/2020 7:47:26 PM
Potassium	6.93	5.00		mg/L	1	3/18/2020 7:43:22 PM
Sodium	356	50.0		mg/L	10	3/18/2020 7:47:26 PM
Strontium	2.22	0.100		mg/L	10	3/18/2020 7:47:26 PM
Zinc	< 0.0100	0.0100		mg/L	1	3/18/2020 7:43:22 PM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B	Analyst: BXB	
Alkalinity, Bicarbonate (As CaCO3)	275	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Total (As CaCO3)	275	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	3,370	200		mg/L	10	3/9/2020 9:12:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services **Collection Date:** 3/6/2020 1:15:00 PM
Project: Henning 9403-010-0100
Lab ID: 20030314-008 **Matrix:** AQUEOUS
Client Sample ID H-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: AB
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.168	0.131		mg/L	1	3/8/2020 12:24:00 PM
TPH (Oil Range)	< 0.121	0.121		mg/L	1	3/8/2020 12:24:00 PM
Surr: 4-Terphenyl-d14	111	51.4 - 146		%Rec	1	3/8/2020 12:24:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: AB
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/12/2020 11:54:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	101	70 - 130		%Rec	1	3/12/2020 11:54:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: AB
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	3/12/2020 11:54:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/12/2020 11:54:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/12/2020 11:54:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/12/2020 11:54:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/12/2020 11:54:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/12/2020 11:54:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	97.2	70 - 130		%Rec	1	3/12/2020 11:54:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	3/9/2020 1:38:51 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	77.6	5.00		mg/L	20	3/12/2020 1:16:33 PM
Sulfate	65.2	5.00		mg/L	20	3/12/2020 1:16:33 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Arsenic	0.0269	0.0100		mg/L	1	3/18/2020 8:00:58 PM
Barium	0.192	0.0100		mg/L	1	3/18/2020 8:00:58 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/6/2020 1:15:00 PM

Project: Henning 9403-010-0100

Lab ID: 20030314-008

Matrix: AQUEOUS

Client Sample ID H-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER				SW6010B	Analyst: STS	
METALS IN WATER BY ICP, TOTALS						
Cadmium	< 0.00500	0.00500		mg/L	1	3/18/2020 8:00:58 PM
Calcium	82.1	0.500		mg/L	1	3/18/2020 8:00:58 PM
Chromium	< 0.0100	0.0100		mg/L	1	3/18/2020 8:00:58 PM
Iron	0.428	0.0100		mg/L	1	3/18/2020 8:00:58 PM
Lead	< 0.0100	0.0100		mg/L	1	3/18/2020 8:00:58 PM
Magnesium	22.6	0.500		mg/L	1	3/18/2020 8:00:58 PM
Manganese	0.284	0.0100		mg/L	1	3/18/2020 8:00:58 PM
Potassium	< 5.00	5.00		mg/L	1	3/18/2020 8:00:58 PM
Sodium	96.9	5.00		mg/L	1	3/18/2020 8:00:58 PM
Strontium	0.429	0.0100		mg/L	1	3/18/2020 8:00:58 PM
Zinc	< 0.0100	0.0100		mg/L	1	3/18/2020 8:00:58 PM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B	Analyst: BXB	
Alkalinity, Bicarbonate (As CaCO3)	368	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
Alkalinity, Total (As CaCO3)	368	10.0		mgCaCO3/L	1	3/10/2020 7:42:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	590	20.0		mg/L	1	3/9/2020 9:12:00 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	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#: 20030314

Date Reported: 3/20/2020

CLIENT: ICON Environmental Services

Collection Date: 3/5/2020

Project: Henning 9403-010-0100

Lab ID: 20030314-009

Matrix: AQUEOUS

Client Sample ID Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
BTEX/TPH-G IN WATER BY SW8021/8015				SW8015B	Analyst: AB	
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	3/12/2020 8:42:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	100	70 - 130		%Rec	1	3/12/2020 8:42:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015				SW8021B	Analyst: AB	
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	3/12/2020 8:42:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	3/12/2020 8:42:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	3/12/2020 8:42:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	3/12/2020 8:42:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	3/12/2020 8:42:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	3/12/2020 8:42:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	95.2	70 - 130		%Rec	1	3/12/2020 8:42:00 PM

Qualifiers:						
B	Analyte detected in the associated Method Blank	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) 233-6546
 Website: www.element.com

QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33382

Sample ID: 20030200-001AMS	SampType: MS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: ZZZZZ	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/8/2020	SeqNo: 2171760						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	1.98	0.205	1.805	0.2823	93.8	70	130				
Surr: 4-Terphenyl-d14	0.0502		0.06017		83.5	51.4	146				

Sample ID: 20030200-001AMSD	SampType: MSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: ZZZZZ	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/8/2020	SeqNo: 2171761						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	1.51	0.203	1.785	0.2823	68.9	70	130	1.976	26.6	21.9	RS
Surr: 4-Terphenyl-d14	0.0222		0.05949		37.3	51.4	146		0	40	S

NOTES:

S - Spike recovery outside of recovery limits. The method is in control for the analyte as indicated by the LCS/LCSD and sample matrix spike

Sample ID: LCS-D33382	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: LCSW	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/7/2020	SeqNo: 2171777						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	1.90	0.137	1.813	0	105	70	130				
Surr: 4-Terphenyl-d14	0.0616		0.06042		102	51.4	146				

Sample ID: LCSD-D33382	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: LCSS02	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/7/2020	SeqNo: 2171778						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:	B Analyte detected in the associated Method Blank	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) 233-6546
 Website: www.element.com

QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33382

Sample ID: LCSD-D33382	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: LCSS02	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/7/2020	SeqNo: 2171778						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	2.06	0.137	1.810	0	114	70	130	1.900	7.90	14.1
Surr: 4-Terphenyl-d14	0.0620		0.06033		103	51.4	146		0	40

Sample ID: LCSD-M33382	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: LCSS02	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/8/2020	SeqNo: 2171779						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	1.94	0.127	1.811	0	107	70	130	1.848	4.80	23.2
Surr: 4-Terphenyl-d14	0.0653		0.06035		108	51.4	146		0	40

Sample ID: LCS-M33382	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: LCSW	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/8/2020	SeqNo: 2171780						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	1.85	0.126	1.802	0	103	70	130			
Surr: 4-Terphenyl-d14	0.0659		0.06006		110	51.4	146			

Sample ID: MB-33382	SampType: MBLK	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: PBW	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/7/2020	SeqNo: 2171781						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	< 0.137	0.137								
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Qualifiers:

B	Analyte detected in the associated Method Blank	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
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 33382

Sample ID: MB-33382	SampType: MBLK	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/6/2020	RunNo: 86732						
Client ID: PBW	Batch ID: 33382	TestNo: SW8015B	SW3511	Analysis Date: 3/7/2020	SeqNo: 2171781						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	< 0.126	0.126									
Surr: 4-Terphenyl-d14	0.0585		0.06015		97.3	51.4	146				

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33398

Sample ID: LCS-33398	SampType: LCS	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86687						
Client ID: LCSW	Batch ID: 33398	TestNo: SW7470A	Analysis Date: 3/9/2020	SeqNo: 2170678							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.0106	0.000200	0.01000	0	106	80	120				
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Sample ID: LCSD-33398	SampType: LCSD	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86687						
Client ID: LCSS02	Batch ID: 33398	TestNo: SW7470A	Analysis Date: 3/9/2020	SeqNo: 2170679							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.0106	0.000200	0.01000	0	106	80	120	0.01058	0.0468	20	
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Sample ID: 20030314-001CMS	SampType: MS	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86687						
Client ID: H-12	Batch ID: 33398	TestNo: SW7470A	Analysis Date: 3/9/2020	SeqNo: 2170682							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.00206	0.000200	0.01000	0	20.6	75	125				S
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Sample ID: 20030314-001CMSD	SampType: MSD	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86687						
Client ID: H-12	Batch ID: 33398	TestNo: SW7470A	Analysis Date: 3/9/2020	SeqNo: 2170683							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury	0.00179	0.000200	0.01000	0	17.9	75	125	0.002061	14.2	20	S
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NOTES:

S - Spike recoveries were outside of QC limits in MS/MSD and PDS/PDSD, suggesting matrix effect. The method is in control as indicated by the Lab Control Sample(s).

Qualifiers:	B Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33398

Sample ID: MB-33398	SampType: MBLK	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86687						
Client ID: PBW	Batch ID: 33398	TestNo: SW7470A		Analysis Date: 3/9/2020	SeqNo: 2170742						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	< 0.000200	0.000200									

Qualifiers:

B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6546
 Website: www.element.com

QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33400

Sample ID: MB-33400	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: PBW	Batch ID: 33400	TestNo: SW6010B		Analysis Date: 3/18/2020	SeqNo: 2176507						
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									
Cadmium	< 0.00500	0.00500									
Calcium	< 0.500	0.500									
Chromium	< 0.0100	0.0100									
Iron	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Magnesium	< 0.500	0.500									
Manganese	< 0.0100	0.0100									
Potassium	< 5.00	5.00									
Sodium	< 10.0	10.0									
Strontium	< 0.0100	0.0100									
Zinc	< 0.0100	0.0100									

Sample ID: LCS-33400	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: LCSW	Batch ID: 33400	TestNo: SW6010B		Analysis Date: 3/18/2020	SeqNo: 2176508						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	0.474	0.0100	0.5000	0	94.7	80	120				
Barium	0.474	0.0100	0.5000	0	94.9	80	120				
Cadmium	0.458	0.00500	0.5000	0	91.6	80	120				
Calcium	47.6	0.500	50.00	0	95.1	80	120				
Chromium	0.471	0.0100	0.5000	0	94.1	80	120				
Iron	0.462	0.0100	0.5000	0	92.4	80	120				
Lead	0.467	0.0100	0.5000	0	93.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6546
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33400

Sample ID: LCS-33400	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: LCSW	Batch ID: 33400	TestNo: SW6010B	Analysis Date: 3/18/2020	SeqNo: 2176508							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Magnesium	47.3	0.500	50.00	0	94.6	80	120				
Manganese	0.472	0.0100	0.5000	0	94.3	80	120				
Potassium	45.4	5.00	50.00	0	90.8	80	120				
Sodium	47.9	10.0	50.00	0	95.8	80	120				
Strontium	0.472	0.0100	0.5000	0	94.3	80	120				
Zinc	0.460	0.0100	0.5000	0	92.1	80	120				

Sample ID: LCSD-33400	SampType: LCSD	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: LCSS02	Batch ID: 33400	TestNo: SW6010B	Analysis Date: 3/18/2020	SeqNo: 2176509							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.484	0.0100	0.5000	0	96.8	80	120	0.4736	2.13	20	
Barium	0.480	0.0100	0.5000	0	96.0	80	120	0.4743	1.24	20	
Cadmium	0.464	0.00500	0.5000	0	92.7	80	120	0.4580	1.24	20	
Calcium	47.8	0.500	50.00	0	95.6	80	120	47.57	0.440	20	
Chromium	0.477	0.0100	0.5000	0	95.4	80	120	0.4706	1.39	20	
Iron	0.481	0.0100	0.5000	0	96.2	80	120	0.4618	4.11	20	
Lead	0.475	0.0100	0.5000	0	94.9	80	120	0.4667	1.70	20	
Magnesium	47.6	0.500	50.00	0	95.2	80	120	47.28	0.717	20	
Manganese	0.477	0.0100	0.5000	0	95.5	80	120	0.4717	1.20	20	
Potassium	46.1	5.00	50.00	0	92.1	80	120	45.41	1.42	20	
Sodium	48.0	10.0	50.00	0	96.1	80	120	47.92	0.271	20	
Strontium	0.476	0.0100	0.5000	0	95.2	80	120	0.4715	0.908	20	
Zinc	0.465	0.0100	0.5000	0	93.0	80	120	0.4605	0.994	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6546
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33400

Sample ID: 20030314-001CMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: H-12	Batch ID: 33400	TestNo: SW6010B	Analysis Date: 3/18/2020	SeqNo: 2176511							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.680	0.100	0.5000	0	136	75	125				S
Barium	2.58	0.100	0.5000	2.106	94.2	75	125				
Cadmium	0.498	0.0500	0.5000	0.02300	95.0	75	125				
Chromium	0.488	0.100	0.5000	0.01500	94.6	75	125				
Iron	7.41	0.100	0.5000	6.932	96.2	75	125				
Lead	0.437	0.100	0.5000	0	87.4	75	125				
Magnesium	607	5.00	50.00	558.1	97.0	75	125				
Potassium	115	50.0	50.00	58.71	112	75	125				
Zinc	0.489	0.100	0.5000	0	97.8	75	125				

Sample ID: 20030314-001CMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: H-12	Batch ID: 33400	TestNo: SW6010B	Analysis Date: 3/18/2020	SeqNo: 2176512							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.625	0.100	0.5000	0	125	75	125	0.6800	8.43	20	
Barium	2.56	0.100	0.5000	2.106	91.2	75	125	2.577	0.584	20	
Cadmium	0.503	0.0500	0.5000	0.02300	96.0	75	125	0.4980	0.999	20	
Chromium	0.488	0.100	0.5000	0.01500	94.6	75	125	0.4880	0	20	
Iron	7.39	0.100	0.5000	6.932	91.2	75	125	7.413	0.338	20	
Lead	0.453	0.100	0.5000	0	90.6	75	125	0.4370	3.60	20	
Magnesium	599	5.00	50.00	558.1	82.0	75	125	606.6	1.24	20	
Potassium	114	50.0	50.00	58.71	111	75	125	114.7	0.437	20	
Zinc	0.482	0.100	0.5000	0	96.4	75	125	0.4890	1.44	20	

NOTES:

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

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33400

Sample ID: 20030314-001CMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: H-12	Batch ID: 33400	TestNo: SW6010B	Analysis Date: 3/18/2020	SeqNo: 2176518							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	1,870	50.0	50.00	1,829	76.0	75	125				
Manganese	14.5	1.00	0.5000	14.37	28.0	75	125				S
Sodium	17,800	1,000	50.00	17,760	100	75	125				
Strontium	46.3	1.00	0.5000	46.34	-10.0	75	125				S

Sample ID: 20030314-001CMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 3/9/2020	RunNo: 86947						
Client ID: H-12	Batch ID: 33400	TestNo: SW6010B	Analysis Date: 3/18/2020	SeqNo: 2176519							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	1,880	50.0	50.00	1,829	92.0	75	125	1,867	0.428	20	
Manganese	14.6	1.00	0.5000	14.37	42.0	75	125	14.51	0.481	20	S
Sodium	17,900	1,000	50.00	17,760	200	75	125	17,810	0.280	20	S
Strontium	46.2	1.00	0.5000	46.34	-30.0	75	125	46.29	0.216	20	S

NOTES:

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33421

Sample ID: LCS-D33421	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/10/2020	RunNo: 86782						
Client ID: LCSW	Batch ID: 33421	TestNo: SW8015B	SW3511	Analysis Date: 3/11/2020	SeqNo: 2172917						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	1.63	0.138	1.822	0	89.3	70	130				
Surr: 4-Terphenyl-d14	0.0672		0.06073		111	51.4	146				

Sample ID: LCSD-D33421	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/10/2020	RunNo: 86782						
Client ID: LCSS02	Batch ID: 33421	TestNo: SW8015B	SW3511	Analysis Date: 3/11/2020	SeqNo: 2172922						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	1.75	0.137	1.813	0	96.5	70	130	1.627	7.19	14.1	
Surr: 4-Terphenyl-d14	0.0663		0.06042		110	51.4	146		0	40	

Sample ID: LCSD-M33421	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/10/2020	RunNo: 86782						
Client ID: LCSS02	Batch ID: 33421	TestNo: SW8015B	SW3511	Analysis Date: 3/11/2020	SeqNo: 2172924						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	2.19	0.126	1.804	0	121	70	130	2.060	6.05	23.2	
Surr: 4-Terphenyl-d14	0.0646		0.06013		107	51.4	146		0	40	

Sample ID: LCS-M33421	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/10/2020	RunNo: 86782						
Client ID: LCSW	Batch ID: 33421	TestNo: SW8015B	SW3511	Analysis Date: 3/11/2020	SeqNo: 2172930						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	2.06	0.128	1.822	0	113	70	130				
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Qualifiers:

B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: 33421

Sample ID: LCS-M33421	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/10/2020	RunNo: 86782						
Client ID: LCSW	Batch ID: 33421	TestNo: SW8015B	SW3511	Analysis Date: 3/11/2020	SeqNo: 2172930						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14 0.0652 0.06071 107 51.4 146

Sample ID: MB-33421	SampType: MBLK	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 3/10/2020	RunNo: 86782						
Client ID: PBW	Batch ID: 33421	TestNo: SW8015B	SW3511	Analysis Date: 3/11/2020	SeqNo: 2172934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) < 0.138 0.138
 TPH (Oil Range) < 0.127 0.127
 Surr: 4-Terphenyl-d14 0.0341 0.06058 56.4 51.4 146

Qualifiers:

B	Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86655

Sample ID: MB-R86655	SampType: MBLK	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 86655						
Client ID: PBW	Batch ID: R86655	TestNo: SM2540C		Analysis Date: 3/9/2020	SeqNo: 2171410						
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-R86655	SampType: LCS	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 86655						
Client ID: LCSW	Batch ID: R86655	TestNo: SM2540C		Analysis Date: 3/9/2020	SeqNo: 2171411						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 998 20.0 1,000 0 99.8 85 115

Sample ID: LCSD-R86655	SampType: LCSD	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 86655						
Client ID: LCSS02	Batch ID: R86655	TestNo: SM2540C		Analysis Date: 3/9/2020	SeqNo: 2171412						
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 85 115 998.0 0.704 10

Sample ID: 20030278-011ADUP	SampType: DUP	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 86655						
Client ID: ZZZZZ	Batch ID: R86655	TestNo: SM2540C		Analysis Date: 3/9/2020	SeqNo: 2171419						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 209 20.0 211.0 0.952 10

Qualifiers:

B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R86655

Sample ID: 20030278-011ADUP	SampType: DUP	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 86655						
Client ID: ZZZZZ	Batch ID: R86655	TestNo: SM2540C		Analysis Date: 3/9/2020	SeqNo: 2171419						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 20030238-001BDUP	SampType: DUP	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 86655						
Client ID: ZZZZZ	Batch ID: R86655	TestNo: SM2540C		Analysis Date: 3/9/2020	SeqNo: 2171423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filterable)	23,600	2,000						23,400	0.851	10	

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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 Website: www.element.com

QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86694

Sample ID: MB-R86694	SampType: MBLK	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 86694						
Client ID: PBW	Batch ID: R86694	TestNo: SM2320 B		Analysis Date: 3/10/2020	SeqNo: 2171211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	< 10.0	10.0									
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0									
Alkalinity, Total (As CaCO3)	< 10.0	10.0									

Sample ID: LCS-R86694	SampType: LCS	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 86694						
Client ID: LCSW	Batch ID: R86694	TestNo: SM2320 B		Analysis Date: 3/10/2020	SeqNo: 2171212						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	43.0	10.0	50.00	0	86.0	80	120				
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Sample ID: 20030314-001DDUP	SampType: DUP	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 86694						
Client ID: H-12	Batch ID: R86694	TestNo: SM2320 B		Analysis Date: 3/10/2020	SeqNo: 2171232						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	295	10.0						295.0	0	20	
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0						0	0	20	
Alkalinity, Total (As CaCO3)	295	10.0						295.0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	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#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86695

Sample ID: MB-R86695	SampType: MBLK	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 86695						
Client ID: PBW	Batch ID: R86695	TestNo: SM2320 B		Analysis Date: 3/10/2020	SeqNo: 2171272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	< 10.0	10.0									
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0									
Alkalinity, Total (As CaCO3)	< 10.0	10.0									

Sample ID: LCS-R86695	SampType: LCS	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 86695						
Client ID: LCSW	Batch ID: R86695	TestNo: SM2320 B		Analysis Date: 3/10/2020	SeqNo: 2171273						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	43.0	10.0	50.00	0	86.0	80	120				
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Sample ID: 20030314-003DDUP	SampType: DUP	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 86695						
Client ID: H-10	Batch ID: R86695	TestNo: SM2320 B		Analysis Date: 3/10/2020	SeqNo: 2171275						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	262	10.0						262.5	0	20	
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0						0	0	20	
Alkalinity, Total (As CaCO3)	262	10.0						262.5	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	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#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86798

Sample ID: GAS LCS	SampType: LCS	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 86798
Client ID: LCSW	Batch ID: R86798	TestNo: SW8015B	Analysis Date: 3/11/2020	SeqNo: 2173186	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

TPH (Gasoline Range)	11.8	0.150	12.50	0	94.1	80	130				
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Sample ID: GAS LCSD	SampType: LCSD	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 86798
Client ID: LCSS02	Batch ID: R86798	TestNo: SW8015B	Analysis Date: 3/11/2020	SeqNo: 2173187	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

TPH (Gasoline Range)	11.9	0.150	12.50	0	95.2	80	130	11.76	1.23	20
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Sample ID: MB	SampType: MBLK	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 86798
Client ID: PBW	Batch ID: R86798	TestNo: SW8015B	Analysis Date: 3/11/2020	SeqNo: 2173188	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

TPH (Gasoline Range)	< 0.150	0.150								
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0495		0.05000		99.0	70	130			

Qualifiers:

B	Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6546
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86799

Sample ID: BTEX LCS	SampType: LCS	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 86799						
Client ID: LCSW	Batch ID: R86799	TestNo: SW8021B	Analysis Date: 3/11/2020	SeqNo: 2173191							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0442	0.00500	0.05000	0	88.4	72	120				
Ethylbenzene	0.0436	0.00500	0.05000	0	87.2	76	129				
m,p-Xylene	0.0883	0.0100	0.1000	0	88.3	75	125				
o-Xylene	0.0447	0.00500	0.05000	0	89.4	75	125				
Toluene	0.0434	0.0100	0.05000	0	86.8	78	120				
Xylenes, Total	0.133	0.0500	0.1500	0	88.7	75	125				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0501		0.05000		100	70	130				

Sample ID: BTEX LCSD	SampType: LCSD	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 86799						
Client ID: LCSS02	Batch ID: R86799	TestNo: SW8021B	Analysis Date: 3/11/2020	SeqNo: 2173192							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0429	0.00500	0.05000	0	85.8	72	120	0.04420	2.99	20	
Ethylbenzene	0.0420	0.00500	0.05000	0	84.0	76	129	0.04360	3.74	20	
m,p-Xylene	0.0853	0.0100	0.1000	0	85.3	75	125	0.08830	3.46	20	
o-Xylene	0.0435	0.00500	0.05000	0	87.0	75	125	0.04470	2.72	20	
Toluene	0.0421	0.0100	0.05000	0	84.2	78	120	0.04340	3.04	20	
Xylenes, Total	0.129	0.0500	0.1500	0	85.9	75	125	0.1330	3.21	20	
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0502		0.05000		100	70	130		0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86799

Sample ID: MB	SampType: MBLK	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 86799						
Client ID: PBW	Batch ID: R86799	TestNo: SW8021B		Analysis Date: 3/11/2020	SeqNo: 2173193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	< 0.00500	0.00500									
Ethylbenzene	< 0.00500	0.00500									
m,p-Xylene	< 0.0100	0.0100									
o-Xylene	< 0.00500	0.00500									
Toluene	< 0.0100	0.0100									
Xylenes, Total	< 0.0500	0.0500									
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0490		0.05000		98.0	70	130				

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86819

Sample ID: MBLK	SampType: MBLK	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 86819						
Client ID: PBW	Batch ID: R86819	TestNo: SW9056A		Analysis Date: 3/12/2020	SeqNo: 2173627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	< 0.250	0.250									
Sulfate	< 0.250	0.250									

Sample ID: LCS	SampType: LCS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 86819						
Client ID: LCSW	Batch ID: R86819	TestNo: SW9056A		Analysis Date: 3/12/2020	SeqNo: 2173628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	9.80	0.250	10.00	0	98.0	80	120				
Sulfate	9.69	0.250	10.00	0	96.9	80	120				

Sample ID: LCSD	SampType: LCSD	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 86819						
Client ID: LCSS02	Batch ID: R86819	TestNo: SW9056A		Analysis Date: 3/12/2020	SeqNo: 2173629						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	9.93	0.250	10.00	0	99.3	80	120	9.799	1.34	15	
Sulfate	9.86	0.250	10.00	0	98.6	80	120	9.691	1.73	15	

Sample ID: 20030444-001AMS	SampType: MS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 86819						
Client ID: ZZZZZ	Batch ID: R86819	TestNo: SW9056A		Analysis Date: 3/12/2020	SeqNo: 2173632						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	5.08	0.250	5.000	0.02905	101	80	120				
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Qualifiers:

B	Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86819

Sample ID: 20030444-001AMS	SampType: MS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 86819						
Client ID: ZZZZZ	Batch ID: R86819	TestNo: SW9056A		Analysis Date: 3/12/2020	SeqNo: 2173632						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	7.32	0.250	5.000	0	146	80	120				S

Sample ID: 20030444-001AMSD	SampType: MSD	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 86819						
Client ID: ZZZZZ	Batch ID: R86819	TestNo: SW9056A		Analysis Date: 3/12/2020	SeqNo: 2173633						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	5.07	0.250	5.000	0.02905	101	80	120	5.075	0.164	15	
Sulfate	7.53	0.250	5.000	0	151	80	120	7.315	2.96	15	S

NOTES:

S - Spike recovery indicates matrix interference. The method is in control as indicated by the LCS/LCSD.

Qualifiers:	B	Analyte detected in the associated Method Blank	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86827

Sample ID: GAS LCS	SampType: LCS	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 86827						
Client ID: LCSW	Batch ID: R86827	TestNo: SW8015B		Analysis Date: 3/12/2020	SeqNo: 2173736						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) 12.3 0.150 12.50 0 98.2 80 130

Sample ID: GAS LCSD	SampType: LCSD	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 86827						
Client ID: LCSS02	Batch ID: R86827	TestNo: SW8015B		Analysis Date: 3/12/2020	SeqNo: 2173737						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) 11.9 0.150 12.50 0 95.2 80 130 12.27 3.06 20

Sample ID: MB	SampType: MBLK	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 86827						
Client ID: PBW	Batch ID: R86827	TestNo: SW8015B		Analysis Date: 3/12/2020	SeqNo: 2173738						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) < 0.150 0.150
 Surr: alpha, alpha, alpha-Trifluorotoluene 0.0489 0.05000 97.8 70 130

Qualifiers:

B	Analyte detected in the associated Method Blank	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) 233-6546
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86832

Sample ID: BTEX LCS	SampType: LCS	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 86832						
Client ID: LCSW	Batch ID: R86832	TestNo: SW8021B	Analysis Date: 3/12/2020	SeqNo: 2173755							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0502	0.00500	0.05000	0	100	72	120				
Ethylbenzene	0.0505	0.00500	0.05000	0	101	76	129				
m,p-Xylene	0.102	0.0100	0.1000	0	102	75	125				
o-Xylene	0.0510	0.00500	0.05000	0	102	75	125				
Toluene	0.0497	0.0100	0.05000	0	99.4	78	120				
Xylenes, Total	0.153	0.0500	0.1500	0	102	75	125				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0471		0.05000		94.2	70	130				

Sample ID: BTEX LCSD	SampType: LCSD	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 86832						
Client ID: LCSS02	Batch ID: R86832	TestNo: SW8021B	Analysis Date: 3/12/2020	SeqNo: 2173756							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0499	0.00500	0.05000	0	99.8	72	120	0.05020	0.599	20	
Ethylbenzene	0.0498	0.00500	0.05000	0	99.6	76	129	0.05050	1.40	20	
m,p-Xylene	0.101	0.0100	0.1000	0	101	75	125	0.1023	1.18	20	
o-Xylene	0.0508	0.00500	0.05000	0	102	75	125	0.05100	0.393	20	
Toluene	0.0497	0.0100	0.05000	0	99.4	78	120	0.04970	0	20	
Xylenes, Total	0.152	0.0500	0.1500	0	101	75	125	0.1533	0.852	20	
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0473		0.05000		94.6	70	130		0	20	

Qualifiers:	B Analyte detected in the associated Method Blank	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 20030314
 20-Mar-20

Client: ICON Environmental Services
Project: Henning 9403-010-0100

BatchID: R86832

Sample ID: MB	SampType: MBLK	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 86832						
Client ID: PBW	Batch ID: R86832	TestNo: SW8021B		Analysis Date: 3/12/2020	SeqNo: 2173757						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	< 0.00500	0.00500									
Ethylbenzene	< 0.00500	0.00500									
m,p-Xylene	< 0.0100	0.0100									
o-Xylene	< 0.00500	0.00500									
Toluene	< 0.0100	0.0100									
Xylenes, Total	< 0.0500	0.0500									
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0472		0.05000		94.4	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	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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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **20030314**

RcptNo: **1**

Logged by:	Danielle Hollier	3/6/2020 3:50:00 PM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	3/6/2020 4:40:05 PM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	3/9/2020 8:03:49 AM	<i>Caitlin Duplantis</i>

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° 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? Yes No
 (Note discrepancies on chain of custody)
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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

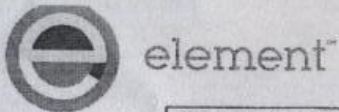
Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Added the trip blank to the COC as per samples received. Barium added to list of metals on COC as per bottle order.

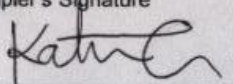
Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Not Present			



Chain of Custody

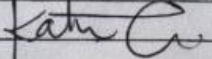


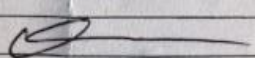
Laboratory Number: **20030314**

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information: Icon Enviromental	Billing Information: Same	PO Number:	Project Name/Number: Henning 9403-010-0100	Page 1 of 1 Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	Jason Sills		Quote Number: 5762	Sampler's Signature 	
	2049 Commerical Dr.		Required QC Level		
	Port Allen, La 70707		Bill Monthly <input type="checkbox"/> Yes <input type="checkbox"/> No	Shipping Method: UPS / FedEx / Airborne DHL / Element / <u>Hand</u> / Mail	
	225-344-8490 Ext.	Ext.			

Which Regulations Apply:	Turn Time	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests						Comments			
			Quantity	Type P=Plastic, G=Glass, V=Vial		TDS	Cations/Anions	Chlorides	BTEX/TPH_G	TPH-DO	Total Metals/Hg		Dissolved Metals		
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Standard RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other				HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃								Metals: As, Cd, Cr, Fe, Mn, Pb, Sr, Zn, Hg Ba (3/9/20CD) Cations: Na, Ca, K, Mg Anions: Alk Carbonate Alk Bicarbonate Sulfate		
Sample ID/Description	Collection Information			Matrix	Quantity	Type	Pres.	TDS	Cations/Anions	Chlorides	BTEX/TPH_G	TPH-DO	Total Metals/Hg	Dissolved Metals	
H-12	3.5.2020	1105	G	AQ	7	PV	HCL/HNO3	X	X	X	X	X	X		
H-9	3.5.2020	1335						X	X	X	X	X	X		
H-10	3.5.2020	1530						X	X	X	X	X	X		
H-2	3.5.2020	1655						X	X	X	X	X	X		
H-16	3.6.2020	0815						X	X	X	X	X	X		
H-18	3.6.2020	0950						X	X	X	X	X	X		
H-1	3.6.2020	1110						X	X	X	X	X	X		
H-3	3.6.2020	1315	✓					X	X	X	X	X	X		
Trip Blank	3-5-20							X	X	X	X	X	X		

3/36/20

3/36/20

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1		3.6.2020/1520		3-6-2020/1520	
2					Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 1.8°C
3		3-6-2020/1550		3-6-2020/1550	

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.

9301 Innovation Drive, Suite 115 Daleville, IN 47334-0569 USA P 765-378-4103 F 765-378-4109	629 Washington St. Suite 300 Columbus, IN 47201-6231 USA P 812-375-0531 F 812-375-0731	2121 East Washington Boulevard Fort Wayne, IN 46803-1328 USA P 260-471-7000 F 260-471-7777	560 South Zimmer Road Warsaw, IN 46580-2368 USA P 574-267-3305 F 574-269-6569	3371 Cleveland Road, Suite 100A South Bend, IN 46628-9780 USA P 574-277-0707 F 574-277-5699	2417 W. Pinhook Rd Lafayette, LA 70508-3344 USA P 337-235-0483 F 337-233-6540
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Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

April 28, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II 9403-010-0100

Order No.: 21040441

Dear Greg Miller:

Element Materials Technology Lafayette received 52 sample(s) on 4/12/2021 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 that reads '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#: 21040441
Date: 4/28/2021

CLIENT: ICON Environmental Services

Project: Henning II 9403-010-0100

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 1:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-001 **Matrix:** SOLID
Client Sample ID H-20 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	34.2	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.91	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.77	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.25	0.10			1	4/20/2021
Soluble Calcium	2.47	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.79	0.05		meq/L	1	4/20/2021
Soluble Sodium	4.15	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	4/26/2021 6:54:52 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.23	2.00		mg/Kg-dry	1	4/19/2021 6:48:00 PM
Barium	430	0.999		mg/Kg-dry	1	4/19/2021 6:48:00 PM
Cadmium	< 0.500	0.500		mg/Kg-dry	1	4/19/2021 6:48:00 PM
Chromium	11.5	0.999		mg/Kg-dry	1	4/19/2021 6:48:00 PM
Lead	9.18	0.999		mg/Kg-dry	1	4/19/2021 6:48:00 PM
Selenium	< 4.00	4.00		mg/Kg-dry	1	4/19/2021 6:48:00 PM
Strontium	37.7	0.999		mg/Kg-dry	1	4/19/2021 6:48:00 PM
Zinc	13.4	0.999		mg/Kg-dry	1	4/19/2021 6:48:00 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 1:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-001 **Matrix:** SOLID
Client Sample ID H-20 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	476	49.3		mg/Kg-dry	1	4/22/2021 5:11:49 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.5	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 1:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-002 **Matrix:** SOLID
Client Sample ID H-20 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	31.0	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.71	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	9.95	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	6.74	0.10			1	4/20/2021
Soluble Calcium	2.16	0.02		meq/L	1	4/20/2021
Soluble Magnesium	1.15	0.05		meq/L	1	4/20/2021
Soluble Sodium	8.68	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	4/26/2021 6:57:09 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.00	2.00		mg/Kg-dry	1	4/19/2021 6:50:07 PM
Barium	284	0.998		mg/Kg-dry	1	4/19/2021 6:50:07 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/19/2021 6:50:07 PM
Chromium	8.81	0.998		mg/Kg-dry	1	4/19/2021 6:50:07 PM
Lead	7.82	0.998		mg/Kg-dry	1	4/19/2021 6:50:07 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/19/2021 6:50:07 PM
Strontium	21.8	0.998		mg/Kg-dry	1	4/19/2021 6:50:07 PM
Zinc	13.9	0.998		mg/Kg-dry	1	4/19/2021 6:50:07 PM
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 1:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-002 **Matrix:** SOLID
Client Sample ID H-20 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	439	45.5		mg/Kg-dry	1	4/22/2021 5:18:11 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.7	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 1:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-003 **Matrix:** SOLID
Client Sample ID H-20 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	22.3	0.100		meq/100g	1	4/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.85	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	12.6	0.10		%	1	4/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.49	0.10			1	4/20/2021
Soluble Calcium	1.11	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.65	0.05		meq/L	1	4/20/2021
Soluble Sodium	4.21	0.25		meq/L	1	4/20/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0939	0.0939		mg/Kg-dry	1	4/26/2021 6:59:25 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.80	2.00		mg/Kg-dry	1	4/19/2021 6:52:14 PM
Barium	80.3	0.999		mg/Kg-dry	1	4/19/2021 6:52:14 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/19/2021 6:52:14 PM
Chromium	15.7	0.999		mg/Kg-dry	1	4/19/2021 6:52:14 PM
Lead	10.4	0.999		mg/Kg-dry	1	4/19/2021 6:52:14 PM
Selenium	< 4.00	4.00		mg/Kg-dry	1	4/19/2021 6:52:14 PM
Strontium	28.1	0.999		mg/Kg-dry	1	4/19/2021 6:52:14 PM
Zinc	45.3	0.999		mg/Kg-dry	1	4/19/2021 6:52:14 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 1:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-003 **Matrix:** SOLID
Client Sample ID H-20 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	101	45.8		mg/Kg-dry	1	4/22/2021 5:20:19 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.2	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 1:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-004 **Matrix:** SOLID
Client Sample ID H-20 18-20

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.25	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	24.1	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 2:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-005 **Matrix:** SOLID
Client Sample ID H-20 28-30

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.31	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.0	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/29/2021 2:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-006 **Matrix:** SOLID
Client Sample ID H-20 38-40

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.33	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.4	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-007 **Matrix:** SOLID
Client Sample ID H-21 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	37.7	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.64	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	12.1	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	9.37	0.10			1	4/20/2021
Soluble Calcium	1.39	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.64	0.05		meq/L	1	4/20/2021
Soluble Sodium	9.44	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0963	0.0963		mg/Kg-dry	1	4/26/2021 7:06:41 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.70	2.00		mg/Kg-dry	1	4/19/2021 6:54:22 PM
Barium	389	0.999		mg/Kg-dry	1	4/19/2021 6:54:22 PM
Cadmium	< 0.500	0.500		mg/Kg-dry	1	4/19/2021 6:54:22 PM
Chromium	10.1	0.999		mg/Kg-dry	1	4/19/2021 6:54:22 PM
Lead	12.8	0.999		mg/Kg-dry	1	4/19/2021 6:54:22 PM
Selenium	< 4.00	4.00		mg/Kg-dry	1	4/19/2021 6:54:22 PM
Strontium	90.6	0.999		mg/Kg-dry	1	4/19/2021 6:54:22 PM
Zinc	35.1	0.999		mg/Kg-dry	1	4/19/2021 6:54:22 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-007 **Matrix:** SOLID
Client Sample ID H-21 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	402	49.2		mg/Kg-dry	1	4/22/2021 5:22:27 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	18.9	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-008 **Matrix:** SOLID
Client Sample ID H-21 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	23.4	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.73	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	76.5	0.10	*	%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	22.7	0.10	*		1	4/20/2021
Soluble Calcium	2.37	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.91	0.05		meq/L	1	4/20/2021
Soluble Sodium	29.1	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	4/26/2021 7:08:57 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.83	1.99		mg/Kg-dry	1	4/19/2021 7:00:45 PM
Barium	209	0.997		mg/Kg-dry	1	4/19/2021 7:00:45 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/19/2021 7:00:45 PM
Chromium	11.3	0.997		mg/Kg-dry	1	4/19/2021 7:00:45 PM
Lead	11.7	0.997		mg/Kg-dry	1	4/19/2021 7:00:45 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/19/2021 7:00:45 PM
Strontium	181	0.997		mg/Kg-dry	1	4/19/2021 7:00:45 PM
Zinc	22.1	0.997		mg/Kg-dry	1	4/19/2021 7:00:45 PM
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-008 **Matrix:** SOLID
Client Sample ID H-21 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	235	47.1		mg/Kg-dry	1	4/22/2021 5:24:35 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	22.6	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-009 **Matrix:** SOLID
Client Sample ID H-21 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.6	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	4.51	0.10	*	mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	43.8	0.10	*	%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	23.5	0.10	*		1	4/20/2021
Soluble Calcium	3.45	0.02		meq/L	1	4/20/2021
Soluble Magnesium	1.39	0.05		meq/L	1	4/20/2021
Soluble Sodium	36.6	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.101	0.101		mg/Kg-dry	1	4/26/2021 7:11:14 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.47	1.99		mg/Kg-dry	1	4/19/2021 7:02:54 PM
Barium	78.5	0.995		mg/Kg-dry	1	4/19/2021 7:02:54 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/19/2021 7:02:54 PM
Chromium	11.6	0.995		mg/Kg-dry	1	4/19/2021 7:02:54 PM
Lead	8.27	0.995		mg/Kg-dry	1	4/19/2021 7:02:54 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/19/2021 7:02:54 PM
Strontium	134	0.995		mg/Kg-dry	1	4/19/2021 7:02:54 PM
Zinc	24.5	0.995		mg/Kg-dry	1	4/19/2021 7:02:54 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-009 **Matrix:** SOLID
Client Sample ID H-21 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	592	47.1		mg/Kg-dry	1	4/22/2021 5:26:42 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	24.3	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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WO#: **21040441**

Date Reported: **4/28/2021**

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-010 **Matrix:** SOLID
Client Sample ID H-21 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	3.88	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B METALS MERCURY IN SOIL OR SLUDGE					29B/SW7471A SW7471A	Analyst: BXB
Mercury	< 0.102	0.102		mg/Kg-dry	1	4/26/2021 7:13:31 AM
INORGANIC ANIONS IN LEACHATE BY IC					SW9056A	Analyst: SGP
Chloride	130	2.50		mg/L	10	4/22/2021 12:54:19 PM
29B METALS METALS IN SOIL OR SLUDGE BY ICP					SW6010B SW3050B	Analyst: STS
Arsenic	4.55	1.99		mg/Kg-dry	1	4/20/2021 6:01:17 PM
Barium	131	0.996		mg/Kg-dry	1	4/20/2021 6:01:17 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:01:17 PM
Chromium	12.7	0.996		mg/Kg-dry	1	4/20/2021 6:01:17 PM
Lead	8.72	0.996		mg/Kg-dry	1	4/20/2021 6:01:17 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 6:01:17 PM
Strontium	107	0.996		mg/Kg-dry	1	4/20/2021 6:01:17 PM
Zinc	33.8	0.996		mg/Kg-dry	1	4/20/2021 6:01:17 PM
29B METALS TRUE TOTAL BARIUM					LDNR 29-B	Analyst: STS
True Total Barium	105	49.4		mg/Kg-dry	1	4/22/2021 5:33:05 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	19.5	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 3/30/2021 12:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-011 **Matrix:** SOLID
Client Sample ID H-21 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	2.99	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	362	12.5		mg/L	50	4/22/2021 1:08:06 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.4	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-012 **Matrix:** SOLID
Client Sample ID H-22 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.6	0.100		meq/100g	1	4/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.88	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.19	0.10		%	1	4/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.69	0.10			1	4/20/2021
Soluble Calcium	5.21	0.02		meq/L	1	4/20/2021
Soluble Magnesium	2.27	0.05		meq/L	1	4/20/2021
Soluble Sodium	9.08	0.25		meq/L	1	4/20/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0970	0.0970		mg/Kg-dry	1	4/26/2021 7:15:47 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.45	2.00		mg/Kg-dry	1	4/20/2021 6:08:12 PM
Barium	3,130	0.999		mg/Kg-dry	1	4/20/2021 6:08:12 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 6:08:12 PM
Chromium	7.36	0.999		mg/Kg-dry	1	4/20/2021 6:08:12 PM
Lead	10.8	0.999		mg/Kg-dry	1	4/20/2021 6:08:12 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:08:12 PM
Strontium	41.4	0.999		mg/Kg-dry	1	4/20/2021 6:08:12 PM
Zinc	14.3	0.999		mg/Kg-dry	1	4/20/2021 6:08:12 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-012 **Matrix:** SOLID
Client Sample ID H-22 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	8,220	47.3		mg/Kg-dry	1	4/22/2021 5:35:12 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	13.8	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
M	Matrix Interference	ND	Not Detected at the Reporting Limit
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 12:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-013 **Matrix:** SOLID
Client Sample ID H-22 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS CATION EXCHANGE CAPACITY					LDNR 29-B	LDNR 29-B Analyst: BXB
Cation Exchange Capacity	32.5	0.100		meq/100g	1	4/27/2021
29B SALTS ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	3.26	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	9.38	0.10		%	1	4/27/2021
29B SALTS SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	9.85	0.10			1	4/20/2021
Soluble Calcium	7.28	0.02		meq/L	1	4/20/2021
Soluble Magnesium	3.25	0.05		meq/L	1	4/20/2021
Soluble Sodium	22.6	0.25		meq/L	1	4/20/2021
29B METALS MERCURY IN SOIL OR SLUDGE					29B/SW7471A	SW7471A Analyst: BXB
Mercury	< 0.0938	0.0938		mg/Kg-dry	1	4/26/2021 7:18:04 AM
29B METALS METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Arsenic	5.15	1.99		mg/Kg-dry	1	4/20/2021 6:10:29 PM
Barium	392	0.996		mg/Kg-dry	1	4/20/2021 6:10:29 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:10:29 PM
Chromium	9.48	0.996		mg/Kg-dry	1	4/20/2021 6:10:29 PM
Lead	11.0	0.996		mg/Kg-dry	1	4/20/2021 6:10:29 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 6:10:29 PM
Strontium	26.8	0.996		mg/Kg-dry	1	4/20/2021 6:10:29 PM
Zinc	15.8	0.996		mg/Kg-dry	1	4/20/2021 6:10:29 PM
29B METALS TRUE TOTAL BARIUM					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 12:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-013 **Matrix:** SOLID
Client Sample ID H-22 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	437	49.2		mg/Kg-dry	1	4/22/2021 5:37:19 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	18.2	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-014 **Matrix:** SOLID
Client Sample ID H-22 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.2	0.100		meq/100g	1	4/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.13	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
LDNR 29-B Analyst: JMI						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.80	0.10		%	1	4/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.06	0.10			1	4/20/2021
Soluble Calcium	4.86	0.02		meq/L	1	4/20/2021
Soluble Magnesium	2.20	0.05		meq/L	1	4/20/2021
Soluble Sodium	15.2	0.25		meq/L	1	4/20/2021
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	4/26/2021 7:27:58 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.90	2.00		mg/Kg-dry	1	4/20/2021 6:12:47 PM
Barium	56.6	0.999		mg/Kg-dry	1	4/20/2021 6:12:47 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 6:12:47 PM
Chromium	14.1	0.999		mg/Kg-dry	1	4/20/2021 6:12:47 PM
Lead	11.9	0.999		mg/Kg-dry	1	4/20/2021 6:12:47 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:12:47 PM
Strontium	21.4	0.999		mg/Kg-dry	1	4/20/2021 6:12:47 PM
Zinc	37.2	0.999		mg/Kg-dry	1	4/20/2021 6:12:47 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-014 **Matrix:** SOLID
Client Sample ID H-22 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	85.0	47.0		mg/Kg-dry	1	4/22/2021 5:39:26 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	16.9	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 12:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-015 **Matrix:** SOLID
Client Sample ID H-22 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.16	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.7	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 1:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-016 **Matrix:** SOLID
Client Sample ID H-22 28-30

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.84	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	13.4	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/1/2021 1:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-017 **Matrix:** SOLID
Client Sample ID H-22 40-42

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.33	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.9	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 3:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-018 **Matrix:** SOLID
Client Sample ID H-23 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.0	0.100		meq/100g	1	4/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.60	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.58	0.10		%	1	4/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.34	0.10			1	4/20/2021
Soluble Calcium	1.04	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.79	0.05		meq/L	1	4/20/2021
Soluble Sodium	3.20	0.25		meq/L	1	4/20/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0971	0.0971		mg/Kg-dry	1	4/26/2021 7:42:44 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.32	1.99		mg/Kg-dry	1	4/20/2021 6:15:04 PM
Barium	171	0.996		mg/Kg-dry	1	4/20/2021 6:15:04 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:15:04 PM
Chromium	12.7	0.996		mg/Kg-dry	1	4/20/2021 6:15:04 PM
Lead	13.0	0.996		mg/Kg-dry	1	4/20/2021 6:15:04 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:15:04 PM
Strontium	31.0	0.996		mg/Kg-dry	1	4/20/2021 6:15:04 PM
Zinc	18.0	0.996		mg/Kg-dry	1	4/20/2021 6:15:04 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 3:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-018 **Matrix:** SOLID
Client Sample ID H-23 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	208	47.6		mg/Kg-dry	1	4/22/2021 5:41:33 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	18.0	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	H	Holding times for preparation or analysis exceeded
M	Matrix Interference	ND	Not Detected at the Reporting Limit
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S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 3:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-019 **Matrix:** SOLID
Client Sample ID H-23 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	25.3	0.100		meq/100g	1	4/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.59	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.80	0.10		%	1	4/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.37	0.10			1	4/20/2021
Soluble Calcium	0.97	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.67	0.05		meq/L	1	4/20/2021
Soluble Sodium	3.05	0.25		meq/L	1	4/20/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	4/26/2021 7:45:01 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.86	1.99		mg/Kg-dry	1	4/20/2021 6:17:22 PM
Barium	193	0.997		mg/Kg-dry	1	4/20/2021 6:17:22 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 6:17:22 PM
Chromium	10.5	0.997		mg/Kg-dry	1	4/20/2021 6:17:22 PM
Lead	9.55	0.997		mg/Kg-dry	1	4/20/2021 6:17:22 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:17:22 PM
Strontium	26.6	0.997		mg/Kg-dry	1	4/20/2021 6:17:22 PM
Zinc	22.4	0.997		mg/Kg-dry	1	4/20/2021 6:17:22 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 3:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-019 **Matrix:** SOLID
Client Sample ID H-23 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS						
TRUE TOTAL BARIUM						Analyst: STS
True Total Barium	231	46.3		mg/Kg-dry	1	4/22/2021 5:43:40 PM
PERCENT MOISTURE						Analyst: BXB
Percent Moisture	16.0	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 3:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-020 **Matrix:** SOLID
Client Sample ID H-23 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	26.7	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.48	0.10		mmhos/cm	1	4/16/2021 1:50:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	12.0	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.16	0.10			1	4/20/2021
Soluble Calcium	1.18	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.74	0.05		meq/L	1	4/20/2021
Soluble Sodium	2.11	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	4/26/2021 7:47:17 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.85	2.00		mg/Kg-dry	1	4/20/2021 6:24:14 PM
Barium	82.9	0.999		mg/Kg-dry	1	4/20/2021 6:24:14 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 6:24:14 PM
Chromium	15.0	0.999		mg/Kg-dry	1	4/20/2021 6:24:14 PM
Lead	13.3	0.999		mg/Kg-dry	1	4/20/2021 6:24:14 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:24:14 PM
Strontium	41.9	0.999		mg/Kg-dry	1	4/20/2021 6:24:14 PM
Zinc	55.4	0.999		mg/Kg-dry	1	4/20/2021 6:24:14 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 3:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-020 **Matrix:** SOLID
Client Sample ID H-23 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	137	47.3		mg/Kg-dry	1	4/22/2021 5:45:48 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	21.4	1.00		wt%	1	4/13/2021 9:30:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 3:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-021 **Matrix:** SOLID
Client Sample ID H-23 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.51	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	22.5	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 4:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-022 **Matrix:** SOLID
Client Sample ID H-23 28-30

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.85	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.8	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/5/2021 4:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-023 **Matrix:** SOLID
Client Sample ID H-23 32-34

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.22	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.3	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-024 **Matrix:** SOLID
Client Sample ID H-24 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.1	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.16	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.24	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.21	0.10			1	4/20/2021
Soluble Calcium	3.31	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.91	0.05		meq/L	1	4/20/2021
Soluble Sodium	6.12	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.101	0.101		mg/Kg-dry	1	4/26/2021 7:49:34 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.66	1.99		mg/Kg-dry	1	4/20/2021 6:26:32 PM
Barium	4,180	0.995		mg/Kg-dry	1	4/20/2021 6:26:32 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	4/20/2021 6:26:32 PM
Chromium	14.6	0.995		mg/Kg-dry	1	4/20/2021 6:26:32 PM
Lead	39.7	0.995		mg/Kg-dry	1	4/20/2021 6:26:32 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 6:26:32 PM
Strontium	89.4	0.995		mg/Kg-dry	1	4/20/2021 6:26:32 PM
Zinc	35.2	0.995		mg/Kg-dry	1	4/20/2021 6:26:32 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-024 **Matrix:** SOLID
Client Sample ID H-24 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	14,200	47.2		mg/Kg-dry	1	4/22/2021 5:47:55 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	16.6	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 12:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-025 **Matrix:** SOLID
Client Sample ID H-24 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.8	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.91	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.22	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	9.89	0.10			1	4/20/2021
Soluble Calcium	3.97	0.02		meq/L	1	4/20/2021
Soluble Magnesium	1.60	0.05		meq/L	1	4/20/2021
Soluble Sodium	16.5	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	4/26/2021 7:51:50 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	< 2.00	2.00		mg/Kg-dry	1	4/20/2021 6:28:49 PM
Barium	254	0.998		mg/Kg-dry	1	4/20/2021 6:28:49 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 6:28:49 PM
Chromium	7.41	0.998		mg/Kg-dry	1	4/20/2021 6:28:49 PM
Lead	9.94	0.998		mg/Kg-dry	1	4/20/2021 6:28:49 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:28:49 PM
Strontium	29.7	0.998		mg/Kg-dry	1	4/20/2021 6:28:49 PM
Zinc	9.61	0.998		mg/Kg-dry	1	4/20/2021 6:28:49 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 12:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-025 **Matrix:** SOLID
Client Sample ID H-24 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	440	48.7		mg/Kg-dry	1	4/22/2021 5:50:03 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	18.2	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-026 **Matrix:** SOLID
Client Sample ID H-24 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.1	0.100		meq/100g	1	4/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.07	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.47	0.10		%	1	4/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.21	0.10			1	4/20/2021
Soluble Calcium	1.76	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.77	0.05		meq/L	1	4/20/2021
Soluble Sodium	5.86	0.25		meq/L	1	4/20/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	4/26/2021 7:54:06 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.90	1.99		mg/Kg-dry	1	4/20/2021 6:31:07 PM
Barium	87.5	0.996		mg/Kg-dry	1	4/20/2021 6:31:07 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:31:07 PM
Chromium	10.1	0.996		mg/Kg-dry	1	4/20/2021 6:31:07 PM
Lead	9.29	0.996		mg/Kg-dry	1	4/20/2021 6:31:07 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 6:31:07 PM
Strontium	23.0	0.996		mg/Kg-dry	1	4/20/2021 6:31:07 PM
Zinc	26.6	0.996		mg/Kg-dry	1	4/20/2021 6:31:07 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-026 **Matrix:** SOLID
Client Sample ID H-24 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	145	47.3		mg/Kg-dry	1	4/22/2021 5:52:11 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	16.6	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 12:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-027 **Matrix:** SOLID
Client Sample ID H-24 12-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.70	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.8	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 1:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-028 **Matrix:** SOLID
Client Sample ID H-24 28-30

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.32	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.4	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/6/2021 2:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-029 **Matrix:** SOLID
Client Sample ID H-24 44-46

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.12	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.2	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-030 **Matrix:** SOLID
Client Sample ID H-25 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	24.7	0.100		meq/100g	1	4/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.01	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
LDNR 29-B Analyst: JMI						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.07	0.10		%	1	4/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	6.42	0.10			1	4/20/2021
Soluble Calcium	6.91	0.02		meq/L	1	4/20/2021
Soluble Magnesium	3.48	0.05		meq/L	1	4/20/2021
Soluble Sodium	14.6	0.25		meq/L	1	4/20/2021
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0974	0.0974		mg/Kg-dry	1	4/26/2021 7:56:23 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.58	1.99		mg/Kg-dry	1	4/20/2021 6:33:25 PM
Barium	160	0.993		mg/Kg-dry	1	4/20/2021 6:33:25 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	4/20/2021 6:33:25 PM
Chromium	8.95	0.993		mg/Kg-dry	1	4/20/2021 6:33:25 PM
Lead	12.6	0.993		mg/Kg-dry	1	4/20/2021 6:33:25 PM
Selenium	< 3.97	3.97		mg/Kg-dry	1	4/20/2021 6:33:25 PM
Strontium	19.6	0.993		mg/Kg-dry	1	4/20/2021 6:33:25 PM
Zinc	12.0	0.993		mg/Kg-dry	1	4/20/2021 6:33:25 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
LDNR 29-B Analyst: STS						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-030 **Matrix:** SOLID
Client Sample ID H-25 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS						
TRUE TOTAL BARIUM						Analyst: STS
True Total Barium	203	47.5		mg/Kg-dry	1	4/22/2021 5:58:34 PM
PERCENT MOISTURE						Analyst: BXB
Percent Moisture	14.3	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:40:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-031 **Matrix:** SOLID
Client Sample ID H-25 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	43.5	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.08	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.11	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.24	0.10			1	4/20/2021
Soluble Calcium	1.79	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.94	0.05		meq/L	1	4/20/2021
Soluble Sodium	6.12	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	4/26/2021 8:03:40 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.84	1.99		mg/Kg-dry	1	4/20/2021 6:35:43 PM
Barium	240	0.996		mg/Kg-dry	1	4/20/2021 6:35:43 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:35:43 PM
Chromium	9.71	0.996		mg/Kg-dry	1	4/20/2021 6:35:43 PM
Lead	12.8	0.996		mg/Kg-dry	1	4/20/2021 6:35:43 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 6:35:43 PM
Strontium	26.0	0.996		mg/Kg-dry	1	4/20/2021 6:35:43 PM
Zinc	15.0	0.996		mg/Kg-dry	1	4/20/2021 6:35:43 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:40:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-031 **Matrix:** SOLID
Client Sample ID H-25 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	362	47.8		mg/Kg-dry	1	4/22/2021 6:00:42 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.7	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:45:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-032 **Matrix:** SOLID
Client Sample ID H-25 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	29.8	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.53	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.97	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.00	0.10			1	4/20/2021
Soluble Calcium	1.06	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.64	0.05		meq/L	1	4/20/2021
Soluble Sodium	2.77	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	4/26/2021 8:05:57 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.81	1.99		mg/Kg-dry	1	4/20/2021 6:38:00 PM
Barium	37.8	0.997		mg/Kg-dry	1	4/20/2021 6:38:00 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:38:00 PM
Chromium	9.43	0.997		mg/Kg-dry	1	4/20/2021 6:38:00 PM
Lead	10.1	0.997		mg/Kg-dry	1	4/20/2021 6:38:00 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:38:00 PM
Strontium	22.2	0.997		mg/Kg-dry	1	4/20/2021 6:38:00 PM
Zinc	16.8	0.997		mg/Kg-dry	1	4/20/2021 6:38:00 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	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
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:45:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-032 **Matrix:** SOLID
Client Sample ID H-25 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	75.4	48.6		mg/Kg-dry	1	4/22/2021 6:02:49 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.6	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-033 **Matrix:** SOLID
Client Sample ID H-25 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	26.5	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.69	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.30	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.57	0.10			1	4/20/2021
Soluble Calcium	1.36	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.77	0.05		meq/L	1	4/20/2021
Soluble Sodium	3.68	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	4/26/2021 8:08:14 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.66	1.99		mg/Kg-dry	1	4/20/2021 6:40:18 PM
Barium	37.2	0.994		mg/Kg-dry	1	4/20/2021 6:40:18 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	4/20/2021 6:40:18 PM
Chromium	13.2	0.994		mg/Kg-dry	1	4/20/2021 6:40:18 PM
Lead	11.9	0.994		mg/Kg-dry	1	4/20/2021 6:40:18 PM
Selenium	< 3.97	3.97		mg/Kg-dry	1	4/20/2021 6:40:18 PM
Strontium	26.8	0.994		mg/Kg-dry	1	4/20/2021 6:40:18 PM
Zinc	31.7	0.994		mg/Kg-dry	1	4/20/2021 6:40:18 PM
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:50:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-033 **Matrix:** SOLID
Client Sample ID H-25 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	80.3	48.1		mg/Kg-dry	1	4/22/2021 6:04:57 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	25.0	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:55:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-034 **Matrix:** SOLID
Client Sample ID H-25 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	19.5	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.70	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.25	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.17	0.10			1	4/20/2021
Soluble Calcium	1.49	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.81	0.05		meq/L	1	4/20/2021
Soluble Sodium	3.40	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0965	0.0965		mg/Kg-dry	1	4/26/2021 8:10:31 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.25	1.99		mg/Kg-dry	1	4/20/2021 6:42:35 PM
Barium	248	0.994		mg/Kg-dry	1	4/20/2021 6:42:35 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	4/20/2021 6:42:35 PM
Chromium	11.8	0.994		mg/Kg-dry	1	4/20/2021 6:42:35 PM
Lead	9.86	0.994		mg/Kg-dry	1	4/20/2021 6:42:35 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 6:42:35 PM
Strontium	293	0.994		mg/Kg-dry	1	4/20/2021 6:42:35 PM
Zinc	42.4	0.994		mg/Kg-dry	1	4/20/2021 6:42:35 PM
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 11:55:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-034 **Matrix:** SOLID
Client Sample ID H-25 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	404	45.9		mg/Kg-dry	1	4/23/2021 4:05:16 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	20.7	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-035 **Matrix:** SOLID
Client Sample ID H-25 24-26

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.55	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.5	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/7/2021 1:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-036 **Matrix:** SOLID
Client Sample ID H-25 40-42

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.70	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.2	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-037 **Matrix:** SOLID
Client Sample ID H-26 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS CATION EXCHANGE CAPACITY					LDNR 29-B	LDNR 29-B Analyst: BXB
Cation Exchange Capacity	25.1	0.100		meq/100g	1	4/27/2021
29B SALTS ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	2.07	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	6.07	0.10		%	1	4/27/2021
29B SALTS SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	9.84	0.10			1	4/20/2021
Soluble Calcium	6.08	0.02		meq/L	1	4/20/2021
Soluble Magnesium	3.33	0.05		meq/L	1	4/20/2021
Soluble Sodium	21.3	0.25		meq/L	1	4/20/2021
29B METALS MERCURY IN SOIL OR SLUDGE					29B/SW7471A	SW7471A Analyst: BXB
Mercury	< 0.0955	0.0955		mg/Kg-dry	1	4/26/2021 8:12:47 AM
29B METALS METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Arsenic	3.33	1.99		mg/Kg-dry	1	4/20/2021 6:44:52 PM
Barium	389	0.996		mg/Kg-dry	1	4/20/2021 6:44:52 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:44:52 PM
Chromium	9.63	0.996		mg/Kg-dry	1	4/20/2021 6:44:52 PM
Lead	10.6	0.996		mg/Kg-dry	1	4/20/2021 6:44:52 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:44:52 PM
Strontium	21.9	0.996		mg/Kg-dry	1	4/20/2021 6:44:52 PM
Zinc	13.3	0.996		mg/Kg-dry	1	4/20/2021 6:44:52 PM
29B METALS TRUE TOTAL BARIUM					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-037 **Matrix:** SOLID
Client Sample ID H-26 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	535	48.7		mg/Kg-dry	1	4/23/2021 4:12:10 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	14.8	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-038 **Matrix:** SOLID
Client Sample ID H-26 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	26.9	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.25	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	11.3	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.22	0.10			1	4/20/2021
Soluble Calcium	1.92	0.02		meq/L	1	4/20/2021
Soluble Magnesium	1.40	0.05		meq/L	1	4/20/2021
Soluble Sodium	6.73	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	4/26/2021 8:15:04 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.35	2.00		mg/Kg-dry	1	4/20/2021 6:51:46 PM
Barium	330	0.998		mg/Kg-dry	1	4/20/2021 6:51:46 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 6:51:46 PM
Chromium	11.1	0.998		mg/Kg-dry	1	4/20/2021 6:51:46 PM
Lead	11.2	0.998		mg/Kg-dry	1	4/20/2021 6:51:46 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:51:46 PM
Strontium	29.5	0.998		mg/Kg-dry	1	4/20/2021 6:51:46 PM
Zinc	15.9	0.998		mg/Kg-dry	1	4/20/2021 6:51:46 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-038 **Matrix:** SOLID
Client Sample ID H-26 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	437	46.6		mg/Kg-dry	1	4/23/2021 4:14:29 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	15.9	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-039 **Matrix:** SOLID
Client Sample ID H-26 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	43.9	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.81	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.85	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.58	0.10			1	4/20/2021
Soluble Calcium	1.50	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.99	0.05		meq/L	1	4/20/2021
Soluble Sodium	4.00	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	4/26/2021 8:17:23 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.54	1.99		mg/Kg-dry	1	4/20/2021 6:54:03 PM
Barium	117	0.995		mg/Kg-dry	1	4/20/2021 6:54:03 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:54:03 PM
Chromium	8.21	0.995		mg/Kg-dry	1	4/20/2021 6:54:03 PM
Lead	8.53	0.995		mg/Kg-dry	1	4/20/2021 6:54:03 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 6:54:03 PM
Strontium	20.6	0.995		mg/Kg-dry	1	4/20/2021 6:54:03 PM
Zinc	15.0	0.995		mg/Kg-dry	1	4/20/2021 6:54:03 PM
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-039 **Matrix:** SOLID
Client Sample ID H-26 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	129	47.5		mg/Kg-dry	1	4/23/2021 4:16:47 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	15.0	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-040 **Matrix:** SOLID
Client Sample ID H-26 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	39.7	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.62	0.10		mmhos/cm	1	4/20/2021 2:15:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.48	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.07	0.10			1	4/20/2021
Soluble Calcium	1.15	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.80	0.05		meq/L	1	4/20/2021
Soluble Sodium	3.03	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	4/26/2021 8:19:39 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.11	1.99		mg/Kg-dry	1	4/20/2021 6:56:21 PM
Barium	501	0.993		mg/Kg-dry	1	4/20/2021 6:56:21 PM
Cadmium	< 0.496	0.496		mg/Kg-dry	1	4/20/2021 6:56:21 PM
Chromium	14.8	0.993		mg/Kg-dry	1	4/20/2021 6:56:21 PM
Lead	11.0	0.993		mg/Kg-dry	1	4/20/2021 6:56:21 PM
Selenium	< 3.97	3.97		mg/Kg-dry	1	4/20/2021 6:56:21 PM
Strontium	29.0	0.993		mg/Kg-dry	1	4/20/2021 6:56:21 PM
Zinc	34.1	0.993		mg/Kg-dry	1	4/20/2021 6:56:21 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-040 **Matrix:** SOLID
Client Sample ID H-26 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS						
TRUE TOTAL BARIUM						Analyst: STS
True Total Barium	733	47.5		mg/Kg-dry	1	4/23/2021 4:19:05 PM
PERCENT MOISTURE						Analyst: BXB
Percent Moisture	14.6	1.00		wt%	1	4/13/2021 10:20:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-041 **Matrix:** SOLID
Client Sample ID H-26 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	39.0	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.75	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.67	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.92	0.10			1	4/20/2021
Soluble Calcium	1.61	0.02		meq/L	1	4/20/2021
Soluble Magnesium	1.07	0.05		meq/L	1	4/20/2021
Soluble Sodium	3.39	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	4/26/2021 8:21:55 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.39	1.99		mg/Kg-dry	1	4/20/2021 6:58:39 PM
Barium	414	0.997		mg/Kg-dry	1	4/20/2021 6:58:39 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 6:58:39 PM
Chromium	17.3	0.997		mg/Kg-dry	1	4/20/2021 6:58:39 PM
Lead	13.5	0.997		mg/Kg-dry	1	4/20/2021 6:58:39 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 6:58:39 PM
Strontium	33.5	0.997		mg/Kg-dry	1	4/20/2021 6:58:39 PM
Zinc	43.5	0.997		mg/Kg-dry	1	4/20/2021 6:58:39 PM
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 12:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-041 **Matrix:** SOLID
Client Sample ID H-26 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	482	47.8		mg/Kg-dry	1	4/23/2021 4:21:23 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.0	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 1:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-042 **Matrix:** SOLID
Client Sample ID H-26 22-24

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.66	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.8	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 1:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-043 **Matrix:** SOLID
Client Sample ID H-26 30-32

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.70	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.6	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/8/2021 3:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-044 **Matrix:** SOLID
Client Sample ID H-26 48-49

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.71	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.3	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:15:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-045 **Matrix:** SOLID
Client Sample ID H-27 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.8	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	2.03	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.76	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.90	0.10			1	4/20/2021
Soluble Calcium	4.31	0.02		meq/L	1	4/20/2021
Soluble Magnesium	2.64	0.05		meq/L	1	4/20/2021
Soluble Sodium	16.6	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0966	0.0966		mg/Kg-dry	1	4/26/2021 8:24:12 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.64	2.00		mg/Kg-dry	1	4/20/2021 7:07:50 PM
Barium	103	0.998		mg/Kg-dry	1	4/20/2021 7:07:50 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 7:07:50 PM
Chromium	6.77	0.998		mg/Kg-dry	1	4/20/2021 7:07:50 PM
Lead	9.62	0.998		mg/Kg-dry	1	4/20/2021 7:07:50 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:07:50 PM
Strontium	17.7	0.998		mg/Kg-dry	1	4/20/2021 7:07:50 PM
Zinc	6.92	0.998		mg/Kg-dry	1	4/20/2021 7:07:50 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:15:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-045 **Matrix:** SOLID
Client Sample ID H-27 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	165	49.0		mg/Kg-dry	1	4/23/2021 4:23:41 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	13.7	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:25:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-046 **Matrix:** SOLID
Client Sample ID H-27 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	31.0	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.94	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	9.22	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.22	0.10			1	4/20/2021
Soluble Calcium	14.0	0.02		meq/L	1	4/20/2021
Soluble Magnesium	8.40	0.05		meq/L	1	4/20/2021
Soluble Sodium	27.5	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0998	0.0998		mg/Kg-dry	1	4/26/2021 8:31:30 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.62	2.00		mg/Kg-dry	1	4/20/2021 7:19:19 PM
Barium	291	1.00		mg/Kg-dry	1	4/20/2021 7:19:19 PM
Cadmium	< 0.500	0.500		mg/Kg-dry	1	4/20/2021 7:19:19 PM
Chromium	8.45	1.00		mg/Kg-dry	1	4/20/2021 7:19:19 PM
Lead	9.42	1.00		mg/Kg-dry	1	4/20/2021 7:19:19 PM
Selenium	< 4.00	4.00		mg/Kg-dry	1	4/20/2021 7:19:19 PM
Strontium	27.7	1.00		mg/Kg-dry	1	4/20/2021 7:19:19 PM
Zinc	13.1	1.00		mg/Kg-dry	1	4/20/2021 7:19:19 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:25:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-046 **Matrix:** SOLID
Client Sample ID H-27 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	389	47.7		mg/Kg-dry	1	4/23/2021 4:32:54 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.8	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-047 **Matrix:** SOLID
Client Sample ID H-27 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	33.9	0.100		meq/100g	1	4/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.97	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	10.0	0.10		%	1	4/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.58	0.10			1	4/20/2021
Soluble Calcium	1.30	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.89	0.05		meq/L	1	4/20/2021
Soluble Sodium	5.83	0.25		meq/L	1	4/20/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0992	0.0992		mg/Kg-dry	1	4/26/2021 8:33:47 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.31	1.99		mg/Kg-dry	1	4/20/2021 7:21:37 PM
Barium	607	0.996		mg/Kg-dry	1	4/20/2021 7:21:37 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 7:21:37 PM
Chromium	8.18	0.996		mg/Kg-dry	1	4/20/2021 7:21:37 PM
Lead	13.9	0.996		mg/Kg-dry	1	4/20/2021 7:21:37 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:21:37 PM
Strontium	32.8	0.996		mg/Kg-dry	1	4/20/2021 7:21:37 PM
Zinc	18.7	0.996		mg/Kg-dry	1	4/20/2021 7:21:37 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:30:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-047 **Matrix:** SOLID
Client Sample ID H-27 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	711	46.4		mg/Kg-dry	1	4/23/2021 4:35:12 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	19.9	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:35:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-048 **Matrix:** SOLID
Client Sample ID H-27 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	23.8	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.27	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.87	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.77	0.10			1	4/20/2021
Soluble Calcium	1.94	0.02		meq/L	1	4/20/2021
Soluble Magnesium	1.30	0.05		meq/L	1	4/20/2021
Soluble Sodium	7.34	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	4/26/2021 8:43:35 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.98	1.99		mg/Kg-dry	1	4/20/2021 7:23:54 PM
Barium	211	0.996		mg/Kg-dry	1	4/20/2021 7:23:54 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 7:23:54 PM
Chromium	5.25	0.996		mg/Kg-dry	1	4/20/2021 7:23:54 PM
Lead	8.59	0.996		mg/Kg-dry	1	4/20/2021 7:23:54 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 7:23:54 PM
Strontium	16.8	0.996		mg/Kg-dry	1	4/20/2021 7:23:54 PM
Zinc	11.8	0.996		mg/Kg-dry	1	4/20/2021 7:23:54 PM
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:35:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-048 **Matrix:** SOLID
Client Sample ID H-27 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	201	46.1		mg/Kg-dry	1	4/23/2021 4:37:30 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.7	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:40:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-049 **Matrix:** SOLID
Client Sample ID H-27 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	20.0	0.100		meq/100g	1	4/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.90	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.82	0.10		%	1	4/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.77	0.10			1	4/20/2021
Soluble Calcium	1.34	0.02		meq/L	1	4/20/2021
Soluble Magnesium	0.94	0.05		meq/L	1	4/20/2021
Soluble Sodium	5.09	0.25		meq/L	1	4/20/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	4/26/2021 8:53:28 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	< 1.99	1.99		mg/Kg-dry	1	4/20/2021 7:26:12 PM
Barium	323	0.997		mg/Kg-dry	1	4/20/2021 7:26:12 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 7:26:12 PM
Chromium	4.56	0.997		mg/Kg-dry	1	4/20/2021 7:26:12 PM
Lead	7.87	0.997		mg/Kg-dry	1	4/20/2021 7:26:12 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:26:12 PM
Strontium	17.3	0.997		mg/Kg-dry	1	4/20/2021 7:26:12 PM
Zinc	12.0	0.997		mg/Kg-dry	1	4/20/2021 7:26:12 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:						
*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:40:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-049 **Matrix:** SOLID
Client Sample ID H-27 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	263	48.7		mg/Kg-dry	1	4/23/2021 4:39:48 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	14.9	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 10:55:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-050 **Matrix:** SOLID
Client Sample ID H-27 16-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.51	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.9	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 11:40:00 AM
Project: Henning II 9403-010-0100
Lab ID: 21040441-051 **Matrix:** SOLID
Client Sample ID H-27 34-36

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.72	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.3	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441

Date Reported: 4/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/9/2021 12:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040441-052 **Matrix:** SOLID
Client Sample ID H-27 50-51

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.25	0.10		mmhos/cm	1	4/20/2021 2:28:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.0	1.00		wt%	1	4/13/2021 11:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39301

Sample ID	MB-39301	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98858
Client ID:	PBS	Batch ID:	39301	TestNo:	SW6010B	SW3050B		Analysis Date:	4/19/2021	SeqNo:	2409743
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Arsenic		< 2.00		2.00							
Barium		< 1.00		1.00							
Cadmium		< 0.500		0.500							
Chromium		< 1.00		1.00							
Lead		< 1.00		1.00							
Selenium		< 4.00		4.00							
Strontium		< 1.00		1.00							
Zinc		< 1.00		1.00							

Sample ID	LCS-39301	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98858
Client ID:	LCSS	Batch ID:	39301	TestNo:	SW6010B	SW3050B		Analysis Date:	4/19/2021	SeqNo:	2409744
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Arsenic		52.9		2.00	50.00	0	106	80	120		
Barium		54.2		1.00	50.00	0	108	80	120		
Cadmium		53.0		0.500	50.00	0	106	80	120		
Chromium		53.9		1.00	50.00	0	108	80	120		
Lead		54.3		1.00	50.00	0	109	80	120		
Selenium		50.7		4.00	50.00	0	101	80	120		
Strontium		53.8		1.00	50.00	0	108	80	120		
Zinc		52.7		1.00	50.00	0	105	80	120		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39301

Sample ID	LCSD-39301	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98858
Client ID:	LCSS02	Batch ID:	39301	TestNo:	SW6010B	SW3050B		Analysis Date:	4/19/2021	SeqNo:	2409745
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.8	2.00	50.00	0	106	80	120	52.90	0.227	20	
Barium	54.4	1.00	50.00	0	109	80	120	54.20	0.377	20	
Cadmium	53.2	0.500	50.00	0	106	80	120	53.03	0.341	20	
Chromium	54.1	1.00	50.00	0	108	80	120	53.91	0.352	20	
Lead	53.8	1.00	50.00	0	108	80	120	54.29	0.964	20	
Selenium	51.5	4.00	50.00	0	103	80	120	50.70	1.64	20	
Strontium	53.9	1.00	50.00	0	108	80	120	53.81	0.226	20	
Zinc	52.8	1.00	50.00	0	106	80	120	52.70	0.146	20	

Sample ID	21031411-002AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98858
Client ID:	ZZZZZ	Batch ID:	39301	TestNo:	SW6010B	SW3050B		Analysis Date:	4/19/2021	SeqNo:	2409749
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.3	2.00	49.93	3.702	89.3	75	125				
Barium	1,090	0.999	49.93	1,081	17.0	75	125				S
Cadmium	43.7	0.499	49.93	0.1609	87.2	75	125				
Chromium	50.6	0.999	49.93	6.611	88.0	75	125				
Lead	54.2	0.999	49.93	12.54	83.4	75	125				
Selenium	41.0	3.99	49.93	0.1819	81.8	75	125				
Strontium	262	0.999	49.93	223.5	77.4	75	125				
Zinc	76.0	0.999	49.93	33.55	85.1	75	125				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39301

Sample ID	21031411-002AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98858
Client ID:	ZZZZZZ	Batch ID:	39301	TestNo:	SW6010B	SW3050B		Analysis Date:	4/19/2021	SeqNo:	2409750
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	49.1	2.00	49.91	3.702	91.0	75	125	48.30	1.67	20	
Barium	1,060	0.998	49.91	1,081	-46.3	75	125	1,089	2.94	20	S
Cadmium	44.2	0.499	49.91	0.1609	88.2	75	125	43.69	1.13	20	
Chromium	51.3	0.998	49.91	6.611	89.5	75	125	50.56	1.44	20	
Lead	54.6	0.998	49.91	12.54	84.4	75	125	54.18	0.862	20	
Selenium	41.0	3.99	49.91	0.1819	81.7	75	125	41.02	0.157	20	
Strontium	262	0.998	49.91	223.5	77.1	75	125	262.1	0.0716	20	
Zinc	76.4	0.998	49.91	33.55	85.9	75	125	76.02	0.511	20	

NOTES:

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39302

Sample ID	MB-39302	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	PBS	Batch ID:	39302	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410586
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Selenium	< 4.00	4.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID	LCS-39302	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	LCSS	Batch ID:	39302	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410589
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Arsenic	55.6	2.00	50.00	0	111	80	120				
Barium	57.0	1.00	50.00	0	114	80	120				
Cadmium	55.4	0.500	50.00	0	111	80	120				
Chromium	56.6	1.00	50.00	0	113	80	120				
Lead	56.8	1.00	50.00	0	114	80	120				
Selenium	53.0	4.00	50.00	0	106	80	120				
Strontium	56.7	1.00	50.00	0	113	80	120				
Zinc	55.3	1.00	50.00	0	111	80	120				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39302

Sample ID	LCSD-39302	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	LCSS02	Batch ID:	39302	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410590
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	55.1	2.00	50.00	0	110	80	120	55.61	0.983	20	
Barium	57.0	1.00	50.00	0	114	80	120	57.00	0.0368	20	
Cadmium	55.3	0.500	50.00	0	111	80	120	55.40	0.152	20	
Chromium	56.6	1.00	50.00	0	113	80	120	56.56	0.133	20	
Lead	56.8	1.00	50.00	0	114	80	120	56.80	0.0616	20	
Selenium	53.5	4.00	50.00	0	107	80	120	52.96	1.04	20	
Strontium	56.6	1.00	50.00	0	113	80	120	56.65	0.0335	20	
Zinc	55.2	1.00	50.00	0	110	80	120	55.32	0.128	20	

Sample ID	21040441-010AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	H-21 10-12	Batch ID:	39302	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410592
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	44.3	1.99	49.84	4.546	79.7	75	125				
Barium	166	0.997	49.84	130.6	71.6	75	125				S
Cadmium	39.7	0.498	49.84	0.2630	79.2	75	125				
Chromium	57.2	0.997	49.84	12.72	89.3	75	125				
Lead	47.5	0.997	49.84	8.718	77.9	75	125				
Selenium	34.9	3.99	49.84	0.2212	69.7	75	125				S
Strontium	144	0.997	49.84	107.1	74.8	75	125				S
Zinc	75.6	0.997	49.84	33.83	83.9	75	125				

Qualifiers:

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

QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39302

Sample ID	21040441-010AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	H-21 10-12	Batch ID:	39302	TestNo:	SW6010B		SW3050B	Analysis Date:	4/20/2021	SeqNo:	2410593
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	45.4	1.99	49.80	4.546	82.0	75	125	44.27	2.45	20	
Barium	166	0.996	49.80	130.6	70.5	75	125	166.3	0.350	20	S
Cadmium	41.3	0.498	49.80	0.2630	82.4	75	125	39.75	3.78	20	
Chromium	59.5	0.996	49.80	12.72	93.9	75	125	57.25	3.87	20	
Lead	49.1	0.996	49.80	8.718	81.1	75	125	47.54	3.20	20	
Selenium	35.6	3.98	49.80	0.2212	71.1	75	125	34.94	1.91	20	S
Strontium	149	0.996	49.80	107.1	85.1	75	125	144.3	3.47	20	
Zinc	78.3	0.996	49.80	33.83	89.4	75	125	75.64	3.49	20	

NOTES:

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39303

Sample ID	MB-39303	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	PBS	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410617
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Arsenic	< 2.00	2.00									
Barium	< 1.00	1.00									
Cadmium	< 0.500	0.500									
Chromium	< 1.00	1.00									
Lead	< 1.00	1.00									
Selenium	< 4.00	4.00									
Strontium	< 1.00	1.00									
Zinc	< 1.00	1.00									

Sample ID	LCS-39303	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	LCSS	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410618
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Arsenic	50.9	2.00	50.00	0	102	80	120				
Barium	53.0	1.00	50.00	0	106	80	120				
Cadmium	50.9	0.500	50.00	0	102	80	120				
Chromium	52.7	1.00	50.00	0	105	80	120				
Lead	52.1	1.00	50.00	0	104	80	120				
Selenium	47.5	4.00	50.00	0	95.0	80	120				
Strontium	52.6	1.00	50.00	0	105	80	120				
Zinc	50.2	1.00	50.00	0	100	80	120				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39303

Sample ID	LCSD-39303	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	LCSS02	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410619
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.1	2.00	50.00	0	100	80	120	50.87	1.52	20	
Barium	52.9	1.00	50.00	0	106	80	120	52.98	0.0717	20	
Cadmium	50.8	0.500	50.00	0	102	80	120	50.93	0.293	20	
Chromium	52.8	1.00	50.00	0	106	80	120	52.74	0.0436	20	
Lead	52.7	1.00	50.00	0	105	80	120	52.10	1.21	20	
Selenium	48.3	4.00	50.00	0	96.6	80	120	47.48	1.73	20	
Strontium	52.4	1.00	50.00	0	105	80	120	52.58	0.301	20	
Zinc	50.1	1.00	50.00	0	100	80	120	50.18	0.0658	20	

Sample ID	21040441-045AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	H-27 0-2	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410621
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.6	1.99	49.86	2.640	90.2	75	125				
Barium	152	0.997	49.86	102.5	99.6	75	125				
Cadmium	46.5	0.499	49.86	0.06684	93.1	75	125				
Chromium	61.2	0.997	49.86	6.769	109	75	125				
Lead	56.0	0.997	49.86	9.617	93.0	75	125				
Selenium	60.2	3.99	49.86	0.1516	120	75	125				
Strontium	67.1	0.997	49.86	17.73	99.1	75	125				
Zinc	58.2	0.997	49.86	6.921	103	75	125				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39303

Sample ID	21040441-045AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896											
Client ID:	H-27 0-2	Batch ID:	39303	TestNo:	SW6010B		SW3050B	Analysis Date:	4/20/2021	SeqNo:	2410622											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual

Arsenic		48.5		2.00		49.88		2.640		92.0		75		125		47.61		1.92		20		
Barium		152		0.998		49.88		102.5		99.4		75		125		152.2		0.0696		20		
Cadmium		46.4		0.499		49.88		0.06684		92.8		75		125		46.48		0.227		20		
Chromium		61.1		0.998		49.88		6.769		109		75		125		61.21		0.255		20		
Lead		55.8		0.998		49.88		9.617		92.6		75		125		55.99		0.319		20		
Selenium		60.3		3.99		49.88		0.1516		120		75		125		60.18		0.124		20		
Strontium		67.1		0.998		49.88		17.73		99.1		75		125		67.12		0.0384		20		
Zinc		58.2		0.998		49.88		6.921		103		75		125		58.17		0.126		20		

Qualifiers:

- | | | |
|---|--|------------------------|
| * Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39314

Sample ID	MB-39314	SampType:	MBLK	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98967
Client ID:	PBS	Batch ID:	39314	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2412719
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

True Total Barium < 50.0 50.0

Sample ID	LCS-39314	SampType:	LCS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98967
Client ID:	LCSS	Batch ID:	39314	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2412722
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

True Total Barium 5,190 50.0 5,000 0 104 75 125

Sample ID	LCSD-39314	SampType:	LCSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98967
Client ID:	LCSS02	Batch ID:	39314	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2412723
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

True Total Barium 5,200 50.0 5,000 0 104 75 125 5,190 0.147 20

Sample ID	21040441-001AMS	SampType:	MS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98967
Client ID:	H-20 0-2	Batch ID:	39314	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2412725
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

True Total Barium 5,310 47.0 4,699 476.3 103 75 125

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39314

Sample ID	21040441-001AMSD	SampType:	MSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98967		
Client ID:	H-20 0-2	Batch ID:	39314	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2412726		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		5,330		46.8	4,677	476.3	104	75	125	5,309	0.446	20	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441

28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39315

Sample ID	MB-39315	SampType:	MBLK	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98999
Client ID:	PBS	Batch ID:	39315	TestNo:	LDNR 29-B			Analysis Date:	4/23/2021	SeqNo:	2413796
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
True Total Barium		< 50.0		50.0							

Sample ID	LCS-39315	SampType:	LCS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98999
Client ID:	LCSS	Batch ID:	39315	TestNo:	LDNR 29-B			Analysis Date:	4/23/2021	SeqNo:	2413797
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
True Total Barium		4,970		50.0	5,000	0	99.4	75	125		

Sample ID	LCSD-39315	SampType:	LCSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98999
Client ID:	LCSS02	Batch ID:	39315	TestNo:	LDNR 29-B			Analysis Date:	4/23/2021	SeqNo:	2413801
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
True Total Barium		4,960		50.0	5,000	0	99.3	75	125	4,969	0.136 20

Sample ID	21040441-034AMS	SampType:	MS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98999
Client ID:	H-25 10-12	Batch ID:	39315	TestNo:	LDNR 29-B			Analysis Date:	4/23/2021	SeqNo:	2413803
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
True Total Barium		5,520		46.6	4,664	403.9	110	75	125		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39315

Sample ID	21040441-034AMSD	SampType:	MSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98999		
Client ID:	H-25 10-12	Batch ID:	39315	TestNo:	LDNR 29-B			Analysis Date:	4/23/2021	SeqNo:	2413804		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		5,840		49.1	4,912	403.9	111	75	125	5,520	5.63	20	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39385

Sample ID	21040441-001Adup	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	4/20/2021	RunNo:	98928		
Client ID:	H-20 0-2	Batch ID:	39385	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/20/2021	SeqNo:	2413646		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		3.22		0.10						3.25	1.16	20	
Soluble Calcium		2.37		0.02						2.47	3.77	20	
Soluble Magnesium		0.75		0.05						0.79	4.67	20	
Soluble Sodium		4.02		0.25						4.15	3.15	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39386

Sample ID	21040441-041Adup	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	4/20/2021	RunNo:	98928		
Client ID:	H-26 10-12	Batch ID:	39386	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/20/2021	SeqNo:	2413673		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		3.00		0.10						2.92	2.52	20	
Soluble Calcium		1.61		0.02						1.61	0.09	20	
Soluble Magnesium		1.07		0.05						1.07	0.23	20	
Soluble Sodium		3.47		0.25						3.39	2.50	20	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39395

Sample ID	MB-39395	SampType:	MBLK	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	PBS	Batch ID:	39395	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414702		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		< 0.100		0.100							

Sample ID	LCS-39395	SampType:	LCS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	LCSS	Batch ID:	39395	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414703		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.843		0.100	0.8330	0	101	80	120		

Sample ID	LCSD-39395	SampType:	LCSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	LCSS02	Batch ID:	39395	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414704		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.870		0.100	0.8330	0	104	80	120	0.8431	3.15 20

Sample ID	21040430-001AMS	SampType:	MS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	ZZZZZZ	Batch ID:	39395	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414707		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.949		0.109	0.9074	0.03290	101	75	125		

Qualifiers:

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

QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39395

Sample ID	21040430-001AMSD	SampType:	MSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025		
Client ID:	ZZZZZZ	Batch ID:	39395	TestNo:	29B/SW7471	SW7471A		Analysis Date:	4/26/2021	SeqNo:	2414708		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury		0.965		0.109	0.9058	0.03290	103	75	125	0.9488	1.71	20	
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Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39396

Sample ID	MB-39396	SampType:	MBLK	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	PBS	Batch ID:	39396	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414732		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		< 0.100		0.100							

Sample ID	LCS-39396	SampType:	LCS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	LCSS	Batch ID:	39396	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414733		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.918		0.100	0.8330	0	110	80	120		

Sample ID	LCSD-39396	SampType:	LCSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	LCSS02	Batch ID:	39396	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414734		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.949		0.100	0.8330	0	114	80	120	0.9182	3.26 20

Sample ID	21040441-014AMS	SampType:	MS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	H-22 8-10	Batch ID:	39396	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414739		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.913		0.107	0.8931	0	102	75	125		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39396

Sample ID	21040441-014AMSD	SampType:	MSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025		
Client ID:	H-22 8-10	Batch ID:	39396	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414740				
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.921		0.107	0.8935	0	103	75	125	0.9127	0.877	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39397

Sample ID	MB-39397	SampType:	MBLK	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	PBS	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414764		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		< 0.100		0.100							

Sample ID	LCS-39397	SampType:	LCS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	LCSS	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414765		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.937		0.100	0.8330	0	113	80	120		

Sample ID	LCSD-39397	SampType:	LCSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	LCSS02	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414766		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.967		0.100	0.8330	0	116	80	120	0.9372	3.12 20

Sample ID	21040441-048AMS	SampType:	MS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025
Client ID:	H-27 8-10	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414769		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.895		0.103	0.8551	0	105	75	125		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39397

Sample ID	21040441-048AMSD	SampType:	MSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025		
Client ID:	H-27 8-10	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A			Analysis Date:	4/26/2021	SeqNo:	2414770		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury		0.924		0.106	0.8862	0	104	75	125	0.8952	3.19	20	
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Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39426

Sample ID	21040441-001Adup	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	4/23/2021	RunNo:	99056		
Client ID:	H-20 0-2	Batch ID:	39426	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/27/2021	SeqNo:	2416044		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		2.76		0.10						2.77	0.36	20	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39427

Sample ID	Ics-39427	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 4/23/2021	RunNo: 99056					
Client ID:	LCSS	Batch ID: 39427	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 4/27/2021	SeqNo: 2415959					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	22.1	0.100	25.00	0	88.4	76	124				
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Sample ID	Icsd-39427	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 4/23/2021	RunNo: 99056					
Client ID:	LCSS02	Batch ID: 39427	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 4/27/2021	SeqNo: 2415960					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	22.4	0.100	25.00	0	89.7	76	124	22.11	1.39	20
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Sample ID	21040441-001Adup	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 4/23/2021	RunNo: 99056					
Client ID:	H-20 0-2	Batch ID: 39427	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 4/27/2021	SeqNo: 2415966					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	34.4	0.100						34.19	0.729	20
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39446

Sample ID	21040441-041Adup	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	4/26/2021	RunNo:	99056		
Client ID:	H-26 10-12	Batch ID:	39446	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/27/2021	SeqNo:	2416052		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		4.23		0.10						5.67	29.1	20	R

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39447

Sample ID	Ics-39447	SampType: LCS	TestCode: CEC	Units: meq/100g	Prep Date: 4/26/2021	RunNo: 99056					
Client ID:	LCSS	Batch ID: 39447	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 4/27/2021	SeqNo: 2415978					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	20.9	0.100	25.00	0	83.4	76	124				
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Sample ID	Icsd-39447	SampType: LCSD	TestCode: CEC	Units: meq/100g	Prep Date: 4/26/2021	RunNo: 99056					
Client ID:	LCSS02	Batch ID: 39447	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 4/27/2021	SeqNo: 2415979					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	21.4	0.100	25.00	0	85.8	76	124	20.86	2.79	20	
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Sample ID	21040441-041Adup	SampType: DUP	TestCode: CEC	Units: meq/100g	Prep Date: 4/26/2021	RunNo: 99056					
Client ID:	H-26 10-12	Batch ID: 39447	TestNo: LDNR 29-B	LDNR 29-B	Analysis Date: 4/27/2021	SeqNo: 2415993					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Cation Exchange Capacity	32.7	0.100						39.01	17.6	20	
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39449

Sample ID	Ics-39449	SampType:	LCS	TestCode:	CEC	Units:	meq/100g	Prep Date:	4/26/2021	RunNo:	99056
Client ID:	LCSS	Batch ID:	39449	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/27/2021	SeqNo:	2416009
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Cation Exchange Capacity	20.4	0.100	25.00	0	81.4	76	124				
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Sample ID	Icsd-39449	SampType:	LCSD	TestCode:	CEC	Units:	meq/100g	Prep Date:	4/26/2021	RunNo:	99056
Client ID:	LCSS02	Batch ID:	39449	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/27/2021	SeqNo:	2416010
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Cation Exchange Capacity	20.9	0.100	25.00	0	83.5	76	124	20.36	2.52	20
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Qualifiers:

* Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98787

Sample ID	21040441-001Adup	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	H-20 0-2	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2407983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.3	1.00						17.50	9.78	20	

Sample ID	21040441-021Adup	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	H-23 14-16	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2408004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.9	1.00						22.50	12.3	20	

Sample ID	21040441-041Adup	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	H-26 10-12	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2408028						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.1	1.00						17.00	0.59	20	

Sample ID	21040481-0011ADU	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	ZZZZZZ	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2408072						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.1	1.00						16.20	5.41	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98787

Sample ID	21040518-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	98787		
Client ID:	ZZZZZZ	Batch ID:	R98787	TestNo:	LDNR 29-B			Analysis Date:	4/14/2021	SeqNo:	2408105		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		23.4		1.00						22.90	2.16	20	

Sample ID	21040509-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	98787		
Client ID:	ZZZZZZ	Batch ID:	R98787	TestNo:	LDNR 29-B			Analysis Date:	4/14/2021	SeqNo:	2408129		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		59.9		1.00						55.00	8.53	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

QC SUMMARY REPORT

WO#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98792

Sample ID	MB-R98792	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98792
Client ID:	PBS	Batch ID:	R98792	TestNo:	LDNR 29-B			Analysis Date:	4/16/2021	SeqNo:	2408243
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R98792	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98792
Client ID:	ZZZZZ	Batch ID:	R98792	TestNo:	LDNR 29-B			Analysis Date:	4/16/2021	SeqNo:	2408244
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.44		0.10	0.46	0	96.9	90	110		

Sample ID	LCS2-R98792	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98792
Client ID:	ZZZZZ	Batch ID:	R98792	TestNo:	LDNR 29-B			Analysis Date:	4/16/2021	SeqNo:	2408245
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		50.5		0.10	53.00	0	95.3	90	110		

Sample ID	21040441-001ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98792
Client ID:	H-20 0-2	Batch ID:	R98792	TestNo:	LDNR 29-B			Analysis Date:	4/16/2021	SeqNo:	2408247
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.91		0.10						0.91	0.22 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98884

Sample ID	MB-R98884	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98884
Client ID:	PBS	Batch ID:	R98884	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410247
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R98884	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98884
Client ID:	ZZZZZ	Batch ID:	R98884	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410248
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.50		0.10	0.46	0	108	90	110		

Sample ID	LCS2-R98884	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98884
Client ID:	ZZZZZ	Batch ID:	R98884	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410249
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		56.5		0.10	53.00	0	107	90	110		

Sample ID	21040441-021ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98884
Client ID:	H-23 14-16	Batch ID:	R98884	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410251
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.52		0.10						0.51	0.78 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98887

Sample ID	MB-R98887	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98887
Client ID:	PBS	Batch ID:	R98887	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410330
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R98887	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98887
Client ID:	ZZZZZ	Batch ID:	R98887	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410331
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.49		0.10	0.46	0	107	90	110		

Sample ID	LCS2-R98887	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98887
Client ID:	ZZZZZ	Batch ID:	R98887	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410332
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		55.7		0.10	53.00	0	105	90	110		

Sample ID	21040441-041ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98887
Client ID:	H-26 10-12	Batch ID:	R98887	TestNo:	LDNR 29-B			Analysis Date:	4/20/2021	SeqNo:	2410334
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.75		0.10						0.75	0.27 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98971

Sample ID	MBLK	SampType:	MBLK	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	98971			
Client ID:	PBW	Batch ID:	R98971	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412835			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250		0.250										

Sample ID	LCS	SampType:	LCS	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	98971			
Client ID:	LCSW	Batch ID:	R98971	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412836			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.2		0.250	10.00	0		102	80	120				

Sample ID	LCSD	SampType:	LCSD	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	98971			
Client ID:	LCSS02	Batch ID:	R98971	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412837			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.2		0.250	10.00	0		102	80	120	10.20	0.388	15	

Sample ID	21040918-008DMS	SampType:	MS	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	98971			
Client ID:	ZZZZZ	Batch ID:	R98971	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412846			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		743		12.5	250.0	465.9		111	80	120				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21040441
 28-Apr-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98971

Sample ID	21040918-008DMSD	SampType:	MSD	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	98971		
Client ID:	ZZZZZZ	Batch ID:	R98971	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412847		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		750		12.5	250.0	465.9	114	80	120	742.5	1.04	15	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- 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: **ICON_ENV**

Work Order Number: **21040441**

RcptNo: **1**

Logged by:	Danielle Hollier	4/12/2021 9:30:00 AM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	4/12/2021 10:19:44 AM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	4/26/2021 10:43:42 AM	<i>Caitlin Duplantis</i>

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° C to 6.0°C Yes No NA
- Not required**
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? Yes No
 (Note discrepancies on chain of custody)
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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:
 Improper error correction(s) made by client

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
-----------	---------	-----------	-------------	---------	-----------	-----------



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Chain of Custody

Laboratory Number:

21040441

Company Name:
 Contact Name:
 Address:
 City, State Zip:
 Phone Number:
 Fax Number:
 E-mail Address:

Client Information:
 Icon Env
 Jason Sills
 2049 Commercial Dr
 Port Allen La 70767
 225 344 8470
 Ext:

Billing Information:
 same

PO Number:
 Quote Number:
 Required QC Level:
 Bill Monthly
 Yes
 No

Project Name/Number:
 Henning II
 9403-010-0100
 Sampler's Signature
 Shipping Method:
 UPS / FedEx / NOW
 DHL / Element / Hand / Mail

Page 1 of 6
Matrix Code
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge SOL = Solid
 O = Oil SO = Soil
 F = Food SW = Swab
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Which Regulations Apply:		Turn Time		Collection Information	Matrix	Container		Pres.	Requested Tests				Comments
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Standard RUSH	(Rush turn times will incur a surcharge and must be pre-approved by lab.)			Quantity	Type P=Plastic, G=Glass, V=Vial		HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	SARLES	CEC	
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	<input type="checkbox"/> 1 Day		Date	Time	Grab / Composite							
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> 2 Day											
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State	<input type="checkbox"/> Other											
<input checked="" type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other												
H-20	0-2	3-29-21	1315	G	SOL				X	X	X	X	
H-20	4-6		1320						X	X	X	X	
H-20	8-10		1330						X	X	X	X	
H-20	18-20		1345						X	X	X	X	
H-20	28-30		1420						X	X	X	X	
H-20	38-40		1445						X	X	X	X	
H-21	0-2	3-30-21	1220						X	X	X	X	
H-21	6-8		1230						X	X	X	X	
H-21	8-10		1235						X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1		4-12-21 0930		4-12-21 0930	
2					Received at lab on ice? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:
3					

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.

8800 North US 31 Columbus, IN 47201 USA P 812-375-0531 F 812-375-0731	328 Ley Road, Suite 100 Fort Wayne, IN 46825 USA P 260-471-7000 F 260-471-7777	909 Executive Dr Warsaw, IN 46580 USA P 574-267-3305 F 574-269-6569	3371 Cleveland Road, Suite 100A South Bend, IN 46628 USA P 574-277-0707 F 574-273-5698	2417 W. Pinhook Rd Lafayette, LA 70508 USA P 337-235-0483 F 337-233-6540
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element™

Chain of Custody

Laboratory Number: **21040441**

Client Information:		Billing Information:		PO Number:	Project Name/Number: Hennings II	Page 2 of 6
Company Name: Icon				Quote Number:		Sampler's Signature:
Contact Name:				Required QC Level:	DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid	
Address:				Bill Monthly:	Shipping Method:	
City, State Zip:				<input type="checkbox"/> Yes	UPS / FedEx / NOW	
Phone Number:		Ext:		<input type="checkbox"/> No	DHL / Element / Hand / Mail	
Fax Number:						
E-mail Address:						

Which Regulations Apply:		Turn Time		(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests					Comments
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Standard	<input type="checkbox"/> RUSH		Quantity	Type P=Plastic, G=Glass, V=Vial		EC	SAB/ESP	CEC	Leachate Cl	29 Metals	
<input type="checkbox"/> POTW		<input type="checkbox"/> 1 Day	<input type="checkbox"/> 2 Day										
<input type="checkbox"/> NPDES		<input type="checkbox"/> Other											
<input type="checkbox"/> USDA/FDA													
<input type="checkbox"/> RECAP/RISC													
Sample ID/Description		Collection Information		Matrix									
Date	Time	Grab / Composite											
H-21	10-12	3-30-21	1240	G	SOL	1	P	-	X				
H-21	4-16	↓	1250						X				
H-22	0-2	4-1-21	1215						X	X	X		
H-22	4-6		1220						X	X	X		
H-22	8-10		1230						X	X	X		
H-22	14-16		1245						X	X	X		
H-22	28-30		1320						X	X	X		
H-22	40-42	↓	1350						X	X	X		
H-23	0-2	4-5-21	1515						X	X	X		

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1		4-12-21 0930		4-12-21 0930	
2					Received at lab on ice? <input type="checkbox"/> Yes <input type="checkbox"/> No Temp:
3					

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.

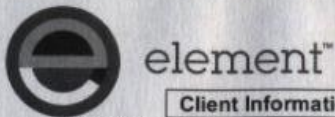
8800 North US 31
Columbus, IN
47201 USA
P 812-375-0531
F 812-375-0731

328 Ley Road, Suite 100
Fort Wayne, IN
46825 USA
P 260-471-7000
F 260-471-7777

909 Executive Dr
Warsaw, IN
46580 USA
P 574-267-3305
F 574-269-6569

3371 Cleveland Road, Suite 100A
South Bend, IN
46628 USA
P 574-277-0707
F 574-273-5880

2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540



Chain of Custody

Laboratory Number: **21040441**

Client Information:		Billing Information:		PO Number:	Project Name/Number:	Page 3 of 6
Company Name:	Icon			Quote Number:	Hamning II	Matrix Code
Contact Name:				Required QC Level:	<i>[Signature]</i>	DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
Address:				Bill Monthly	Shipping Method:	
City, State Zip:				<input type="checkbox"/> Yes	UPS / FedEx / NOW	
Phone Number:	Ext:	Phone Number:	Ext:	<input type="checkbox"/> No	DHL / Element / Hand / Mail	
Fax Number:						
E-mail Address:						

Sample ID/Description	Collection Information			Matrix	Quantity	Type P=Plastic, G=Glass, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests					Comments
	Date	Time	Grab / Composite					EC	SAR/EP	CEC	Leachate	Zn Metals	
H-23	4-6	4-5-21	1520	Gr	30L			X	X	X	X	X	
H-23	10-12		1535					X	X	X	X	X	
H-23	14-16		1545					X	X	X	X	X	
H-23	28-30		1620					X	X	X	X	X	
H-23	32-34		1630					X	X	X	X	X	
H-24	0-2	4-6-21	1215					X	X	X	X	X	
H-24	4-6		1220					X	X	X	X	X	
H-24	8-10		1230					X	X	X	X	X	
H-24	12-14		1240					X	X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<i>[Signature]</i>	4-12-21 0930	<i>[Signature]</i>	4-12-21 0930	
2					Received at lab on ice?
3					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp:

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.

04-12-21

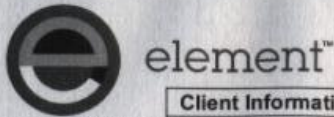
8800 North US 31
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47201 USA
P 812-375-0531
F 812-375-0731

328 Ley Road, Suite 100
Fort Wayne, IN
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F 260-471-7777

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70508 USA
P 337-235-0483
F 337-233-6540



Chain of Custody

Laboratory Number: **21040441**

Page **4** of **6**

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:	Billing Information:	PO Number:	Project Name/Number: Henning II	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	Name: Icon		Quote Number:	Sampler's Signature 	
	Address: Sume		Required QC Level:		
	City, State Zip:		Bill Monthly:	Shipping Method: UPS / FedEx / NOW DHL / Element / Hand / Mail	
	Phone Number: Ext:		<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Fax Number:				

Which Regulations Apply:	Turn Time	Collection Information		Matrix	Container		Pres.	Requested Tests					Comments	
					Quantity	Type		HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	SAR/ES	CFE	Leach/Cl		Zn Metals
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input checked="" type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Date	Time	Grab / Composite									
Sample ID/Description														

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1		4-12-21 0930		4-12-21 0930	
2					Received at lab on ice?
3					<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:

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.

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Chain of Custody

Laboratory Number: 21040441

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:	Billing Information:	PO Number:	Project Name/Number:	Page <u>5</u> of <u>6</u> Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	Company Name: <u>Icon Env</u>		Quote Number:		
	Address: <u>same</u>		Required QC Level		
	City, State Zip:		Bill Monthly		
	Phone Number: Ext:		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
	Fax Number:		Shipping Method: UPS / FedEx / NOW DHL / Element / Hand / Mail		

Sample ID/Description	Collection Information			Matrix	Quantity	Type P=Plastic, G=Glass, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests					Comments	
	Date	Time	Grab / Composite					EC	SARLES	CEC	ZnB Metals	Moisture		
H-26	0-2	4-8-21	1215	G	SOL	1	P	-	X	X	X	X	X	
H-26	4-6	↓	1225	↓	↓	↓	↓	↓	X	X	X	X	X	
H-26	6-8	↓	1230	↓	↓	↓	↓	↓	X	X	X	X	X	
H-26	8-10	↓	1235	↓	↓	↓	↓	↓	X	X	X	X	X	
H-26	10-12	↓	1240	↓	↓	↓	↓	↓	X	X	X	X	X	
H-26	22-24	↓	1310	↓	↓	↓	↓	↓	X	X	X	X	X	
H-26	30-32	↓	1330	↓	↓	↓	↓	↓	X	X	X	X	X	
H-26	48-49	↓	1500	↓	↓	↓	↓	↓	X	X	X	X	X	
H-27	0-2	4-9-21	1015	↓	↓	↓	↓	↓	X	X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1		4-12-21 0930		4-12-21 0930	
2					Received at lab on ice? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:
3					

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.

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Warsaw, IN
46580 USA
P 574-267-3305
F 574-269-6569

3371 Cleveland Road, Suite 100A
South Bend, IN
46628 USA
P 574-277-0707
F 574-273-1613

2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540



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Chain of Custody

Laboratory Number:

21040441

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information:	Billing Information:	PO Number:	Project Name/Number:	Page 6 of 6 Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	Icon Env		Quote Number:	Henning II	
	Ext: same		Required QC Level:	Sampler's Signature	
			Bill Monthly	Shipping Method:	
			<input type="checkbox"/> Yes	UPS / FedEx / NOW	
			<input type="checkbox"/> No	DHL / Element / Hand / Mail	

Which Regulations Apply:		Turn Time		Container	Pres.	Requested Tests				Comments		
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Standard	(Rush turn times will incur a surcharge and must be pre-approved by lab.)			Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC		SAR/ESP	CEC
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	RUSH		P=Plastic, G=Glass, V=Vial								
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> 1 Day										
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State	<input type="checkbox"/> 2 Day										
<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other	<input type="checkbox"/> Other										
Sample ID/Description		Collection Information			Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	EC	SAR/ESP	CEC	DB/Net/ab	/Moisture
		Date	Time	Grab / Composite	Matrix							
H-27	4-6	4-9-21	1025	G	SOL	1	P					
H-27	6-8	↓	1030	↓	↓	↓	↓	X	X	X	X	
H-27	8-10	↓	1035	↓	↓	↓	↓	X	X	X	X	
H-27	10-12	↓	1040	↓	↓	↓	↓	X	X	X	X	
H-27	16-18	↓	1055	↓	↓	↓	↓	X	X	X	X	
H-27	34-36	↓	1140	↓	↓	↓	↓	X	X	X	X	
H-27	50-51	↓	1200	↓	↓	↓	↓	X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1		4-11-21 0930		4-11-21 0930	
2					Received at lab on ice?
3					<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:

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F 574-273-5669

2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540



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

May 06, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II 9403-010-0100

Order No.: 21040518

Dear Greg Miller:

Element Materials Technology Lafayette received 16 sample(s) on 4/13/2021 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 that reads '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#: 21040518
Date: 5/6/2021

CLIENT: ICON Environmental Services

Project: Henning II 9403-010-0100

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#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 12:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-001 **Matrix:** SOLID
Client Sample ID H-28 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.2	0.100		meq/100g	1	4/28/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.03	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
LDNR 29-B Analyst: JMI						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	13.5	0.10		%	1	4/28/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	7.52	0.10			1	4/22/2021
Soluble Calcium	1.18	0.02		meq/L	1	4/22/2021
Soluble Magnesium	0.53	0.05		meq/L	1	4/22/2021
Soluble Sodium	6.96	0.25		meq/L	1	4/22/2021
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	4/26/2021 9:00:45 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.81	1.99		mg/Kg-dry	1	4/20/2021 7:28:30 PM
Barium	7,080	9.95		mg/Kg-dry	10	4/20/2021 9:14:58 PM
Cadmium	0.538	0.497		mg/Kg-dry	1	4/20/2021 7:28:30 PM
Chromium	63.4	0.995		mg/Kg-dry	1	4/20/2021 7:28:30 PM
Lead	54.2	0.995		mg/Kg-dry	1	4/20/2021 7:28:30 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 7:28:30 PM
Strontium	278	0.995		mg/Kg-dry	1	4/20/2021 7:28:30 PM
Zinc	67.4	0.995		mg/Kg-dry	1	4/20/2021 7:28:30 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
LDNR 29-B Analyst: STS						

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#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 12:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-001 **Matrix:** SOLID
Client Sample ID H-28 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	17,200	46.9		mg/Kg-dry	1	4/26/2021 7:49:36 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	22.9	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

(consolidated)

WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 12:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-002 **Matrix:** SOLID
Client Sample ID H-28 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
29B SALTS							
CATION EXCHANGE CAPACITY					LDNR 29-B	LDNR 29-B	Analyst: BXB
Cation Exchange Capacity	30.8	0.100		meq/100g	1	4/28/2021	
29B SALTS							
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.01	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM	
29B SALTS							
EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B	Analyst: BXB
Exchangeable Sodium %	14.2	0.10		%	1	4/28/2021	
29B SALTS							
SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B	Analyst: STS
Sodium Adsorption Ratio	7.00	0.10			1	4/22/2021	
Soluble Calcium	1.12	0.02		meq/L	1	4/22/2021	
Soluble Magnesium	0.65	0.05		meq/L	1	4/22/2021	
Soluble Sodium	6.57	0.25		meq/L	1	4/22/2021	
29B METALS							
MERCURY IN SOIL OR SLUDGE					29B/SW7471A	SW7471A	Analyst: BXB
Mercury	< 0.107	0.107		mg/Kg-dry	1	4/26/2021 9:03:01 AM	
29B METALS							
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B	Analyst: STS
Arsenic	5.18	2.00		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
Barium	416	0.999		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
Chromium	8.32	0.999		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
Lead	9.76	0.999		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
Selenium	< 4.00	4.00		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
Strontium	96.9	0.999		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
Zinc	17.5	0.999		mg/Kg-dry	1	4/20/2021 7:30:47 PM	
29B METALS							
TRUE TOTAL BARIUM					LDNR 29-B		Analyst: STS

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

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WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 12:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-002 **Matrix:** SOLID
Client Sample ID H-28 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	804	47.2		mg/Kg-dry	1	4/26/2021 7:51:43 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.7	1.00		wt%	1	4/14/2021 1:15:00 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



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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 12:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-003 **Matrix:** SOLID
Client Sample ID H-28 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	28.2	0.100		meq/100g	1	4/28/2021
					LDNR 29-B	LDNR 29-B Analyst: BXB
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.57	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
					LDNR 29-B	Analyst: JMI
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	13.9	0.10		%	1	4/28/2021
					LDNR 29-B	LDNR 29-B Analyst: BXB
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	11.2	0.10			1	4/22/2021
Soluble Calcium	1.22	0.02		meq/L	1	4/22/2021
Soluble Magnesium	0.60	0.05		meq/L	1	4/22/2021
Soluble Sodium	10.7	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	4/26/2021 9:05:22 AM
					29B/SW7471A	SW7471A Analyst: BXB
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.21	1.98		mg/Kg-dry	1	4/20/2021 7:33:05 PM
Barium	865	0.991		mg/Kg-dry	1	4/20/2021 7:33:05 PM
Cadmium	< 0.495	0.495		mg/Kg-dry	1	4/20/2021 7:33:05 PM
Chromium	12.8	0.991		mg/Kg-dry	1	4/20/2021 7:33:05 PM
Lead	11.5	0.991		mg/Kg-dry	1	4/20/2021 7:33:05 PM
Selenium	< 3.96	3.96		mg/Kg-dry	1	4/20/2021 7:33:05 PM
Strontium	50.1	0.991		mg/Kg-dry	1	4/20/2021 7:33:05 PM
Zinc	29.3	0.991		mg/Kg-dry	1	4/20/2021 7:33:05 PM
					SW6010B	SW3050B Analyst: STS
29B METALS						
TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS

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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 Lafayette, LA 70508-3344
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 Website: www.element.com

Analytical Report

(consolidated)

WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 12:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-003 **Matrix:** SOLID
Client Sample ID H-28 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS			LDNR 29-B			Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	745	47.8		mg/Kg-dry	1	4/26/2021 7:53:50 PM
PERCENT MOISTURE			LDNR 29-B			Analyst: BXB
Percent Moisture	17.2	1.00		wt%	1	4/14/2021 1:15:00 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



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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 12:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-004 **Matrix:** SOLID
Client Sample ID H-28 14-15

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	3.82	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.9	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

(consolidated)

WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-005 **Matrix:** SOLID
Client Sample ID H-29 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	33.4	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.68	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.28	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.75	0.10			1	4/22/2021
Soluble Calcium	1.79	0.02		meq/L	1	4/22/2021
Soluble Magnesium	0.71	0.05		meq/L	1	4/22/2021
Soluble Sodium	3.08	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	4/26/2021 9:07:38 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.61	1.98		mg/Kg-dry	1	4/20/2021 7:35:23 PM
Barium	354	0.992		mg/Kg-dry	1	4/20/2021 7:35:23 PM
Cadmium	< 0.496	0.496		mg/Kg-dry	1	4/20/2021 7:35:23 PM
Chromium	10.1	0.992		mg/Kg-dry	1	4/20/2021 7:35:23 PM
Lead	12.3	0.992		mg/Kg-dry	1	4/20/2021 7:35:23 PM
Selenium	< 3.97	3.97		mg/Kg-dry	1	4/20/2021 7:35:23 PM
Strontium	27.3	0.992		mg/Kg-dry	1	4/20/2021 7:35:23 PM
Zinc	14.7	0.992		mg/Kg-dry	1	4/20/2021 7:35:23 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	H	M
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
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Analytical Report

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WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-005 **Matrix:** SOLID
Client Sample ID H-29 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	477	49.1		mg/Kg-dry	1	4/26/2021 7:55:58 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.6	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-006 **Matrix:** SOLID
Client Sample ID H-29 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
29B SALTS							
CATION EXCHANGE CAPACITY					LDNR 29-B	LDNR 29-B	Analyst: BXB
Cation Exchange Capacity	30.0	0.100		meq/100g	1	4/28/2021	
29B SALTS							
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B		Analyst: JMI
Electrical Conductivity	3.18	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM	
29B SALTS							
EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B	Analyst: BXB
Exchangeable Sodium %	1.02	0.10		%	1	4/28/2021	
29B SALTS							
SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B	Analyst: STS
Sodium Adsorption Ratio	3.28	0.10			1	4/28/2021	
Soluble Calcium	22.1	0.02		meq/L	1	4/28/2021	
Soluble Magnesium	5.27	0.05		meq/L	1	4/28/2021	
Soluble Sodium	12.1	0.25		meq/L	1	4/28/2021	
29B METALS							
MERCURY IN SOIL OR SLUDGE					29B/SW7471A	SW7471A	Analyst: BXB
Mercury	< 0.0965	0.0965		mg/Kg-dry	1	4/26/2021 9:09:55 AM	
29B METALS							
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B	Analyst: STS
Arsenic	3.61	2.00		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
Barium	406	0.998		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
Chromium	8.95	0.998		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
Lead	11.1	0.998		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
Strontium	32.1	0.998		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
Zinc	15.1	0.998		mg/Kg-dry	1	4/20/2021 7:37:41 PM	
29B METALS							
TRUE TOTAL BARIUM					LDNR 29-B		Analyst: STS

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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-006 **Matrix:** SOLID
Client Sample ID H-29 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	518	49.6		mg/Kg-dry	1	4/26/2021 7:58:05 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.1	1.00		wt%	1	4/14/2021 1:15:00 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



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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-007 **Matrix:** SOLID
Client Sample ID H-29 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
29B SALTS							
CATION EXCHANGE CAPACITY					LDNR 29-B	LDNR 29-B	Analyst: BXB
Cation Exchange Capacity	31.2	0.100		meq/100g	1	4/28/2021	
29B SALTS							
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.18	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM	
29B SALTS							
EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B	Analyst: BXB
Exchangeable Sodium %	2.95	0.10		%	1	4/28/2021	
29B SALTS							
SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B	Analyst: STS
Sodium Adsorption Ratio	2.57	0.10			1	4/22/2021	
Soluble Calcium	4.36	0.02		meq/L	1	4/22/2021	
Soluble Magnesium	1.65	0.05		meq/L	1	4/22/2021	
Soluble Sodium	4.45	0.25		meq/L	1	4/22/2021	
29B METALS							
MERCURY IN SOIL OR SLUDGE					29B/SW7471A	SW7471A	Analyst: BXB
Mercury	< 0.0945	0.0945		mg/Kg-dry	1	4/26/2021 9:12:11 AM	
29B METALS							
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B	Analyst: STS
Arsenic	7.93	2.00		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
Barium	179	0.999		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
Cadmium	< 0.500	0.500		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
Chromium	15.3	0.999		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
Lead	11.2	0.999		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
Selenium	< 4.00	4.00		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
Strontium	34.0	0.999		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
Zinc	42.7	0.999		mg/Kg-dry	1	4/20/2021 7:39:59 PM	
29B METALS							
TRUE TOTAL BARIUM					LDNR 29-B		Analyst: STS

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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 Lafayette, LA 70508-3344
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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-007 **Matrix:** SOLID
Client Sample ID H-29 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	230	48.9		mg/Kg-dry	1	4/26/2021 8:00:12 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	18.5	1.00		wt%	1	4/14/2021 1:15:00 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



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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-008 **Matrix:** SOLID
Client Sample ID H-29 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	23.9	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.38	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.57	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.41	0.10			1	4/22/2021
Soluble Calcium	5.34	0.02		meq/L	1	4/22/2021
Soluble Magnesium	1.94	0.05		meq/L	1	4/22/2021
Soluble Sodium	4.60	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	4/26/2021 9:14:27 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.70	1.99		mg/Kg-dry	1	4/20/2021 7:46:54 PM
Barium	107	0.994		mg/Kg-dry	1	4/20/2021 7:46:54 PM
Cadmium	< 0.497	0.497		mg/Kg-dry	1	4/20/2021 7:46:54 PM
Chromium	12.1	0.994		mg/Kg-dry	1	4/20/2021 7:46:54 PM
Lead	8.69	0.994		mg/Kg-dry	1	4/20/2021 7:46:54 PM
Selenium	< 3.98	3.98		mg/Kg-dry	1	4/20/2021 7:46:54 PM
Strontium	278	0.994		mg/Kg-dry	1	4/20/2021 7:46:54 PM
Zinc	48.2	0.994		mg/Kg-dry	1	4/20/2021 7:46:54 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	H	M
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:40:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-008 **Matrix:** SOLID
Client Sample ID H-29 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	155	46.2		mg/Kg-dry	1	4/26/2021 8:02:20 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	18.2	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-009 **Matrix:** SOLID
Client Sample ID H-30 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
29B SALTS							
CATION EXCHANGE CAPACITY					LDNR 29-B	LDNR 29-B	Analyst: BXB
Cation Exchange Capacity	25.4	0.100		meq/100g	1	4/28/2021	
29B SALTS							
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B		Analyst: JMI
Electrical Conductivity	3.08	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM	
29B SALTS							
EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B	Analyst: BXB
Exchangeable Sodium %	0.87	0.10		%	1	4/28/2021	
29B SALTS							
SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B	Analyst: STS
Sodium Adsorption Ratio	2.62	0.10			1	4/28/2021	
Soluble Calcium	22.0	0.02		meq/L	1	4/28/2021	
Soluble Magnesium	5.84	0.05		meq/L	1	4/28/2021	
Soluble Sodium	9.78	0.25		meq/L	1	4/28/2021	
29B METALS							
MERCURY IN SOIL OR SLUDGE					29B/SW7471A	SW7471A	Analyst: BXB
Mercury	< 0.0936	0.0936		mg/Kg-dry	1	4/26/2021 9:16:44 AM	
29B METALS							
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B	Analyst: STS
Arsenic	< 2.00	2.00		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
Barium	137	0.999		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
Chromium	9.27	0.999		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
Lead	8.85	0.999		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
Strontium	18.4	0.999		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
Zinc	10.4	0.999		mg/Kg-dry	1	4/20/2021 7:49:14 PM	
29B METALS							
TRUE TOTAL BARIUM					LDNR 29-B		Analyst: STS

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#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-009 **Matrix:** SOLID
Client Sample ID H-30 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	170	48.2		mg/Kg-dry	1	4/26/2021 8:04:27 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.3	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-010 **Matrix:** SOLID
Client Sample ID H-30 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	28.6	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	3.67	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.40	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.13	0.10			1	4/22/2021
Soluble Calcium	24.3	0.02		meq/L	1	4/22/2021
Soluble Magnesium	5.78	0.05		meq/L	1	4/22/2021
Soluble Sodium	12.1	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	4/26/2021 9:19:01 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	2.76	1.99		mg/Kg-dry	1	4/20/2021 7:51:33 PM
Barium	553	0.993		mg/Kg-dry	1	4/20/2021 7:51:33 PM
Cadmium	< 0.496	0.496		mg/Kg-dry	1	4/20/2021 7:51:33 PM
Chromium	9.77	0.993		mg/Kg-dry	1	4/20/2021 7:51:33 PM
Lead	8.60	0.993		mg/Kg-dry	1	4/20/2021 7:51:33 PM
Selenium	< 3.97	3.97		mg/Kg-dry	1	4/20/2021 7:51:33 PM
Strontium	33.7	0.993		mg/Kg-dry	1	4/20/2021 7:51:33 PM
Zinc	16.3	0.993		mg/Kg-dry	1	4/20/2021 7:51:33 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	H	M
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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 Lafayette, LA 70508-3344
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WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 2:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-010 **Matrix:** SOLID
Client Sample ID H-30 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	697	47.8		mg/Kg-dry	1	4/26/2021 8:06:34 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.9	1.00		wt%	1	4/14/2021 1:15:00 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



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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-011 **Matrix:** SOLID
Client Sample ID H-30 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	25.0	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.32	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.99	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.08	0.10			1	4/22/2021
Soluble Calcium	4.38	0.02		meq/L	1	4/22/2021
Soluble Magnesium	1.74	0.05		meq/L	1	4/22/2021
Soluble Sodium	5.38	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	4/26/2021 9:21:17 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.46	1.99		mg/Kg-dry	1	4/20/2021 7:53:52 PM
Barium	424	0.996		mg/Kg-dry	1	4/20/2021 7:53:52 PM
Cadmium	< 0.498	0.498		mg/Kg-dry	1	4/20/2021 7:53:52 PM
Chromium	16.9	0.996		mg/Kg-dry	1	4/20/2021 7:53:52 PM
Lead	12.2	0.996		mg/Kg-dry	1	4/20/2021 7:53:52 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:53:52 PM
Strontium	32.7	0.996		mg/Kg-dry	1	4/20/2021 7:53:52 PM
Zinc	43.4	0.996		mg/Kg-dry	1	4/20/2021 7:53:52 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	H	M
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#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-011 **Matrix:** SOLID
Client Sample ID H-30 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	418	48.8		mg/Kg-dry	1	4/26/2021 8:08:41 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	16.6	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

(consolidated)

WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-012 **Matrix:** SOLID
Client Sample ID H-30 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	23.9	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.52	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.20	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.23	0.10			1	4/22/2021
Soluble Calcium	5.38	0.02		meq/L	1	4/22/2021
Soluble Magnesium	1.96	0.05		meq/L	1	4/22/2021
Soluble Sodium	6.18	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0978	0.0978		mg/Kg-dry	1	4/26/2021 9:28:34 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.88	2.00		mg/Kg-dry	1	4/20/2021 7:56:11 PM
Barium	97.3	0.998		mg/Kg-dry	1	4/20/2021 7:56:11 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 7:56:11 PM
Chromium	12.3	0.998		mg/Kg-dry	1	4/20/2021 7:56:11 PM
Lead	9.99	0.998		mg/Kg-dry	1	4/20/2021 7:56:11 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:56:11 PM
Strontium	190	0.998		mg/Kg-dry	1	4/20/2021 7:56:11 PM
Zinc	45.7	0.998		mg/Kg-dry	1	4/20/2021 7:56:11 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	H	M
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-012 **Matrix:** SOLID
Client Sample ID H-30 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	158	49.6		mg/Kg-dry	1	4/26/2021 8:15:03 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	18.4	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

(consolidated)

WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-013 **Matrix:** SOLID
Client Sample ID H-31 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	38.5	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.99	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.67	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.90	0.10			1	4/22/2021
Soluble Calcium	1.85	0.02		meq/L	1	4/22/2021
Soluble Magnesium	0.62	0.05		meq/L	1	4/22/2021
Soluble Sodium	5.45	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.102	0.102		mg/Kg-dry	1	4/26/2021 9:30:51 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	< 2.00	2.00		mg/Kg-dry	1	4/20/2021 7:58:31 PM
Barium	85.0	0.998		mg/Kg-dry	1	4/20/2021 7:58:31 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 7:58:31 PM
Chromium	9.45	0.998		mg/Kg-dry	1	4/20/2021 7:58:31 PM
Lead	9.17	0.998		mg/Kg-dry	1	4/20/2021 7:58:31 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 7:58:31 PM
Strontium	16.8	0.998		mg/Kg-dry	1	4/20/2021 7:58:31 PM
Zinc	10.3	0.998		mg/Kg-dry	1	4/20/2021 7:58:31 PM
29B METALS						
TRUE TOTAL BARIUM						

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

Analytical Report

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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-013 **Matrix:** SOLID
Client Sample ID H-31 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	163	49.4		mg/Kg-dry	1	4/26/2021 8:17:10 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.3	1.00		wt%	1	4/14/2021 1:15:00 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



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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-014 **Matrix:** SOLID
Client Sample ID H-31 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
29B SALTS							
CATION EXCHANGE CAPACITY					LDNR 29-B	LDNR 29-B	Analyst: BXB
Cation Exchange Capacity	31.6	0.100		meq/100g	1	4/28/2021	
29B SALTS							
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.76	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM	
29B SALTS							
EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B	Analyst: BXB
Exchangeable Sodium %	2.87	0.10		%	1	4/28/2021	
29B SALTS							
SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B	Analyst: STS
Sodium Adsorption Ratio	2.65	0.10			1	4/22/2021	
Soluble Calcium	2.12	0.02		meq/L	1	4/22/2021	
Soluble Magnesium	0.81	0.05		meq/L	1	4/22/2021	
Soluble Sodium	3.20	0.25		meq/L	1	4/22/2021	
29B METALS							
MERCURY IN SOIL OR SLUDGE					29B/SW7471A	SW7471A	Analyst: BXB
Mercury	< 0.108	0.108		mg/Kg-dry	1	4/26/2021 9:33:07 AM	
29B METALS							
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B	Analyst: STS
Arsenic	2.77	2.00		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
Barium	324	0.998		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
Chromium	8.26	0.998		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
Lead	9.78	0.998		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
Strontium	25.7	0.998		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
Zinc	15.4	0.998		mg/Kg-dry	1	4/20/2021 8:00:50 PM	
29B METALS							
TRUE TOTAL BARIUM					LDNR 29-B		Analyst: STS

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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 Lafayette, LA 70508-3344
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WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-014 **Matrix:** SOLID
Client Sample ID H-31 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	387	49.1		mg/Kg-dry	1	4/26/2021 8:19:18 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.1	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-015 **Matrix:** SOLID
Client Sample ID H-31 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	29.0	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.53	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.89	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	1.71	0.10			1	4/22/2021
Soluble Calcium	8.23	0.02		meq/L	1	4/22/2021
Soluble Magnesium	2.32	0.05		meq/L	1	4/22/2021
Soluble Sodium	3.93	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0964	0.0964		mg/Kg-dry	1	4/30/2021 9:36:05 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.98	2.00		mg/Kg-dry	1	4/20/2021 8:03:09 PM
Barium	475	0.998		mg/Kg-dry	1	4/20/2021 8:03:09 PM
Cadmium	< 0.499	0.499		mg/Kg-dry	1	4/20/2021 8:03:09 PM
Chromium	13.6	0.998		mg/Kg-dry	1	4/20/2021 8:03:09 PM
Lead	11.1	0.998		mg/Kg-dry	1	4/20/2021 8:03:09 PM
Selenium	< 3.99	3.99		mg/Kg-dry	1	4/20/2021 8:03:09 PM
Strontium	29.6	0.998		mg/Kg-dry	1	4/20/2021 8:03:09 PM
Zinc	34.4	0.998		mg/Kg-dry	1	4/20/2021 8:03:09 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	H	M
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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:25:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-015 **Matrix:** SOLID
Client Sample ID H-31 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	420	46.4		mg/Kg-dry	1	4/26/2021 8:21:25 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	17.2	1.00		wt%	1	4/14/2021 1:15:00 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



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Analytical Report

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WO#: 21040518

Date Reported: 5/6/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-016 **Matrix:** SOLID
Client Sample ID H-31 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	21.9	0.100		meq/100g	1	4/28/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.53	0.10		mmhos/cm	1	4/22/2021 10:35:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.75	0.10		%	1	4/28/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.02	0.10			1	4/22/2021
Soluble Calcium	6.65	0.02		meq/L	1	4/22/2021
Soluble Magnesium	2.05	0.05		meq/L	1	4/22/2021
Soluble Sodium	4.21	0.25		meq/L	1	4/22/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.105	0.105		mg/Kg-dry	1	4/26/2021 9:35:24 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	7.09	1.99		mg/Kg-dry	1	4/20/2021 8:05:28 PM
Barium	199	0.993		mg/Kg-dry	1	4/20/2021 8:05:28 PM
Cadmium	< 0.496	0.496		mg/Kg-dry	1	4/20/2021 8:05:28 PM
Chromium	10.4	0.993		mg/Kg-dry	1	4/20/2021 8:05:28 PM
Lead	8.14	0.993		mg/Kg-dry	1	4/20/2021 8:05:28 PM
Selenium	< 3.97	3.97		mg/Kg-dry	1	4/20/2021 8:05:28 PM
Strontium	236	0.993		mg/Kg-dry	1	4/20/2021 8:05:28 PM
Zinc	33.3	0.993		mg/Kg-dry	1	4/20/2021 8:05:28 PM
29B METALS						
TRUE TOTAL BARIUM						

Qualifiers:	H	M
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#: **21040518**

Date Reported: **5/6/2021**

CLIENT: ICON Environmental Services **Collection Date:** 4/12/2021 3:30:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21040518-016 **Matrix:** SOLID
Client Sample ID H-31 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	238	48.0		mg/Kg-dry	1	4/26/2021 8:23:32 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	16.9	1.00		wt%	1	4/14/2021 1:15:00 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



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QC SUMMARY REPORT

WO#: 21040518

06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39303

Sample ID	MB-39303	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	PBS	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410617
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Arsenic		< 2.00		2.00							
Barium		< 1.00		1.00							
Cadmium		< 0.500		0.500							
Chromium		< 1.00		1.00							
Lead		< 1.00		1.00							
Selenium		< 4.00		4.00							
Strontium		< 1.00		1.00							
Zinc		< 1.00		1.00							

Sample ID	LCS-39303	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	LCSS	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410618
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Arsenic		50.9		2.00	50.00	0	102	80	120		
Barium		53.0		1.00	50.00	0	106	80	120		
Cadmium		50.9		0.500	50.00	0	102	80	120		
Chromium		52.7		1.00	50.00	0	105	80	120		
Lead		52.1		1.00	50.00	0	104	80	120		
Selenium		47.5		4.00	50.00	0	95.0	80	120		
Strontium		52.6		1.00	50.00	0	105	80	120		
Zinc		50.2		1.00	50.00	0	100	80	120		

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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 Website: www.element.com

QC SUMMARY REPORT

WO#: 21040518

06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39303

Sample ID	LCSD-39303	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	LCSS02	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410619
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	50.1	2.00	50.00	0	100	80	120	50.87	1.52	20	
Barium	52.9	1.00	50.00	0	106	80	120	52.98	0.0717	20	
Cadmium	50.8	0.500	50.00	0	102	80	120	50.93	0.293	20	
Chromium	52.8	1.00	50.00	0	106	80	120	52.74	0.0436	20	
Lead	52.7	1.00	50.00	0	105	80	120	52.10	1.21	20	
Selenium	48.3	4.00	50.00	0	96.6	80	120	47.48	1.73	20	
Strontium	52.4	1.00	50.00	0	105	80	120	52.58	0.301	20	
Zinc	50.1	1.00	50.00	0	100	80	120	50.18	0.0658	20	

Sample ID	21040441-045AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	ZZZZZ	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410621
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	47.6	1.99	49.86	2.640	90.2	75	125				
Barium	152	0.997	49.86	102.5	99.6	75	125				
Cadmium	46.5	0.499	49.86	0.06684	93.1	75	125				
Chromium	61.2	0.997	49.86	6.769	109	75	125				
Lead	56.0	0.997	49.86	9.617	93.0	75	125				
Selenium	60.2	3.99	49.86	0.1516	120	75	125				
Strontium	67.1	0.997	49.86	17.73	99.1	75	125				
Zinc	58.2	0.997	49.86	6.921	103	75	125				

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39303

Sample ID	21040441-045AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	4/14/2021	RunNo:	98896
Client ID:	ZZZZZZ	Batch ID:	39303	TestNo:	SW6010B	SW3050B		Analysis Date:	4/20/2021	SeqNo:	2410622
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.5	2.00	49.88	2.640	92.0	75	125	47.61	1.92	20	
Barium	152	0.998	49.88	102.5	99.4	75	125	152.2	0.0696	20	
Cadmium	46.4	0.499	49.88	0.06684	92.8	75	125	46.48	0.227	20	
Chromium	61.1	0.998	49.88	6.769	109	75	125	61.21	0.255	20	
Lead	55.8	0.998	49.88	9.617	92.6	75	125	55.99	0.319	20	
Selenium	60.3	3.99	49.88	0.1516	120	75	125	60.18	0.124	20	
Strontium	67.1	0.998	49.88	17.73	99.1	75	125	67.12	0.0384	20	
Zinc	58.2	0.998	49.88	6.921	103	75	125	58.17	0.126	20	

Qualifiers:

- | | | | | | |
|----|--|---|---|-----|-------------------------------------|
| H | Holding times for preparation or analysis exceeded | M | Matrix Interference | ND | Not Detected at the Reporting Limit |
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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39318

Sample ID	MB-39318	SampType:	MBLK	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99038			
Client ID:	PBS	Batch ID:	39318	TestNo:	LDNR 29-B			Analysis Date:	4/26/2021	SeqNo:	2415365			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium < 50.0 50.0

Sample ID	LCS-39318	SampType:	LCS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99038			
Client ID:	LCSS	Batch ID:	39318	TestNo:	LDNR 29-B			Analysis Date:	4/26/2021	SeqNo:	2415366			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 4,890 50.0 5,000 0 97.7 75 125

Sample ID	LCSD-39318	SampType:	LCSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99038			
Client ID:	LCSS02	Batch ID:	39318	TestNo:	LDNR 29-B			Analysis Date:	4/26/2021	SeqNo:	2415367			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 4,900 50.0 5,000 0 98.0 75 125 4,887 0.301 20

Sample ID	21040512-001AMS	SampType:	MS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99038			
Client ID:	ZZZZZZ	Batch ID:	39318	TestNo:	LDNR 29-B			Analysis Date:	4/26/2021	SeqNo:	2415368			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

True Total Barium 16,800 48.5 4,850 12,800 81.7 75 125

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39318

Sample ID	21040512-001AMSD	SampType:	MSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99038		
Client ID:	ZZZZZZ	Batch ID:	39318	TestNo:	LDNR 29-B			Analysis Date:	4/26/2021	SeqNo:	2415370		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		17,700		46.0	4,604	12,800	107	75	125	16,760	5.51	20	

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040518

06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39397

Sample ID	MB-39397	SampType:	MBLK	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025					
Client ID:	PBS	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414764							
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		< 0.100		0.100												

Sample ID	LCS-39397	SampType:	LCS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025					
Client ID:	LCSS	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414765							
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.937		0.100		0.8330		0		113	80	120				

Sample ID	LCSD-39397	SampType:	LCSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025					
Client ID:	LCSS02	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414766							
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.967		0.100		0.8330		0		116	80	120	0.9372	3.12	20	

Sample ID	21040441-048AMS	SampType:	MS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025					
Client ID:	ZZZZZZ	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/26/2021	SeqNo:	2414769							
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.895		0.103		0.8551		0		105	75	125				

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39397

Sample ID	21040441-048AMSD	SampType:	MSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/23/2021	RunNo:	99025		
Client ID:	ZZZZZZ	Batch ID:	39397	TestNo:	29B/SW7471 SW7471A			Analysis Date:	4/26/2021	SeqNo:	2414770		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.924		0.106	0.8862	0	104	75	125	0.8952	3.19	20	

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39422

Sample ID	21040518-001ADUP	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	4/22/2021	RunNo:	98998		
Client ID:	H-28 0-2	Batch ID:	39422	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/22/2021	SeqNo:	2413733		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		7.49		0.10						7.52	0.42	20	
Soluble Calcium		1.17		0.02						1.18	0.94	20	
Soluble Magnesium		0.53		0.05						0.53	0.86	20	
Soluble Sodium		6.89		0.25						6.96	0.88	20	

Sample ID	21040568-001ADUP	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	4/22/2021	RunNo:	98998		
Client ID:	ZZZZZZ	Batch ID:	39422	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/22/2021	SeqNo:	2413750		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		0.72		0.10						0.74	1.88	20	
Soluble Calcium		1.91		0.02						1.90	0.42	20	
Soluble Magnesium		0.91		0.05						0.90	1.09	20	
Soluble Sodium		0.86		0.25						0.87	1.56	20	

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 39471

Sample ID	21040518-001ADUP	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	4/27/2021	RunNo:	99098		
Client ID:	H-28 0-2	Batch ID:	39471	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/28/2021	SeqNo:	2418707		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		13.3		0.10						13.47	0.97	20	

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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040518

06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39472

Sample ID	21040518-001ADUP	SampType:	DUP	TestCode:	CEC	Units:	meq/100g	Prep Date:	4/27/2021	RunNo:	99098
Client ID:	H-28 0-2	Batch ID:	39472	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/28/2021	SeqNo:	2418688
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		29.8		0.100						30.22	1.50 20

Sample ID	lcs-39472	SampType:	LCS	TestCode:	CEC	Units:	meq/100g	Prep Date:	4/27/2021	RunNo:	99098
Client ID:	LCSS	Batch ID:	39472	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/28/2021	SeqNo:	2418704
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		19.9		0.100	25.00	0	79.5	76	124		

Sample ID	lcsd-39472	SampType:	LCSD	TestCode:	CEC	Units:	meq/100g	Prep Date:	4/27/2021	RunNo:	99098
Client ID:	LCSS02	Batch ID:	39472	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	4/28/2021	SeqNo:	2418705
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		20.3		0.100	25.00	0	81.2	76	124	19.87	2.14 20

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#: 21040518

06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39500

Sample ID	MB-39500	SampType:	MBLK	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/29/2021	RunNo:	99161
Client ID:	PBS	Batch ID:	39500	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/30/2021	SeqNo:	2419977		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		< 0.100		0.100							

Sample ID	LCS-39500	SampType:	LCS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/29/2021	RunNo:	99161
Client ID:	LCSS	Batch ID:	39500	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/30/2021	SeqNo:	2419978		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.903		0.100	0.8330	0	108	80	120		

Sample ID	LCSD-39500	SampType:	LCSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/29/2021	RunNo:	99161
Client ID:	LCSS02	Batch ID:	39500	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/30/2021	SeqNo:	2419979		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.914		0.100	0.8330	0	110	80	120	0.9028	1.23 20

Sample ID	21040518-015AMS	SampType:	MS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/29/2021	RunNo:	99161
Client ID:	H-31 8-10	Batch ID:	39500	TestNo:	29B/SW7471 SW7471A	Analysis Date:	4/30/2021	SeqNo:	2419982		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.801		0.0944	0.7867	0	102	75	125		

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 39500

Sample ID	21040518-015AMSD	SampType:	MSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	4/29/2021	RunNo:	99161											
Client ID:	H-31 8-10	Batch ID:	39500	TestNo:	29B/SW7471 SW7471A			Analysis Date:	4/30/2021	SeqNo:	2419983											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual

Mercury		0.851		0.0986		0.8215		0		104		75		125		0.8014		6.02		20		
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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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040518

06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: R98787

Sample ID	21040441-001Adup	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	ZZZZZZ	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2407983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.3	1.00						17.50	9.78	20	

Sample ID	21040441-021Adup	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	ZZZZZZ	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2408004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.9	1.00						22.50	12.3	20	

Sample ID	21040441-041Adup	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	ZZZZZZ	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2408028						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.1	1.00						17.00	0.59	20	

Sample ID	21040481-0011ADU	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 98787					
Client ID:	ZZZZZZ	Batch ID: R98787	TestNo: LDNR 29-B	Analysis Date: 4/13/2021	SeqNo: 2408072						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.1	1.00						16.20	5.41	20	

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

QC SUMMARY REPORT

WO#: 21040518
 06-May-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R98787

Sample ID	21040518-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	98787
Client ID:	H-28 0-2	Batch ID:	R98787	TestNo:	LDNR 29-B			Analysis Date:	4/14/2021	SeqNo:	2408105
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture		23.4		1.00						22.90	2.16 20

Sample ID	21040509-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	98787
Client ID:	ZZZZZZ	Batch ID:	R98787	TestNo:	LDNR 29-B			Analysis Date:	4/14/2021	SeqNo:	2408129
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture		59.9		1.00						55.00	8.53 20

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#: 21040518
 06-May-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: R98942

Sample ID	MB-R98942	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98942
Client ID:	PBS	Batch ID:	R98942	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2411885
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity < 0.10 0.10

Sample ID	LCS1-R98942	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98942
Client ID:	ZZZZZ	Batch ID:	R98942	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2411886
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 0.46 0.10 0.46 0 101 90 110

Sample ID	LCS2-R98942	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98942
Client ID:	ZZZZZ	Batch ID:	R98942	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2411887
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 54.2 0.10 53.00 0 102 90 110

Sample ID	21040518-001ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	98942
Client ID:	H-28 0-2	Batch ID:	R98942	TestNo:	LDNR 29-B			Analysis Date:	4/22/2021	SeqNo:	2411891
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 1.04 0.10 1.03 0.96 20

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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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **21040518** RcptNo: **1**

Logged by:	Danielle Hollier	4/13/2021 3:45:00 PM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	4/13/2021 4:02:54 PM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	4/26/2021 4:03:19 PM	<i>Caitlin Duplantis</i>

Chain of Custody

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

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
-----------	---------	-----------	-------------	---------	-----------	-----------



element

Chain of Custody

Laboratory Number: 21040518

Page 1 of 2

Client Information:	Billing Information:	PO Number:	Project Name/Number:	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
Company Name: <u>Iron Env</u>			<u>Henning II</u>	
Contact Name: <u>Jason Sills</u>		Quote Number:	<u>9403-010-0100</u>	
Address: <u>2049 Commercial Dr</u>		Required QC Level:	<u>[Signature]</u>	
City, State Zip: <u>Port Allen La 70267</u>	<u>same</u>	Bill Monthly:	Shipping Method:	
Phone Number: <u>225 344 8490</u> Ext:		<input type="checkbox"/> Yes <input type="checkbox"/> No	UPS / FedEx / NOW DHL / Element / <u>Hand</u> / Mail	

Which Regulations Apply:	Turn Time	Collection Information	Container	Pres.	Requested Tests						Comments		
					Quantity	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Fe	Sulfur	CEL		ZAB Metals	% Moisture
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Standard RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other											
Sample ID/Description	Date	Time	Grab / Composite	Matrix									
H-28	0-2	4-12-21	1200	G	SOL	1	P	-	X	X	X	X	X
H-28	2-6		1205						X	X	X	X	X
H-28	6-8		1210						X	X	X	X	X
H-28	14-15		1230						X	X	X	X	X
H-29	0-2		1420						X	X	X	X	X
H-29	4-6		1425						X	X	X	X	X
H-29	8-10		1435						X	X	X	X	X
H-29	10-12		1440						X	X	X	X	X
H-30	6-2		1445						X	X	X	X	X

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<u>[Signature]</u>	4-13-21 / 1430	<u>[Signature]</u>	4-13-21 / 1430	
2	<u>[Signature]</u>				Received at lab on ice? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:
3	<u>[Signature]</u>	4-13-21 / 1545	<u>[Signature]</u>	4-13-21 / 1545	

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.

8800 North US 31
Columbus, IN
47201 USA
P 812-375-0531
F 812-375-0731

328 Ley Road, Suite 100
Fort Wayne, IN
46825 USA
P 260-471-7000
F 260-471-7777

909 Executive Dr
Warsaw, IN
46580 USA
P 574-267-3305
F 574-269-6569

3371 Cleveland Road, Suite 100A
South Bend, IN
46628 USA
P 574-277-0707
F 574-273-5699

2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540



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Chain of Custody

Laboratory Number: 21040518

Client Information:	Billing Information:	PO Number:	Project Name/Number:	Page <u>2</u> of <u>2</u>
Company Name: <u>Iron</u>			<u>Hemming II</u>	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
Contact Name:		Quote Number:	Sampler's Signature	
Address:	<u>Same</u>	Required QC Level	<u>[Signature]</u>	
City, State Zip:		Bill Monthly	Shipping Method:	
Phone Number:	Ext:	Ext:	<input type="checkbox"/> Yes <input type="checkbox"/> No UPS / FedEx / NOW DHL / Element / <u>Hand</u> / Mail	
Fax Number:				
E-mail Address:				

Which Regulations Apply:		Turn Time		(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests					Comments
<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Standard	<input type="checkbox"/> RUSH		Quantity	Type P=Plastic, G=Glass, V=Vial	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃						
<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	<input type="checkbox"/> 1 Day	<input type="checkbox"/> 2 Day										
<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	<input type="checkbox"/> Other											
<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State												
<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other												
Sample ID/Description		Collection Information		Grab / Composite	Matrix								
H-30	4-6	4-12-21	1450	G	SOL	1	P	-	X	X	X	X	
H-30	8-10		1500						X	X	X	X	
H-30	10-12		1505						X	X	X	X	
H-31	0-2		1510						X	X	X	X	
H-31	6-8		1520						X	X	X	X	
H-31	8-10		1525						X	X	X	X	
H-31	10-12		1530						X	X	X	X	

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<u>[Signature]</u>	4-13-21 / 1430	<u>[Signature]</u>	4-13-21 / 1430	
2	<u>[Signature]</u>				Received at lab on ice? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:
3	<u>[Signature]</u>	4-13-21 / 1545	<u>[Signature]</u>	4-13-21 / 1545	

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2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540



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

April 30, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning

Order No.: 21040918

Dear Greg Miller:

Element Materials Technology Lafayette received 8 sample(s) on 4/21/2021 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 that reads '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
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Website: www.element.com

Case Narrative

WO#: 21040918
Date: 4/30/2021

CLIENT: ICON Environmental Services

Project: Henning

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.

Please review the Sample Log-in Check List regarding the discrepancies between the chain of custody and the samples received and the documentation of client resolution.

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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 10:00:00 AM
Project: Henning
Lab ID: 21040918-001 **Matrix:** AQUEOUS
Client Sample ID H-20

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.136	0.136		mg/L	1	4/26/2021 10:42:00 PM
TPH (Oil Range)	< 0.125	0.125		mg/L	1	4/26/2021 10:42:00 PM
Surr: 4-Terphenyl-d14	98.4	51.4 - 146		%Rec	1	4/26/2021 10:42:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	4/26/2021 7:43:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	103	70 - 130		%Rec	1	4/26/2021 7:43:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	4/26/2021 7:43:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	4/26/2021 7:43:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	4/26/2021 7:43:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	4/26/2021 7:43:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	99.6	70 - 130		%Rec	1	4/26/2021 7:43:00 PM
MERCURY IN GROUND WATER, TOTAL					SW7470A	Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	4/28/2021 8:19:07 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	282	12.5		mg/L	50	4/22/2021 10:36:32 AM
Sulfate	961	12.5		mg/L	50	4/22/2021 10:36:32 AM
METALS IN WATER BY ICP, TOTALS					SW6010B	Analyst: STS
Barium	0.0162	0.0100		mg/L	1	4/29/2021 2:51:29 PM
Cadmium	< 0.00500	0.00500		mg/L	1	4/29/2021 2:51:29 PM
Calcium	207	0.500		mg/L	1	4/29/2021 2:51:29 PM
Chromium	< 0.0100	0.0100		mg/L	1	4/29/2021 2:51:29 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



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Analytical Report

(consolidated)

WO#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 10:00:00 AM
Project: Henning
Lab ID: 21040918-001 **Matrix:** AQUEOUS
Client Sample ID H-20

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, TOTALS			SW6010B		Analyst: STS	
Iron	0.292	0.0100		mg/L	1	4/29/2021 2:51:29 PM
Lead	< 0.0100	0.0100		mg/L	1	4/29/2021 2:51:29 PM
Magnesium	106	0.500		mg/L	1	4/29/2021 2:51:29 PM
Manganese	1.64	0.0100		mg/L	1	4/29/2021 2:51:29 PM
Potassium	6.24	5.00		mg/L	1	4/29/2021 2:51:29 PM
Sodium	310	10.0		mg/L	1	4/29/2021 2:51:29 PM
Strontium	1.18	0.0100		mg/L	1	4/29/2021 2:51:29 PM
Zinc	< 0.0100	0.0100		mg/L	1	4/29/2021 2:51:29 PM
METALS IN WATER BY ICP-MS, TOTAL			SW6020A		Analyst: MRB	
Arsenic	< 0.00250	0.00250		mg/L	10	4/29/2021 11:14:16 AM
ALKALINITY; TOTAL, CARB, BICARB			SM2320 B		Analyst: MAB	
Alkalinity, Bicarbonate (As CaCO3)	342	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	342	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS			SM2540C		Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	2,060	100		mg/L	5	4/23/2021 7:30:00 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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 11:10:00 AM
Project: Henning
Lab ID: 21040918-002 **Matrix:** AQUEOUS
Client Sample ID H-22

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.140	0.140		mg/L	1	4/26/2021 11:12:00 PM
TPH (Oil Range)	< 0.120	0.120		mg/L	1	4/26/2021 11:12:00 PM
Surr: 4-Terphenyl-d14	105	51.4 - 146		%Rec	1	4/26/2021 11:12:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	4/29/2021 8:00:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	102	70 - 130		%Rec	1	4/29/2021 8:00:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	4/29/2021 8:00:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	4/29/2021 8:00:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	4/29/2021 8:00:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	4/29/2021 8:00:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	99.6	70 - 130		%Rec	1	4/29/2021 8:00:00 PM
MERCURY IN GROUND WATER, TOTAL					SW7470A	Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	4/28/2021 8:29:22 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	283	12.5		mg/L	50	4/22/2021 10:50:10 AM
Sulfate	757	12.5		mg/L	50	4/22/2021 10:50:10 AM
METALS IN WATER BY ICP, TOTALS					SW6010B	Analyst: STS
Barium	0.0360	0.0100		mg/L	1	4/29/2021 3:03:42 PM
Cadmium	< 0.00500	0.00500		mg/L	1	4/29/2021 3:03:42 PM
Calcium	187	0.500		mg/L	1	4/29/2021 3:03:42 PM
Chromium	< 0.0100	0.0100		mg/L	1	4/29/2021 3:03:42 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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 11:10:00 AM
Project: Henning
Lab ID: 21040918-002 **Matrix:** AQUEOUS
Client Sample ID H-22

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Iron	1.22	0.0100		mg/L	1	4/29/2021 3:03:42 PM
Lead	< 0.0100	0.0100		mg/L	1	4/29/2021 3:03:42 PM
Magnesium	79.1	0.500		mg/L	1	4/29/2021 3:03:42 PM
Manganese	1.17	0.0100		mg/L	1	4/29/2021 3:03:42 PM
Potassium	6.05	5.00		mg/L	1	4/29/2021 3:03:42 PM
Sodium	313	10.0		mg/L	1	4/29/2021 3:03:42 PM
Strontium	0.940	0.0100		mg/L	1	4/29/2021 3:03:42 PM
Zinc	< 0.0100	0.0100		mg/L	1	4/29/2021 3:03:42 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A		Analyst: MRB
Arsenic	< 0.00250	0.00250		mg/L	10	4/29/2021 11:17:04 AM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B		Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	340	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	340	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	1,810	100		mg/L	5	4/23/2021 7:30:00 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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 1:35:00 PM
Project: Henning
Lab ID: 21040918-003 **Matrix:** AQUEOUS
Client Sample ID H-23

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.132	0.132		mg/L	1	4/26/2021 11:41:00 PM
TPH (Oil Range)	< 0.122	0.122		mg/L	1	4/26/2021 11:41:00 PM
Surr: 4-Terphenyl-d14	107	51.4 - 146		%Rec	1	4/26/2021 11:41:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	4/29/2021 8:27:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	102	70 - 130		%Rec	1	4/29/2021 8:27:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	4/29/2021 8:27:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	4/29/2021 8:27:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	4/29/2021 8:27:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	4/29/2021 8:27:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	97.8	70 - 130		%Rec	1	4/29/2021 8:27:00 PM
MERCURY IN GROUND WATER, TOTAL					SW7470A	Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	4/28/2021 8:31:38 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	321	12.5		mg/L	50	4/22/2021 11:03:58 AM
Sulfate	783	12.5		mg/L	50	4/22/2021 11:03:58 AM
METALS IN WATER BY ICP, TOTALS					SW6010B	Analyst: STS
Barium	0.0205	0.0100		mg/L	1	4/29/2021 3:06:00 PM
Cadmium	< 0.00500	0.00500		mg/L	1	4/29/2021 3:06:00 PM
Calcium	175	0.500		mg/L	1	4/29/2021 3:06:00 PM
Chromium	< 0.0100	0.0100		mg/L	1	4/29/2021 3:06:00 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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 1:35:00 PM
Project: Henning
Lab ID: 21040918-003 **Matrix:** AQUEOUS
Client Sample ID H-23

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, TOTALS					SW6010B	Analyst: STS
Iron	0.218	0.0100		mg/L	1	4/29/2021 3:06:00 PM
Lead	< 0.0100	0.0100		mg/L	1	4/29/2021 3:06:00 PM
Magnesium	78.0	0.500		mg/L	1	4/29/2021 3:06:00 PM
Manganese	0.926	0.0100		mg/L	1	4/29/2021 3:06:00 PM
Potassium	5.53	5.00		mg/L	1	4/29/2021 3:06:00 PM
Sodium	374	10.0		mg/L	1	4/29/2021 3:06:00 PM
Strontium	0.890	0.0100		mg/L	1	4/29/2021 3:06:00 PM
Zinc	< 0.0100	0.0100		mg/L	1	4/29/2021 3:06:00 PM
METALS IN WATER BY ICP-MS, TOTAL					SW6020A	Analyst: MRB
Arsenic	< 0.00250	0.00250		mg/L	10	4/29/2021 11:19:52 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	362	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	362	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	1,840	100		mg/L	5	4/23/2021 7:30:00 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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 3:00:00 PM
Project: Henning
Lab ID: 21040918-004 **Matrix:** AQUEOUS
Client Sample ID H-24

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.134	0.134		mg/L	1	4/27/2021 12:11:00 AM
TPH (Oil Range)	< 0.124	0.124		mg/L	1	4/27/2021 12:11:00 AM
Surr: 4-Terphenyl-d14	101	51.4 - 146		%Rec	1	4/27/2021 12:11:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	4/29/2021 8:54:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	103	70 - 130		%Rec	1	4/29/2021 8:54:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	4/29/2021 8:54:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	4/29/2021 8:54:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	4/29/2021 8:54:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	4/29/2021 8:54:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	99.2	70 - 130		%Rec	1	4/29/2021 8:54:00 PM
MERCURY IN GROUND WATER, TOTAL					SW7470A	Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	4/28/2021 8:33:55 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	552	12.5		mg/L	50	4/22/2021 11:17:45 AM
Sulfate	266	12.5		mg/L	50	4/22/2021 11:17:45 AM
METALS IN WATER BY ICP, TOTALS					SW6010B	Analyst: STS
Barium	0.0507	0.0100		mg/L	1	4/29/2021 3:08:18 PM
Cadmium	< 0.00500	0.00500		mg/L	1	4/29/2021 3:08:18 PM
Calcium	191	0.500		mg/L	1	4/29/2021 3:08:18 PM
Chromium	< 0.0100	0.0100		mg/L	1	4/29/2021 3:08:18 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
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Analytical Report

(consolidated)

WO#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 3:00:00 PM
Project: Henning
Lab ID: 21040918-004 **Matrix:** AQUEOUS
Client Sample ID H-24

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Iron	0.417	0.0100		mg/L	1	4/29/2021 3:08:18 PM
Lead	< 0.0100	0.0100		mg/L	1	4/29/2021 3:08:18 PM
Magnesium	85.3	0.500		mg/L	1	4/29/2021 3:08:18 PM
Manganese	1.35	0.0100		mg/L	1	4/29/2021 3:08:18 PM
Potassium	5.94	5.00		mg/L	1	4/29/2021 3:08:18 PM
Sodium	254	10.0		mg/L	1	4/29/2021 3:08:18 PM
Strontium	1.05	0.0100		mg/L	1	4/29/2021 3:08:18 PM
Zinc	< 0.0100	0.0100		mg/L	1	4/29/2021 3:08:18 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A		Analyst: MRB
Arsenic	< 0.00250	0.00250		mg/L	10	4/29/2021 11:22:39 AM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B		Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	342	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	342	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	1,540	100		mg/L	5	4/23/2021 7:30:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services

Collection Date: 4/19/2021

Project: Henning

Lab ID: 21040918-005

Matrix: AQUEOUS

Client Sample ID Dup

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.136	0.136		mg/L	1	4/27/2021 12:41:00 AM
TPH (Oil Range)	< 0.125	0.125		mg/L	1	4/27/2021 12:41:00 AM
Surr: 4-Terphenyl-d14	105	51.4 - 146		%Rec	1	4/27/2021 12:41:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	4/29/2021 9:22:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	102	70 - 130		%Rec	1	4/29/2021 9:22:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	4/29/2021 9:22:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	4/29/2021 9:22:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	4/29/2021 9:22:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	4/29/2021 9:22:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	98.0	70 - 130		%Rec	1	4/29/2021 9:22:00 PM
MERCURY IN GROUND WATER, TOTAL					SW7470A	Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	4/28/2021 10:00:29 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	287	12.5		mg/L	50	4/22/2021 11:31:32 AM
Sulfate	942	12.5		mg/L	50	4/22/2021 11:31:32 AM
METALS IN WATER BY ICP, TOTALS					SW6010B	Analyst: STS
Barium	0.0150	0.0100		mg/L	1	4/29/2021 3:10:36 PM
Cadmium	< 0.00500	0.00500		mg/L	1	4/29/2021 3:10:36 PM
Calcium	210	0.500		mg/L	1	4/29/2021 3:10:36 PM
Chromium	< 0.0100	0.0100		mg/L	1	4/29/2021 3:10:36 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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services

Collection Date: 4/19/2021

Project: Henning

Lab ID: 21040918-005

Matrix: AQUEOUS

Client Sample ID Dup

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, TOTALS				SW6010B		Analyst: STS
Iron	0.240	0.0100		mg/L	1	4/29/2021 3:10:36 PM
Lead	< 0.0100	0.0100		mg/L	1	4/29/2021 3:10:36 PM
Magnesium	108	0.500		mg/L	1	4/29/2021 3:10:36 PM
Manganese	1.67	0.0100		mg/L	1	4/29/2021 3:10:36 PM
Potassium	6.25	5.00		mg/L	1	4/29/2021 3:10:36 PM
Sodium	315	10.0		mg/L	1	4/29/2021 3:10:36 PM
Strontium	1.21	0.0100		mg/L	1	4/29/2021 3:10:36 PM
Zinc	< 0.0100	0.0100		mg/L	1	4/29/2021 3:10:36 PM
METALS IN WATER BY ICP-MS, TOTAL				SW6020A		Analyst: MRB
Arsenic	< 0.00250	0.00250		mg/L	10	4/29/2021 11:25:27 AM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B		Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	352	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	352	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	2,040	100		mg/L	5	4/23/2021 7:30:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/20/2021 2:40:00 PM
Project: Henning
Lab ID: 21040918-006 **Matrix:** AQUEOUS
Client Sample ID H-25

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.359	0.137		mg/L	1	4/27/2021 1:10:00 AM
TPH (Oil Range)	< 0.126	0.126		mg/L	1	4/27/2021 1:10:00 AM
Surr: 4-Terphenyl-d14	102	51.4 - 146		%Rec	1	4/27/2021 1:10:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	4/29/2021 9:49:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	103	70 - 130		%Rec	1	4/29/2021 9:49:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	4/29/2021 9:49:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	4/29/2021 9:49:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	4/29/2021 9:49:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	4/29/2021 9:49:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	98.6	70 - 130		%Rec	1	4/29/2021 9:49:00 PM
MERCURY IN GROUND WATER, DISSOLVED					SW7470A	Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	4/28/2021 8:51:32 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	347	12.5		mg/L	50	4/22/2021 11:45:20 AM
Sulfate	254	12.5		mg/L	50	4/22/2021 11:45:20 AM
METALS IN WATER BY ICP, DISSOLVED					SW6010B	Analyst: STS
Barium	0.0775	0.0100		mg/L	1	4/29/2021 3:31:18 PM
Cadmium	< 0.00500	0.00500		mg/L	1	4/29/2021 3:31:18 PM
Calcium	126	0.500		mg/L	1	4/29/2021 3:31:18 PM
Chromium	< 0.0100	0.0100		mg/L	1	4/29/2021 3:31:18 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#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/20/2021 2:40:00 PM
Project: Henning
Lab ID: 21040918-006 **Matrix:** AQUEOUS
Client Sample ID H-25

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, DISSOLVED			SW6010B		Analyst: STS	
Iron	0.377	0.0100		mg/L	1	4/29/2021 3:31:18 PM
Lead	< 0.0100	0.0100		mg/L	1	4/29/2021 3:31:18 PM
Magnesium	50.2	0.500		mg/L	1	4/29/2021 3:31:18 PM
Manganese	1.51	0.0100		mg/L	1	4/29/2021 3:31:18 PM
Potassium	< 5.00	5.00		mg/L	1	4/29/2021 3:31:18 PM
Sodium	271	10.0		mg/L	1	4/29/2021 3:31:18 PM
Strontium	0.748	0.0100		mg/L	1	4/29/2021 3:31:18 PM
Zinc	< 0.0100	0.0100		mg/L	1	4/29/2021 3:31:18 PM
METALS IN WATER BY ICP-MS, DISSOLVED			SW6020A		Analyst: MRB	
Arsenic	< 0.00250	0.00250		mg/L	10	4/29/2021 11:57:50 AM
ALKALINITY; TOTAL, CARB, BICARB			SM2320 B		Analyst: MAB	
Alkalinity, Bicarbonate (As CaCO3)	388	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	388	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS			SM2540C		Analyst: GMS	
Total Dissolved Solids (Residue, Filterable)	1,260	100		mg/L	5	4/23/2021 7:30:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/20/2021 2:25:00 PM
Project: Henning
Lab ID: 21040918-007 **Matrix:** AQUEOUS
Client Sample ID H-26

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	250	12.5		mg/L	50	4/22/2021 11:59:08 AM
Sulfate	246	12.5		mg/L	50	4/22/2021 11:59:08 AM
METALS IN WATER BY ICP, TOTALS					SW6010B	Analyst: STS
Calcium	108	0.500		mg/L	1	4/29/2021 3:17:30 PM
Magnesium	47.1	0.500		mg/L	1	4/29/2021 3:17:30 PM
Potassium	7.37	5.00		mg/L	1	4/29/2021 3:17:30 PM
Sodium	241	10.0		mg/L	1	4/29/2021 3:17:30 PM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	342	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	342	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	1,120	100		mg/L	5	4/23/2021 7:30:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 2:00:00 PM
Project: Henning
Lab ID: 21040918-008 **Matrix:** AQUEOUS
Client Sample ID H-27

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.248	0.136		mg/L	1	4/27/2021 1:40:00 AM
TPH (Oil Range)	< 0.125	0.125		mg/L	1	4/27/2021 1:40:00 AM
Surr: 4-Terphenyl-d14	106	51.4 - 146		%Rec	1	4/27/2021 1:40:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	4/29/2021 10:16:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	102	70 - 130		%Rec	1	4/29/2021 10:16:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021						
Benzene	< 0.00500	0.00500		mg/L	1	4/29/2021 10:16:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	4/29/2021 10:16:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	4/29/2021 10:16:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	4/29/2021 10:16:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	98.0	70 - 130		%Rec	1	4/29/2021 10:16:00 PM
MERCURY IN GROUND WATER, DISSOLVED					SW7470A	Analyst: BXB
Mercury	< 0.000200	0.000200		mg/L	1	4/28/2021 9:01:40 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	466	12.5		mg/L	50	4/22/2021 12:12:55 PM
Sulfate	499	12.5		mg/L	50	4/22/2021 12:12:55 PM
METALS IN WATER BY ICP, DISSOLVED					SW6010B	Analyst: STS
Barium	0.0489	0.0100		mg/L	1	4/29/2021 3:38:13 PM
Cadmium	< 0.00500	0.00500		mg/L	1	4/29/2021 3:38:13 PM
Calcium	180	0.500		mg/L	1	4/29/2021 3:38:13 PM
Chromium	< 0.0100	0.0100		mg/L	1	4/29/2021 3:38:13 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



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21040918

Date Reported: 4/30/2021

CLIENT: ICON Environmental Services **Collection Date:** 4/19/2021 2:00:00 PM
Project: Henning
Lab ID: 21040918-008 **Matrix:** AQUEOUS
Client Sample ID H-27

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, DISSOLVED				SW6010B		Analyst: STS
Iron	1.22	0.0100		mg/L	1	4/29/2021 3:38:13 PM
Lead	< 0.0100	0.0100		mg/L	1	4/29/2021 3:38:13 PM
Magnesium	76.8	0.500		mg/L	1	4/29/2021 3:38:13 PM
Manganese	0.755	0.0100		mg/L	1	4/29/2021 3:38:13 PM
Potassium	< 5.00	5.00		mg/L	1	4/29/2021 3:38:13 PM
Sodium	283	10.0		mg/L	1	4/29/2021 3:38:13 PM
Strontium	1.13	0.0100		mg/L	1	4/29/2021 3:38:13 PM
Zinc	0.0107	0.0100		mg/L	1	4/29/2021 3:38:13 PM
METALS IN WATER BY ICP-MS, DISSOLVED				SW6020A		Analyst: MRB
Arsenic	0.00428	0.00250		mg/L	10	4/29/2021 12:00:37 PM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B		Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	338	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
Alkalinity, Total (As CaCO3)	338	10.0		mgCaCO3/L	1	4/30/2021 9:16:00 AM
TOTAL DISSOLVED SOLIDS				SM2540C		Analyst: GMS
Total Dissolved Solids (Residue, Filterable)	1,720	100		mg/L	5	4/23/2021 7:30:00 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#: 21040918
 30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39439

Sample ID 21040942-011BMS	SampType: MS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 4/24/2021	RunNo: 99119						
Client ID: ZZZZZZ	Batch ID: 39439	TestNo: SW8015B	SW3511	Analysis Date: 4/26/2021	SeqNo: 2418517						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	5.07	0.136	1.793	1.616	193	70	130				SM
Surr: 4-Terphenyl-d14	0.0654		0.05977		109	51.4	146				

Sample ID 21040942-011BMSD	SampType: MSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 4/24/2021	RunNo: 99119						
Client ID: ZZZZZZ	Batch ID: 39439	TestNo: SW8015B	SW3511	Analysis Date: 4/26/2021	SeqNo: 2418518						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	4.78	0.133	1.756	1.616	180	70	130	5.070	5.91	21.9	SM
Surr: 4-Terphenyl-d14	0.0601		0.05853		103	51.4	146		0	40	

Sample ID lcs-D39439	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 4/24/2021	RunNo: 99119						
Client ID: LCSW	Batch ID: 39439	TestNo: SW8015B	SW3511	Analysis Date: 4/26/2021	SeqNo: 2418522						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	2.03	0.136	1.789	0	113	70	130				
Surr: 4-Terphenyl-d14	0.0697		0.05963		117	51.4	146				

Sample ID LCSD-D39439	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 4/24/2021	RunNo: 99119						
Client ID: LCSS02	Batch ID: 39439	TestNo: SW8015B	SW3511	Analysis Date: 4/26/2021	SeqNo: 2418523						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	2.03	0.135	1.776	0	115	70	130	2.025	0.461	14.1	
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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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39439

Sample ID	LCSD-D39439	SampType: LCSD	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 4/24/2021			RunNo: 99119		
Client ID:	LCSS02	Batch ID: 39439	TestNo: SW8015B SW3511		Analysis Date: 4/26/2021			SeqNo: 2418523			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	0.0683		0.05919		115	51.4	146		0	40	

Sample ID	LCSD-M39439	SampType: LCSD	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 4/24/2021			RunNo: 99119		
Client ID:	LCSS02	Batch ID: 39439	TestNo: SW8015B SW3511		Analysis Date: 4/26/2021			SeqNo: 2418524			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	1.63	0.125	1.789	0	91.1	70	130	1.504	7.99	23.2	
Surr: 4-Terphenyl-d14	0.0848		0.05963		142	51.4	146		0	40	

Sample ID	ics-M39439	SampType: LCS	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 4/24/2021			RunNo: 99119		
Client ID:	LCSW	Batch ID: 39439	TestNo: SW8015B SW3511		Analysis Date: 4/26/2021			SeqNo: 2418525			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	1.50	0.125	1.785	0	84.3	70	130				
Surr: 4-Terphenyl-d14	0.0801		0.05949		135	51.4	146				

Sample ID	MB-39439	SampType: MBLK	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 4/24/2021			RunNo: 99119		
Client ID:	PBW	Batch ID: 39439	TestNo: SW8015B SW3511		Analysis Date: 4/26/2021			SeqNo: 2418526			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)	< 0.135	0.135									
TPH (Oil Range)	< 0.124	0.124									

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: 39439

Sample ID MB-39439	SampType: MBLK	TestCode: 8015_DO_W_ Units: mg/L	Prep Date: 4/24/2021	RunNo: 99119							
Client ID: PBW	Batch ID: 39439	TestNo: SW8015B SW3511	Analysis Date: 4/26/2021	SeqNo: 2418526							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	0.0570		0.05919		96.3	51.4	146				

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39458

Sample ID	MB-39458	SampType:	MBLK	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99089			
Client ID:	PBW	Batch ID:	39458	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417336			
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-39458	SampType:	LCS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99089			
Client ID:	LCSW	Batch ID:	39458	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417337			
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-39458	SampType:	LCSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99089			
Client ID:	LCSS02	Batch ID:	39458	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417338			
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	0.01025	1.08	20	

Sample ID	21040918-001CMS	SampType:	MS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99089			
Client ID:	H-20	Batch ID:	39458	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417341			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00996		0.000200	0.01000	0		99.6	75	125				

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: 39458

Sample ID	21040918-001CMSD	SampType:	MSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99089											
Client ID:	H-20	Batch ID:	39458	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417342											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Mercury		0.0100		0.000200		0.01000		0		100		75		125		0.009957		0.852		20		

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39459

Sample ID	MB-39459	SampType:	MBLK	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99093			
Client ID:	PBW	Batch ID:	39459	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417622			
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-39459	SampType:	LCS	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99093			
Client ID:	LCSW	Batch ID:	39459	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417623			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0109		0.000200	0.01000	0		109	80	120				

Sample ID	LCSD-39459	SampType:	LCSD	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99093			
Client ID:	LCSS02	Batch ID:	39459	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417624			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.0109		0.000200	0.01000	0		109	80	120	0	0	20	

Sample ID	21040918-006CMS	SampType:	MS	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99093			
Client ID:	H-25	Batch ID:	39459	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417627			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00930		0.000200	0.01000	0		93.0	75	125				

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#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: 39459

Sample ID	21040918-006CMSD	SampType:	MSD	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	4/27/2021	RunNo:	99093											
Client ID:	H-25	Batch ID:	39459	TestNo:	SW7470A			Analysis Date:	4/28/2021	SeqNo:	2417628											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Mercury		0.00932		0.000200		0.01000		0		93.2		75		125		0		0		20		

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39485

Sample ID	MB-39485	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99144						
Client ID:	PBW	Batch ID:	39485	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419151						
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual

Barium	< 0.0100	0.0100															
Cadmium	< 0.00500	0.00500															
Calcium	< 0.500	0.500															
Chromium	< 0.0100	0.0100															
Iron	< 0.0100	0.0100															
Lead	< 0.0100	0.0100															
Magnesium	< 0.500	0.500															
Manganese	< 0.0100	0.0100															
Potassium	< 5.00	5.00															
Sodium	< 10.0	10.0															
Strontium	< 0.0100	0.0100															
Zinc	< 0.0100	0.0100															

Sample ID	LCS-39485	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99144						
Client ID:	LCSW	Batch ID:	39485	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419152						
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual

Barium	0.495	0.0100	0.5000	0	99.1	80	120										
Cadmium	0.497	0.00500	0.5000	0	99.4	80	120										
Calcium	49.0	0.500	50.00	0	98.1	80	120										
Chromium	0.489	0.0100	0.5000	0	97.7	80	120										
Iron	0.499	0.0100	0.5000	0	99.9	80	120										
Lead	0.481	0.0100	0.5000	0	96.2	80	120										
Magnesium	48.8	0.500	50.00	0	97.5	80	120										
Manganese	0.491	0.0100	0.5000	0	98.2	80	120										

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39485

Sample ID	LCS-39485	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99144
Client ID:	LCSW	Batch ID:	39485	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419152
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	48.6	5.00	50.00	0	97.3	80	120				
Sodium	47.2	10.0	50.00	0	94.5	80	120				
Strontium	0.493	0.0100	0.5000	0	98.7	80	120				
Zinc	0.466	0.0100	0.5000	0	93.1	80	120				

Sample ID	LCSD-39485	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99144
Client ID:	LCSS02	Batch ID:	39485	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419153
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.496	0.0100	0.5000	0	99.3	80	120	0.4955	0.181	20	
Cadmium	0.498	0.00500	0.5000	0	99.7	80	120	0.4971	0.275	20	
Calcium	49.3	0.500	50.00	0	98.5	80	120	49.04	0.437	20	
Chromium	0.488	0.0100	0.5000	0	97.7	80	120	0.4886	0.0368	20	
Iron	0.505	0.0100	0.5000	0	101	80	120	0.4995	1.12	20	
Lead	0.484	0.0100	0.5000	0	96.9	80	120	0.4810	0.715	20	
Magnesium	49.1	0.500	50.00	0	98.2	80	120	48.77	0.620	20	
Manganese	0.489	0.0100	0.5000	0	97.8	80	120	0.4912	0.416	20	
Potassium	48.9	5.00	50.00	0	97.9	80	120	48.65	0.609	20	
Sodium	47.5	10.0	50.00	0	94.9	80	120	47.23	0.481	20	
Strontium	0.494	0.0100	0.5000	0	98.7	80	120	0.4933	0.0730	20	
Zinc	0.466	0.0100	0.5000	0	93.1	80	120	0.4656	0.0107	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39485

Sample ID	21040918-005CMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 4/28/2021	RunNo: 99144					
Client ID:	Dup	Batch ID: 39485	TestNo: SW6010B		Analysis Date: 4/29/2021	SeqNo: 2419174					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.486	0.0100	0.5000	0.01500	94.1	75	125				
Cadmium	0.488	0.00500	0.5000	0	97.6	75	125				
Calcium	248	0.500	50.00	210.4	75.7	75	125				
Chromium	0.459	0.0100	0.5000	0	91.9	75	125				
Iron	0.700	0.0100	0.5000	0.2401	92.1	75	125				
Lead	0.449	0.0100	0.5000	0	89.8	75	125				
Magnesium	154	0.500	50.00	108.1	91.2	75	125				
Manganese	2.05	0.0100	0.5000	1.670	76.2	75	125				
Potassium	57.4	5.00	50.00	6.246	102	75	125				
Sodium	352	10.0	50.00	315.0	73.6	75	125				S
Strontium	1.63	0.0100	0.5000	1.210	83.6	75	125				
Zinc	0.452	0.0100	0.5000	0	90.4	75	125				

NOTES:

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

Sample ID	21040918-005CMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 4/28/2021	RunNo: 99144					
Client ID:	Dup	Batch ID: 39485	TestNo: SW6010B		Analysis Date: 4/29/2021	SeqNo: 2419175					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.495	0.0100	0.5000	0.01500	96.0	75	125	0.4856	1.93	20	
Cadmium	0.504	0.00500	0.5000	0	101	75	125	0.4878	3.35	20	
Calcium	257	0.500	50.00	210.4	92.7	75	125	248.2	3.36	20	
Chromium	0.468	0.0100	0.5000	0	93.6	75	125	0.4594	1.85	20	
Iron	0.720	0.0100	0.5000	0.2401	95.9	75	125	0.7004	2.73	20	
Lead	0.461	0.0100	0.5000	0	92.1	75	125	0.4489	2.60	20	
Magnesium	159	0.500	50.00	108.1	103	75	125	153.7	3.70	20	

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39485

Sample ID	21040918-005CMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99144
Client ID:	Dup	Batch ID:	39485	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419175
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2.12	0.0100	0.5000	1.670	90.5	75	125	2.051	3.43	20	
Potassium	59.5	5.00	50.00	6.246	107	75	125	57.37	3.68	20	
Sodium	365	10.0	50.00	315.0	100	75	125	351.8	3.68	20	
Strontium	1.68	0.0100	0.5000	1.210	94.7	75	125	1.628	3.32	20	
Zinc	0.466	0.0100	0.5000	0	93.2	75	125	0.4520	3.02	20	

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

QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39486

Sample ID	MB-39486	SampType:	MBLK	TestCode:	6020A_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99133			
Client ID:	PBW	Batch ID:	39486	TestNo:	SW6020A			Analysis Date:	4/29/2021	SeqNo:	2418778			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		< 0.000250		0.000250										

Sample ID	LCS-39486	SampType:	LCS	TestCode:	6020A_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99133			
Client ID:	LCSW	Batch ID:	39486	TestNo:	SW6020A			Analysis Date:	4/29/2021	SeqNo:	2418779			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.508		0.00500	0.500	0		102	80	120				

Sample ID	LCSD-39486	SampType:	LCSD	TestCode:	6020A_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99133			
Client ID:	LCSS02	Batch ID:	39486	TestNo:	SW6020A			Analysis Date:	4/29/2021	SeqNo:	2418780			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.507		0.00500	0.500	0		101	80	120	0.508	0.144	20	

Sample ID	21040918-005CMS	SampType:	MS	TestCode:	6020A_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99133			
Client ID:	Dup	Batch ID:	39486	TestNo:	SW6020A			Analysis Date:	4/29/2021	SeqNo:	2418790			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.495		0.00500	0.500	0.00160		98.7	75	125				

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: 39486

Sample ID	21040918-005CMSD	SampType:	MSD	TestCode:	6020A_W	Units:	mg/L	Prep Date:	4/28/2021	RunNo:	99133											
Client ID:	Dup	Batch ID:	39486	TestNo:	SW6020A			Analysis Date:	4/29/2021	SeqNo:	2418791											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Arsenic		0.505		0.00500		0.500		0.00160		101		75		125		0.495		2.05		20		

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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R98968

Sample ID	MB-R98968	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98968			
Client ID:	PBW	Batch ID:	R98968	TestNo:	SM2540C			Analysis Date:	4/23/2021	SeqNo:	2415130			
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-R98968	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98968			
Client ID:	LCSW	Batch ID:	R98968	TestNo:	SM2540C			Analysis Date:	4/23/2021	SeqNo:	2415131			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 998 20.0 1,000 0 99.8 85 115

Sample ID	LCSD-R98968	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98968			
Client ID:	LCSS02	Batch ID:	R98968	TestNo:	SM2540C			Analysis Date:	4/23/2021	SeqNo:	2415132			
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 85 115 998.0 0.704 10

Sample ID	21040918-008DDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98968			
Client ID:	H-27	Batch ID:	R98968	TestNo:	SM2540C			Analysis Date:	4/23/2021	SeqNo:	2415143			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,800 100 1,715 4.56 10

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: R98968

Sample ID	21040918-008DDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98968
Client ID:	H-27	Batch ID:	R98968	TestNo:	SM2540C			Analysis Date:	4/23/2021	SeqNo:	2415143
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Sample ID	21040918-007ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	98968
Client ID:	H-26	Batch ID:	R98968	TestNo:	SM2540C			Analysis Date:	4/23/2021	SeqNo:	2415144
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filterable)		1,130		100						1,125	0.443 10

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R98969

Sample ID	MBLK	SampType:	MBLK	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	98969			
Client ID:	PBW	Batch ID:	R98969	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412809			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250		0.250										
Sulfate		< 0.250		0.250										

Sample ID	LCS	SampType:	LCS	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	98969			
Client ID:	LCSW	Batch ID:	R98969	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412810			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.2		0.250	10.00	0		102	80	120				
Sulfate		10.4		0.250	10.00	0		104	80	120				

Sample ID	LCSD	SampType:	LCSD	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	98969			
Client ID:	LCSS02	Batch ID:	R98969	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412811			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.2		0.250	10.00	0		102	80	120	10.20	0.388	15	
Sulfate		10.3		0.250	10.00	0		103	80	120	10.39	1.09	15	

Sample ID	21040918-008DMS	SampType:	MS	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	98969			
Client ID:	H-27	Batch ID:	R98969	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412820			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		743		12.5	250.0	465.9		111	80	120				

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R98969

Sample ID	21040918-008DMS	SampType:	MS	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	98969
Client ID:	H-27	Batch ID:	R98969	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412820
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Sulfate		725		12.5	250.0	499.3	90.3	80	120		

Sample ID	21040918-008DMSD	SampType:	MSD	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	98969
Client ID:	H-27	Batch ID:	R98969	TestNo:	SW9056A			Analysis Date:	4/22/2021	SeqNo:	2412821
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Chloride		750		12.5	250.0	465.9	114	80	120	742.5	1.04 15
Sulfate		727		12.5	250.0	499.3	91.0	80	120	725.1	0.216 15

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99052

Sample ID	GAS LCS	SampType:	LCS	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99052			
Client ID:	LCSW	Batch ID:	R99052	TestNo:	SW8015B			Analysis Date:	4/26/2021	SeqNo:	2415742			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		13.5		0.150	12.50	0		108	80	130				

Sample ID	GAS LCSD	SampType:	LCSD	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99052			
Client ID:	LCSS02	Batch ID:	R99052	TestNo:	SW8015B			Analysis Date:	4/26/2021	SeqNo:	2415743			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		13.9		0.150	12.50	0		111	80	130	13.54	2.36	20	

Sample ID	21040781-010AMS	SampType:	MS	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99052			
Client ID:	ZZZZZ	Batch ID:	R99052	TestNo:	SW8015B			Analysis Date:	4/26/2021	SeqNo:	2415749			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		12.2		0.150	12.50	0.2886		95.1	70	130				
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0758			0.05000			152	70	130				SM

Sample ID	21040781-010AMSD	SampType:	MSD	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99052			
Client ID:	ZZZZZ	Batch ID:	R99052	TestNo:	SW8015B			Analysis Date:	4/26/2021	SeqNo:	2415750			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		11.9		0.150	12.50	0.2886		93.2	70	130	12.18	1.99	20	
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0744			0.05000			149	70	130		0	20	SM

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

QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: R99052

Sample ID	21040781-010AMSD	SampType:	MSD	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99052			
Client ID:	ZZZZZZ	Batch ID:	R99052	TestNo:	SW8015B			Analysis Date:	4/26/2021	SeqNo:	2415750			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MBLK	SampType:	MBLK	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99052			
Client ID:	PBW	Batch ID:	R99052	TestNo:	SW8015B			Analysis Date:	4/26/2021	SeqNo:	2415756			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		< 0.150		0.150										
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0516			0.05000			103	70	130				

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: R99053

Sample ID BTEX LCS	SampType: LCS	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 99053						
Client ID: LCSW	Batch ID: R99053	TestNo: SW8021B	Analysis Date: 4/26/2021	SeqNo: 2415773							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0471	0.00500	0.05000	0	94.2	72	120				
Ethylbenzene	0.0470	0.00500	0.05000	0	94.0	76	129				
Toluene	0.0471	0.0100	0.05000	0	94.2	78	120				
Xylenes, Total	0.140	0.0500	0.1500	0	93.6	75	125				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0514		0.05000		103	70	130				

Sample ID BTEX LCSD	SampType: LCSD	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 99053						
Client ID: LCSS02	Batch ID: R99053	TestNo: SW8021B	Analysis Date: 4/26/2021	SeqNo: 2415774							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0445	0.00500	0.05000	0	89.0	72	120	0.04710	5.68	20	
Ethylbenzene	0.0443	0.00500	0.05000	0	88.6	76	129	0.04700	5.91	20	
Toluene	0.0444	0.0100	0.05000	0	88.8	78	120	0.04710	5.90	20	
Xylenes, Total	0.133	0.0500	0.1500	0	88.9	75	125	0.1404	5.11	20	
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0505		0.05000		101	70	130		0	20	

Sample ID MBLK	SampType: MBLK	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 99053						
Client ID: PBW	Batch ID: R99053	TestNo: SW8021B	Analysis Date: 4/26/2021	SeqNo: 2415787							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	< 0.00500	0.00500									
Ethylbenzene	< 0.00500	0.00500									

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: R99053

Sample ID	MBLK	SampType:	MBLK	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99053			
Client ID:	PBW	Batch ID:	R99053	TestNo:	SW8021B			Analysis Date:	4/26/2021	SeqNo:	2415787			
Analyte		Result		PQL		SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene		< 0.0100		0.0100										
Xylenes, Total		< 0.0500		0.0500										
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0497				0.05000		99.4	70	130				

Sample ID	21040781-010AMS	SampType:	MS	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99053			
Client ID:	ZZZZZ	Batch ID:	R99053	TestNo:	SW8021B			Analysis Date:	4/26/2021	SeqNo:	2415788			
Analyte		Result		PQL		SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		0.0447		0.00500		0.05000	0.0008000	87.8	26	161				
Ethylbenzene		0.0492		0.00500		0.05000	0.007600	83.2	66	153				
Toluene		0.0502		0.0100		0.05000	0.007500	85.4	68	141				
Xylenes, Total		0.160		0.0500		0.1500	0.03640	82.3	48	154				
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0504				0.05000		101	70	130				

Sample ID	21040781-010AMSD	SampType:	MSD	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99053			
Client ID:	ZZZZZ	Batch ID:	R99053	TestNo:	SW8021B			Analysis Date:	4/26/2021	SeqNo:	2415789			
Analyte		Result		PQL		SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		0.0444		0.00500		0.05000	0.0008000	87.2	26	161	0.04470	0.673	20	
Ethylbenzene		0.0498		0.00500		0.05000	0.007600	84.4	66	153	0.04920	1.21	20	
Toluene		0.0499		0.0100		0.05000	0.007500	84.8	68	141	0.05020	0.599	20	
Xylenes, Total		0.160		0.0500		0.1500	0.03640	82.6	48	154	0.1599	0.250	20	

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: R99053

Sample ID	21040781-010AMSD	SampType:	MSD	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99053					
Client ID:	ZZZZZZ	Batch ID:	R99053	TestNo:	SW8021B			Analysis Date:	4/26/2021	SeqNo:	2415789					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0504				0.05000				101	70	130		0	20	

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99134

Sample ID MB	SampType: MBLK	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 99134
Client ID: PBW	Batch ID: R99134	TestNo: SW6020A		Analysis Date: 4/29/2021	SeqNo: 2418866
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic < 0.000250 0.000250

Sample ID LCS	SampType: LCS	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 99134
Client ID: LCSW	Batch ID: R99134	TestNo: SW6020A		Analysis Date: 4/29/2021	SeqNo: 2418867
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.0197 0.000250 0.0200 0 98.7 80 120

Sample ID LCSD	SampType: LCSD	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 99134
Client ID: LCSS02	Batch ID: R99134	TestNo: SW6020A		Analysis Date: 4/29/2021	SeqNo: 2418868
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.0195 0.000250 0.0200 0 97.3 80 120 0.0197 1.44 20

Sample ID 21040918-008CMS	SampType: MS	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 99134
Client ID: H-27	Batch ID: R99134	TestNo: SW6020A		Analysis Date: 4/29/2021	SeqNo: 2418873
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.0206 0.000250 0.0200 0.00428 81.7 75 125

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99134

Sample ID	21040918-008CMSD	SampType:	MSD	TestCode:	6020A_D	Units:	mg/L	Prep Date:		RunNo:	99134					
Client ID:	H-27	Batch ID:	R99134	TestNo:	SW6020A			Analysis Date:	4/29/2021	SeqNo:	2418874					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.0209		0.000250		0.0200		0.00428		83.1	75	125	0.0206	1.34	20	

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99144

Sample ID MB	SampType: MBLK	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 99144						
Client ID: PBW	Batch ID: R99144	TestNo: SW6010B		Analysis Date: 4/29/2021	SeqNo: 2419177						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	< 0.0100	0.0100									
Cadmium	< 0.00500	0.00500									
Calcium	< 0.500	0.500									
Chromium	< 0.0100	0.0100									
Iron	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Magnesium	< 0.500	0.500									
Manganese	< 0.0100	0.0100									
Potassium	< 5.00	5.00									
Sodium	< 10.0	10.0									
Strontium	< 0.0100	0.0100									
Zinc	< 0.0100	0.0100									

Sample ID LCS	SampType: LCS	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 99144						
Client ID: LCSW	Batch ID: R99144	TestNo: SW6010B		Analysis Date: 4/29/2021	SeqNo: 2419178						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.490	0.0100	0.5000	0	98.1	80	120				
Cadmium	0.499	0.00500	0.5000	0	99.8	80	120				
Calcium	48.5	0.500	50.00	0	97.0	80	120				
Chromium	0.485	0.0100	0.5000	0	97.0	80	120				
Iron	0.488	0.0100	0.5000	0	97.6	80	120				
Lead	0.490	0.0100	0.5000	0	98.0	80	120				
Magnesium	47.9	0.500	50.00	0	95.7	80	120				
Manganese	0.489	0.0100	0.5000	0	97.8	80	120				

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99144

Sample ID	LCS	SampType:	LCS	TestCode:	6010-D	Units:	mg/L	Prep Date:		RunNo:	99144					
Client ID:	LCSSW	Batch ID:	R99144	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419178					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium		47.9		5.00		50.00		0		95.8	80	120				
Sodium		46.4		10.0		50.00		0		92.8	80	120				
Strontium		0.492		0.0100		0.5000		0		98.3	80	120				
Zinc		0.477		0.0100		0.5000		0		95.5	80	120				

Sample ID	LCSD	SampType:	LCSD	TestCode:	6010-D	Units:	mg/L	Prep Date:		RunNo:	99144					
Client ID:	LCSS02	Batch ID:	R99144	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419179					
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		98.2	80	120	0.4904	0.114	20	
Cadmium		0.499		0.00500		0.5000		0		99.9	80	120	0.4988	0.126	20	
Calcium		48.8		0.500		50.00		0		97.6	80	120	48.48	0.630	20	
Chromium		0.485		0.0100		0.5000		0		97.1	80	120	0.4848	0.0886	20	
Iron		0.489		0.0100		0.5000		0		97.8	80	120	0.4882	0.131	20	
Lead		0.491		0.0100		0.5000		0		98.2	80	120	0.4898	0.269	20	
Magnesium		48.1		0.500		50.00		0		96.2	80	120	47.86	0.518	20	
Manganese		0.489		0.0100		0.5000		0		97.7	80	120	0.4888	0.0491	20	
Potassium		48.4		5.00		50.00		0		96.8	80	120	47.92	0.998	20	
Sodium		48.2		10.0		50.00		0		96.4	80	120	46.41	3.74	20	
Strontium		0.492		0.0100		0.5000		0		98.4	80	120	0.4916	0.112	20	
Zinc		0.477		0.0100		0.5000		0		95.4	80	120	0.4773	0.0251	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#: 21040918
 30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99144

Sample ID	21040918-006CMS	SampType:	MS	TestCode:	6010-D	Units:	mg/L	Prep Date:	RunNo:	99144	
Client ID:	H-25	Batch ID:	R99144	TestNo:	SW6010B	Analysis Date:	4/29/2021	SeqNo:	2419183		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.586	0.0100	0.5000	0.07750	102	75	125				
Cadmium	0.545	0.00500	0.5000	0	109	75	125				
Calcium	175	0.500	50.00	126.3	97.7	75	125				
Chromium	0.503	0.0100	0.5000	0.0005300	100	75	125				
Iron	0.955	0.0100	0.5000	0.3771	116	75	125				
Lead	0.509	0.0100	0.5000	0	102	75	125				
Magnesium	101	0.500	50.00	50.23	102	75	125				
Manganese	1.96	0.0100	0.5000	1.506	91.4	75	125				
Potassium	58.3	5.00	50.00	4.440	108	75	125				
Sodium	322	10.0	50.00	270.6	102	75	125				
Strontium	1.25	0.0100	0.5000	0.7478	100	75	125				
Zinc	0.522	0.0100	0.5000	0	104	75	125				

Sample ID	21040918-006CMSD	SampType:	MSD	TestCode:	6010-D	Units:	mg/L	Prep Date:	RunNo:	99144	
Client ID:	H-25	Batch ID:	R99144	TestNo:	SW6010B	Analysis Date:	4/29/2021	SeqNo:	2419184		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.588	0.0100	0.5000	0.07750	102	75	125	0.5859	0.356	20	
Cadmium	0.550	0.00500	0.5000	0	110	75	125	0.5454	0.800	20	
Calcium	177	0.500	50.00	126.3	100	75	125	175.1	0.794	20	
Chromium	0.505	0.0100	0.5000	0.0005300	101	75	125	0.5028	0.466	20	
Iron	0.970	0.0100	0.5000	0.3771	118	75	125	0.9554	1.48	20	
Lead	0.504	0.0100	0.5000	0	101	75	125	0.5085	0.925	20	
Magnesium	102	0.500	50.00	50.23	103	75	125	101.1	0.654	20	
Manganese	1.97	0.0100	0.5000	1.506	93.7	75	125	1.963	0.566	20	

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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 2417 W. Pinhook Road
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QC SUMMARY REPORT

WO#: 21040918
 30-Apr-21

Client: ICON Environmental Services
Project: Henning

BatchID: R99144

Sample ID	21040918-006CMSD	SampType:	MSD	TestCode:	6010-D	Units:	mg/L	Prep Date:		RunNo:	99144
Client ID:	H-25	Batch ID:	R99144	TestNo:	SW6010B			Analysis Date:	4/29/2021	SeqNo:	2419184
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	59.0	5.00	50.00	4.440	109	75	125	58.34	1.07	20	
Sodium	323	10.0	50.00	270.6	105	75	125	321.6	0.419	20	
Strontium	1.25	0.0100	0.5000	0.7478	101	75	125	1.249	0.226	20	
Zinc	0.524	0.0100	0.5000	0	105	75	125	0.5215	0.547	20	

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

QC SUMMARY REPORT

WO#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99152

Sample ID	MB-R99152	SampType:	MBLK	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	99152
Client ID:	PBW	Batch ID:	R99152	TestNo:	SM2320 B			Analysis Date:	4/30/2021	SeqNo:	2420024
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Bicarbonate (As CaCO3)	< 10.0	10.0
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0
Alkalinity, Total (As CaCO3)	< 10.0	10.0

Sample ID	LCS-R99152	SampType:	LCS	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	99152
Client ID:	LCSW	Batch ID:	R99152	TestNo:	SM2320 B			Analysis Date:	4/30/2021	SeqNo:	2420025
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Total (As CaCO3)	49.5	10.0	50.00	0	99.0	80	120
------------------------------	------	------	-------	---	------	----	-----

Sample ID	21041154-001DDUP	SampType:	DUP	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	99152
Client ID:	ZZZZZ	Batch ID:	R99152	TestNo:	SM2320 B			Analysis Date:	4/30/2021	SeqNo:	2420035
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Bicarbonate (As CaCO3)	87.5	10.0								87.50	0	20
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0								0	0	20
Alkalinity, Total (As CaCO3)	87.5	10.0								87.50	0	20

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#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99155

Sample ID	BTEX LCS	SampType:	LCS	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99155	
Client ID:	LCSW	Batch ID:	R99155	TestNo:	SW8021B			Analysis Date:	4/29/2021	SeqNo:	2419778	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		0.0505	0.00500	0.05000	0	101	72	120				
Ethylbenzene		0.0504	0.00500	0.05000	0	101	76	129				
Toluene		0.0502	0.0100	0.05000	0	100	78	120				
Xylenes, Total		0.151	0.0500	0.1500	0	101	75	125				
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0522		0.05000		104	70	130				

Sample ID	BTEX LCSD	SampType:	LCSD	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99155	
Client ID:	LCSS02	Batch ID:	R99155	TestNo:	SW8021B			Analysis Date:	4/29/2021	SeqNo:	2419779	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		0.0473	0.00500	0.05000	0	94.6	72	120	0.05050	6.54	20	
Ethylbenzene		0.0475	0.00500	0.05000	0	95.0	76	129	0.05040	5.92	20	
Toluene		0.0472	0.0100	0.05000	0	94.4	78	120	0.05020	6.16	20	
Xylenes, Total		0.142	0.0500	0.1500	0	94.5	75	125	0.1513	6.55	20	
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0520		0.05000		104	70	130		0	20	

Sample ID	MBLK	SampType:	MBLK	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99155	
Client ID:	PBW	Batch ID:	R99155	TestNo:	SW8021B			Analysis Date:	4/29/2021	SeqNo:	2419790	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		< 0.00500	0.00500									
Ethylbenzene		< 0.00500	0.00500									

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#: 21040918
 30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99155

Sample ID	MBLK	SampType:	MBLK	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	99155			
Client ID:	PBW	Batch ID:	R99155	TestNo:	SW8021B			Analysis Date:	4/29/2021	SeqNo:	2419790			
Analyte		Result		PQL		SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	< 0.0100	0.0100												
Xylenes, Total	< 0.0500	0.0500												
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0492				0.05000			98.4	70	130				

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#: 21040918

30-Apr-21

Client: ICON Environmental Services

Project: Henning

BatchID: R99156

Sample ID	GAS LCS	SampType:	LCS	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99156			
Client ID:	LCSW	Batch ID:	R99156	TestNo:	SW8015B			Analysis Date:	4/29/2021	SeqNo:	2419791			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		11.8		0.150	12.50	0		94.4	80	130				

Sample ID	GAS LCSD	SampType:	LCSD	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99156			
Client ID:	LCSS02	Batch ID:	R99156	TestNo:	SW8015B			Analysis Date:	4/29/2021	SeqNo:	2419792			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		12.2		0.150	12.50	0		97.8	80	130	11.80	3.56	20	

Sample ID	MBLK	SampType:	MBLK	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	99156			
Client ID:	PBW	Batch ID:	R99156	TestNo:	SW8015B			Analysis Date:	4/29/2021	SeqNo:	2419803			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		< 0.150		0.150										
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0521			0.05000			104	70	130				

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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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **21040918**

RcptNo: **1**

Logged by:	Danielle Hollier	4/21/2021 3:10:00 PM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	4/21/2021 4:32:37 PM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	4/27/2021 12:39:10 PM	<i>Caitlin Duplantis</i>

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Jason Sills"/>	Date	<input type="text" value="4/23/2021"/>
By Whom:	<input type="text" value="Caitlin Duplantis"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="H-25 and H-26 bottles seem to be swapped with the testing requests."/>		
Client Instructions:	<input type="text" value="The testing request for H-25 and H-26 were swapped. Please correct."/>		

18. Additional remarks:
 Improper error correction(s) made by client
 4/27/2021-metals bottle not received for H-26 Cation analysis. Client instructed to preserve volume from the unpreserved bottle received for the analysis.

Cooler Information



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2417 W. Pinhook Road
Lafayette, LA 70508-3344
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Website: www.element.com

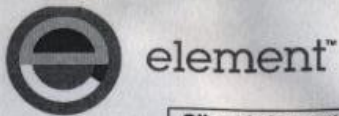
Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **21040918**

RcptNo: **1**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Not Present			



Chain of Custody

Laboratory Number: 21040913

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information: Icon Enviromental	Billing Information: Same	PO Number: Quote Number: 5762	Project Name/Number: Henning	Page <u>1</u> of <u>1</u> Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	2049 Commerical Dr.		Required QC Level	Sampler's Signature 	
	Port Allen, La 70707		Bill Monthly <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Shipping Method: UPS / FedEx / Airborne DHL / Element / Hand / Mail	
	225-344-8490 Ext:	Ext:			

Which Regulations Apply:	Turn Time	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests							Comments		
			Quantity	Type P=Plastic, G=Glass, V=Vial		TDS	Cations/Anions	Chlorides	BTEX/TPH_G	TPH-DO	Total Metals/Hg	Dissolved Metals			
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input checked="" type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other				HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃									Metals: As, Ba, Cd, Cr, Fe, Mn, Pb, Sr, Zn, Hg Cations: Na, Ca, K, Mg Anions: Alk Carbonate Alk Bicarbonate Sulfate	
Collection Information			Date	Time	Grab / Composite	Matrix									
Sample ID/Description															
H-20	4-19-21	1000	G	AQ	7	P/V	HCL/HNO3	X	X	X	X	X	X		
H-22		1110						X	X	X	X	X	X		
H-23		1335						X	X	X	X	X	X		
H-24		1500						X	X	X	X	X	X		
Dup		-						X	X	X	X	X	X		
H-25	4-20-21	1440			7	P/V	HCL-HNO3	X	X	X	X	X	X		
H-26		1425			1	P/V	HCL-HNO3	X	X	X	X	X	X		
H-27		1400					HCL-HNO3	X	X	X	X	X	X		
							DH 4-27-21								

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1		4-21-21/0900		4-21-21/0900	
2					Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3		4-21-21/1510		4-21-21/1510	Temp: 16 ^a

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.

9301 Innovation Drive, Suite 115
 Daleville, IN
 47334-0569 USA
 P 765-378-4103
 F 765-378-4109

629 Washington St. Suite 300
 Columbus, IN
 47201-6231 USA
 P 812-375-0531
 F 812-375-0731

2121 East Washington Boulevard
 Fort Wayne, IN
 46803-1328 USA
 P 260-471-7000
 F 260-471-7777

560 South Zimmer Road
 Warsaw, IN
 46580-2368 USA
 P 574-267-3305
 F 574-269-6569

3371 Cleveland Road, Suite 100A
 South Bend, IN
 46628-9780 USA
 P 574-277-0707
 F 574-277-5699

2417 W. Pinhook Rd
 Lafayette, LA
 70508-3344 USA
 P 337-235-0483
 F 337-233-6540



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 03, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II 9403-010-0100

Order No.: 21080909

Dear Greg Miller:

Element Materials Technology Lafayette received 17 sample(s) on 8/20/2021 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 that reads 'Cristina Thibeaux'.

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



Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
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Website: www.element.com

Case Narrative

WO#: 21080909
Date: 9/3/2021

CLIENT: ICON Environmental Services

Project: Henning II 9403-010-0100

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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 1:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-001 **Matrix:** SOIL
Client Sample ID H-32 2-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	28.9	0.100		meq/100g	1	8/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.40	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
LDNR 29-B Analyst: JMI						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.17	0.10		%	1	8/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.45	0.10			1	8/26/2021
Soluble Calcium	0.59	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.35	0.05		meq/L	1	8/26/2021
Soluble Sodium	2.37	0.25		meq/L	1	8/26/2021
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0968	0.0968		mg/Kg-dry	1	9/2/2021 6:43:11 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.32	1.83		mg/Kg-dry	1	8/27/2021 2:57:06 PM
Barium	222	0.914		mg/Kg-dry	1	8/27/2021 2:57:06 PM
Cadmium	< 0.457	0.457		mg/Kg-dry	1	8/27/2021 2:57:06 PM
Chromium	11.6	0.914		mg/Kg-dry	1	8/27/2021 2:57:06 PM
Lead	14.3	0.914		mg/Kg-dry	1	8/27/2021 2:57:06 PM
Selenium	< 3.65	3.65		mg/Kg-dry	1	8/27/2021 2:57:06 PM
Strontium	9.19	0.914		mg/Kg-dry	1	8/27/2021 2:57:06 PM
Zinc	11.6	0.914		mg/Kg-dry	1	8/27/2021 2:57:06 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
LDNR 29-B Analyst: STS						

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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 1:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-001 **Matrix:** SOIL
Client Sample ID H-32 2-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	319	49.0		mg/Kg-dry	1	8/26/2021 11:41:28 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	13.0	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 2:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-002 **Matrix:** SOIL
Client Sample ID H-32 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	48.7	0.100		meq/100g	1	8/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.48	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
LDNR 29-B Analyst: JMI						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.58	0.10		%	1	8/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.86	0.10			1	8/26/2021
Soluble Calcium	0.67	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.41	0.05		meq/L	1	8/26/2021
Soluble Sodium	2.84	0.25		meq/L	1	8/26/2021
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.107	0.107		mg/Kg-dry	1	9/2/2021 6:53:01 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.81	1.85		mg/Kg-dry	1	8/27/2021 3:04:02 PM
Barium	42.9	0.923		mg/Kg-dry	1	8/27/2021 3:04:02 PM
Cadmium	< 0.462	0.462		mg/Kg-dry	1	8/27/2021 3:04:02 PM
Chromium	13.3	0.923		mg/Kg-dry	1	8/27/2021 3:04:02 PM
Lead	13.6	0.923		mg/Kg-dry	1	8/27/2021 3:04:02 PM
Selenium	< 3.69	3.69		mg/Kg-dry	1	8/27/2021 3:04:02 PM
Strontium	11.7	0.923		mg/Kg-dry	1	8/27/2021 3:04:02 PM
Zinc	14.0	0.923		mg/Kg-dry	1	8/27/2021 3:04:02 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
LDNR 29-B Analyst: STS						

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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 2:00:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-002 **Matrix:** SOIL
Client Sample ID H-32 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	73.5	49.3		mg/Kg-dry	1	8/26/2021 11:43:49 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.3	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 2:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-003 **Matrix:** SOIL
Client Sample ID H-32 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	45.6	0.100		meq/100g	1	8/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.75	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	5.01	0.10		%	1	8/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.71	0.10			1	8/26/2021
Soluble Calcium	1.13	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.71	0.05		meq/L	1	8/26/2021
Soluble Sodium	4.52	0.25		meq/L	1	8/26/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.103	0.103		mg/Kg-dry	1	9/2/2021 6:55:18 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.96	1.89		mg/Kg-dry	1	8/27/2021 3:06:21 PM
Barium	326	0.947		mg/Kg-dry	1	8/27/2021 3:06:21 PM
Cadmium	< 0.473	0.473		mg/Kg-dry	1	8/27/2021 3:06:21 PM
Chromium	10.1	0.947		mg/Kg-dry	1	8/27/2021 3:06:21 PM
Lead	11.6	0.947		mg/Kg-dry	1	8/27/2021 3:06:21 PM
Selenium	< 3.79	3.79		mg/Kg-dry	1	8/27/2021 3:06:21 PM
Strontium	17.1	0.947		mg/Kg-dry	1	8/27/2021 3:06:21 PM
Zinc	25.2	0.947		mg/Kg-dry	1	8/27/2021 3:06:21 PM
29B METALS						
TRUE TOTAL BARIUM						

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

M Matrix Interference
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits
 U Analyte not detected



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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 2:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-003 **Matrix:** SOIL
Client Sample ID H-32 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	337	49.4		mg/Kg-dry	1	8/27/2021 3:45:40 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.9	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 2:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-004 **Matrix:** SOIL
Client Sample ID H-32 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	57.0	0.100		meq/100g	1	8/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.61	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.14	0.10		%	1	8/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.44	0.10			1	8/26/2021
Soluble Calcium	1.17	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.75	0.05		meq/L	1	8/26/2021
Soluble Sodium	3.37	0.25		meq/L	1	8/26/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.106	0.106		mg/Kg-dry	1	9/2/2021 6:57:35 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.49	1.98		mg/Kg-dry	1	8/27/2021 3:08:40 PM
Barium	447	0.990		mg/Kg-dry	1	8/27/2021 3:08:40 PM
Cadmium	< 0.495	0.495		mg/Kg-dry	1	8/27/2021 3:08:40 PM
Chromium	13.5	0.990		mg/Kg-dry	1	8/27/2021 3:08:40 PM
Lead	11.8	0.990		mg/Kg-dry	1	8/27/2021 3:08:40 PM
Selenium	< 3.96	3.96		mg/Kg-dry	1	8/27/2021 3:08:40 PM
Strontium	26.1	0.990		mg/Kg-dry	1	8/27/2021 3:08:40 PM
Zinc	44.6	0.990		mg/Kg-dry	1	8/27/2021 3:08:40 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 2:15:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-004 **Matrix:** SOIL
Client Sample ID H-32 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	514	46.8		mg/Kg-dry	1	8/27/2021 3:52:36 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.4	1.00		wt%	1	8/23/2021 11:20:00 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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 2:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-005 **Matrix:** SOIL
Client Sample ID H-32 18-20

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.57	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	18.2	1.25		mg/L	5	9/2/2021 1:39:22 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.5	1.00		wt%	1	8/23/2021 11:20:00 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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/17/2021 3:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-006 **Matrix:** SOIL
Client Sample ID H-32 48-50

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.86	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	24.6	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-007 **Matrix:** SOIL
Client Sample ID H-33 2-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	17.6	0.100		meq/100g	1	8/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.48	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.31	0.10		%	1	8/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.11	0.10			1	8/26/2021
Soluble Calcium	0.75	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.49	0.05		meq/L	1	8/26/2021
Soluble Sodium	2.45	0.25		meq/L	1	8/26/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.108	0.108		mg/Kg-dry	1	9/2/2021 7:04:50 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	3.50	1.86		mg/Kg-dry	1	8/27/2021 3:15:36 PM
Barium	39.3	0.928		mg/Kg-dry	1	8/27/2021 3:15:36 PM
Cadmium	< 0.464	0.464		mg/Kg-dry	1	8/27/2021 3:15:36 PM
Chromium	8.27	0.928		mg/Kg-dry	1	8/27/2021 3:15:36 PM
Lead	9.62	0.928		mg/Kg-dry	1	8/27/2021 3:15:36 PM
Selenium	< 3.71	3.71		mg/Kg-dry	1	8/27/2021 3:15:36 PM
Strontium	6.75	0.928		mg/Kg-dry	1	8/27/2021 3:15:36 PM
Zinc	7.28	0.928		mg/Kg-dry	1	8/27/2021 3:15:36 PM
29B METALS						
TRUE TOTAL BARIUM						

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

M Matrix Interference
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits
 U Analyte not detected



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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:35:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-007 **Matrix:** SOIL
Client Sample ID H-33 2-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	74.4	48.8		mg/Kg-dry	1	8/27/2021 3:54:56 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.7	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-008 **Matrix:** SOIL
Client Sample ID H-33 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	33.1	0.100		meq/100g	1	8/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.85	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
LDNR 29-B Analyst: JMI						
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.15	0.10		%	1	8/27/2021
LDNR 29-B LDNR 29-B Analyst: BXB						
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.98	0.10			1	8/26/2021
Soluble Calcium	1.06	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.70	0.05		meq/L	1	8/26/2021
Soluble Sodium	4.67	0.25		meq/L	1	8/26/2021
LDNR 29-B LDNR 29-B Analyst: STS						
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.100	0.100		mg/Kg-dry	1	9/2/2021 7:07:07 AM
29B/SW7471A SW7471A Analyst: BXB						
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.92	1.84		mg/Kg-dry	1	8/27/2021 3:17:54 PM
Barium	213	0.920		mg/Kg-dry	1	8/27/2021 3:17:54 PM
Cadmium	< 0.460	0.460		mg/Kg-dry	1	8/27/2021 3:17:54 PM
Chromium	9.80	0.920		mg/Kg-dry	1	8/27/2021 3:17:54 PM
Lead	13.1	0.920		mg/Kg-dry	1	8/27/2021 3:17:54 PM
Selenium	< 3.68	3.68		mg/Kg-dry	1	8/27/2021 3:17:54 PM
Strontium	23.7	0.920		mg/Kg-dry	1	8/27/2021 3:17:54 PM
Zinc	24.0	0.920		mg/Kg-dry	1	8/27/2021 3:17:54 PM
SW6010B SW3050B Analyst: STS						
29B METALS						
TRUE TOTAL BARIUM						
LDNR 29-B Analyst: STS						

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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-008 **Matrix:** SOIL
Client Sample ID H-33 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	213	48.9		mg/Kg-dry	1	8/27/2021 3:57:15 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.4	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-009 **Matrix:** SOIL
Client Sample ID H-33 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	30.1	0.100		meq/100g	1	8/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.78	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.24	0.10		%	1	8/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.61	0.10			1	8/26/2021
Soluble Calcium	1.11	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.70	0.05		meq/L	1	8/26/2021
Soluble Sodium	4.38	0.25		meq/L	1	8/26/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.104	0.104		mg/Kg-dry	1	9/2/2021 7:09:23 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.10	1.96		mg/Kg-dry	1	8/27/2021 3:20:13 PM
Barium	231	0.982		mg/Kg-dry	1	8/27/2021 3:20:13 PM
Cadmium	< 0.491	0.491		mg/Kg-dry	1	8/27/2021 3:20:13 PM
Chromium	11.4	0.982		mg/Kg-dry	1	8/27/2021 3:20:13 PM
Lead	10.8	0.982		mg/Kg-dry	1	8/27/2021 3:20:13 PM
Selenium	< 3.93	3.93		mg/Kg-dry	1	8/27/2021 3:20:13 PM
Strontium	20.0	0.982		mg/Kg-dry	1	8/27/2021 3:20:13 PM
Zinc	25.2	0.982		mg/Kg-dry	1	8/27/2021 3:20:13 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-009 **Matrix:** SOIL
Client Sample ID H-33 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	202	47.7		mg/Kg-dry	1	8/27/2021 3:59:34 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	13.4	1.00		wt%	1	8/23/2021 11:20:00 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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-010 **Matrix:** SOIL
Client Sample ID H-33 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	45.9	0.100		meq/100g	1	8/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.85	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.43	0.10		%	1	8/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.27	0.10			1	8/26/2021
Soluble Calcium	1.14	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.71	0.05		meq/L	1	8/26/2021
Soluble Sodium	< 0.25	0.25		meq/L	1	8/26/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0940	0.0940		mg/Kg-dry	1	9/2/2021 7:11:40 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	6.45	1.87		mg/Kg-dry	1	8/27/2021 3:22:32 PM
Barium	358	0.937		mg/Kg-dry	1	8/27/2021 3:22:32 PM
Cadmium	< 0.469	0.469		mg/Kg-dry	1	8/27/2021 3:22:32 PM
Chromium	14.6	0.937		mg/Kg-dry	1	8/27/2021 3:22:32 PM
Lead	17.0	0.937		mg/Kg-dry	1	8/27/2021 3:22:32 PM
Selenium	< 3.75	3.75		mg/Kg-dry	1	8/27/2021 3:22:32 PM
Strontium	114	0.937		mg/Kg-dry	1	8/27/2021 3:22:32 PM
Zinc	46.4	0.937		mg/Kg-dry	1	8/27/2021 3:22:32 PM
29B METALS						
TRUE TOTAL BARIUM						

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

M Matrix Interference
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits
 U Analyte not detected



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 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 3:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-010 **Matrix:** SOIL
Client Sample ID H-33 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS		LDNR 29-B			Analyst: STS	
TRUE TOTAL BARIUM						
True Total Barium	644	49.4		mg/Kg-dry	1	8/27/2021 4:01:52 PM
PERCENT MOISTURE		LDNR 29-B			Analyst: BXB	
Percent Moisture	16.7	1.00		wt%	1	8/23/2021 11:20:00 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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/18/2021 4:10:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-011 **Matrix:** SOIL
Client Sample ID H-33 16-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.93	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
INORGANIC ANIONS IN LEACHATE BY IC				SW9056A		Analyst: SGP
Chloride	30.6	1.25		mg/L	5	9/2/2021 1:53:09 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.1	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 2:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-012 **Matrix:** SOIL
Client Sample ID H-34 2-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	27.4	0.100		meq/100g	1	8/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.78	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.47	0.10		%	1	8/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.70	0.10			1	8/26/2021
Soluble Calcium	2.29	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.84	0.05		meq/L	1	8/26/2021
Soluble Sodium	3.37	0.25		meq/L	1	8/26/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.109	0.109		mg/Kg-dry	1	9/2/2021 7:13:57 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	4.44	1.93		mg/Kg-dry	1	8/27/2021 3:24:51 PM
Barium	205	0.966		mg/Kg-dry	1	8/27/2021 3:24:51 PM
Cadmium	< 0.483	0.483		mg/Kg-dry	1	8/27/2021 3:24:51 PM
Chromium	11.8	0.966		mg/Kg-dry	1	8/27/2021 3:24:51 PM
Lead	17.4	0.966		mg/Kg-dry	1	8/27/2021 3:24:51 PM
Selenium	< 3.87	3.87		mg/Kg-dry	1	8/27/2021 3:24:51 PM
Strontium	10.7	0.966		mg/Kg-dry	1	8/27/2021 3:24:51 PM
Zinc	23.0	0.966		mg/Kg-dry	1	8/27/2021 3:24:51 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

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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 2417 W. Pinhook Road
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Analytical Report

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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 2:45:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-012 **Matrix:** SOIL
Client Sample ID H-34 2-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	111	46.4		mg/Kg-dry	1	8/27/2021 4:04:10 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.8	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 2:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-013 **Matrix:** SOIL
Client Sample ID H-34 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	42.2	0.100		meq/100g	1	8/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.59	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	4.35	0.10		%	1	8/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.33	0.10			1	8/26/2021
Soluble Calcium	0.71	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.44	0.05		meq/L	1	8/26/2021
Soluble Sodium	3.29	0.25		meq/L	1	8/26/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0928	0.0928		mg/Kg-dry	1	9/2/2021 7:16:17 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.45	1.83		mg/Kg-dry	1	8/27/2021 3:27:11 PM
Barium	157	0.913		mg/Kg-dry	1	8/27/2021 3:27:11 PM
Cadmium	< 0.456	0.456		mg/Kg-dry	1	8/27/2021 3:27:11 PM
Chromium	11.6	0.913		mg/Kg-dry	1	8/27/2021 3:27:11 PM
Lead	11.7	0.913		mg/Kg-dry	1	8/27/2021 3:27:11 PM
Selenium	< 3.65	3.65		mg/Kg-dry	1	8/27/2021 3:27:11 PM
Strontium	17.9	0.913		mg/Kg-dry	1	8/27/2021 3:27:11 PM
Zinc	13.6	0.913		mg/Kg-dry	1	8/27/2021 3:27:11 PM
29B METALS						
TRUE TOTAL BARIUM						

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

M Matrix Interference
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits
 U Analyte not detected



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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 2:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-013 **Matrix:** SOIL
Client Sample ID H-34 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	153	48.1		mg/Kg-dry	1	8/27/2021 4:06:29 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.7	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 2:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-014 **Matrix:** SOIL
Client Sample ID H-34 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	25.2	0.100		meq/100g	1	8/27/2021
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.81	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	3.23	0.10		%	1	8/27/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	4.45	0.10			1	8/26/2021
Soluble Calcium	1.17	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.69	0.05		meq/L	1	8/26/2021
Soluble Sodium	4.29	0.25		meq/L	1	8/26/2021
29B METALS					29B/SW7471A	SW7471A Analyst: BXB
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0942	0.0942		mg/Kg-dry	1	9/2/2021 7:18:33 AM
29B METALS					SW6010B	SW3050B Analyst: STS
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.80	1.84		mg/Kg-dry	1	8/27/2021 3:29:29 PM
Barium	114	0.920		mg/Kg-dry	1	8/27/2021 3:29:29 PM
Cadmium	< 0.460	0.460		mg/Kg-dry	1	8/27/2021 3:29:29 PM
Chromium	7.23	0.920		mg/Kg-dry	1	8/27/2021 3:29:29 PM
Lead	10.1	0.920		mg/Kg-dry	1	8/27/2021 3:29:29 PM
Selenium	< 3.68	3.68		mg/Kg-dry	1	8/27/2021 3:29:29 PM
Strontium	13.1	0.920		mg/Kg-dry	1	8/27/2021 3:29:29 PM
Zinc	17.6	0.920		mg/Kg-dry	1	8/27/2021 3:29:29 PM
29B METALS					LDNR 29-B	Analyst: STS
TRUE TOTAL BARIUM						

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

M Matrix Interference
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits
 U Analyte not detected



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 2:55:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-014 **Matrix:** SOIL
Client Sample ID H-34 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	147	45.7		mg/Kg-dry	1	8/27/2021 4:13:24 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.4	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909

Date Reported: 9/3/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 3:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-015 **Matrix:** SOIL
Client Sample ID H-34 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	54.0	0.100		meq/100g	1	8/27/2021
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.81	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	2.45	0.10		%	1	8/27/2021
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	3.70	0.10			1	8/26/2021
Soluble Calcium	1.51	0.02		meq/L	1	8/26/2021
Soluble Magnesium	0.88	0.05		meq/L	1	8/26/2021
Soluble Sodium	4.05	0.25		meq/L	1	8/26/2021
29B METALS						
MERCURY IN SOIL OR SLUDGE						
Mercury	< 0.0966	0.0966		mg/Kg-dry	1	9/2/2021 7:20:50 AM
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Arsenic	5.04	1.94		mg/Kg-dry	1	8/27/2021 5:15:47 PM
Barium	154	0.969		mg/Kg-dry	1	8/27/2021 5:15:47 PM
Cadmium	< 0.485	0.485		mg/Kg-dry	1	8/27/2021 5:15:47 PM
Chromium	14.9	0.969		mg/Kg-dry	1	8/27/2021 5:15:47 PM
Lead	17.7	0.969		mg/Kg-dry	1	8/27/2021 5:15:47 PM
Selenium	< 3.88	3.88		mg/Kg-dry	1	8/27/2021 5:15:47 PM
Strontium	28.1	0.969		mg/Kg-dry	1	8/27/2021 5:15:47 PM
Zinc	48.3	0.969		mg/Kg-dry	1	8/27/2021 5:15:47 PM
29B METALS						
TRUE TOTAL BARIUM						

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

M Matrix Interference
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits
 U Analyte not detected



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 3:05:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-015 **Matrix:** SOIL
Client Sample ID H-34 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B METALS				LDNR 29-B		Analyst: STS
TRUE TOTAL BARIUM						
True Total Barium	189	49.2		mg/Kg-dry	1	8/27/2021 4:15:42 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.2	1.00		wt%	1	8/23/2021 11:20:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 3:20:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-016 **Matrix:** SOIL
Client Sample ID H-34 16-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						Analyst: JMI
Electrical Conductivity	0.54	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
INORGANIC ANIONS IN LEACHATE BY IC						Analyst: SGP
Chloride	18.7	1.25		mg/L	5	9/2/2021 2:06:57 PM
PERCENT MOISTURE						Analyst: BXB
Percent Moisture	20.8	1.00		wt%	1	8/23/2021 11:20:00 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#: **21080909**

Date Reported: **9/3/2021**

CLIENT: ICON Environmental Services **Collection Date:** 8/19/2021 3:50:00 PM
Project: Henning II 9403-010-0100
Lab ID: 21080909-017 **Matrix:** SOIL
Client Sample ID H-34 28-30

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.61	0.10		mmhos/cm	1	8/26/2021 2:25:00 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.3	1.00		wt%	1	8/23/2021 11:20:00 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#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40782

Sample ID	MB-40782	SampType:	MBLK	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102190			
Client ID:	PBS	Batch ID:	40782	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494722			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		< 50.0		50.0										

Sample ID	LCS-40782	SampType:	LCS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102190			
Client ID:	LCSS	Batch ID:	40782	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494723			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,570		50.0	5,000	0		91.3	75	125				

Sample ID	LCSD-40782	SampType:	LCSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102190			
Client ID:	LCSS02	Batch ID:	40782	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494724			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,560		50.0	5,000	0		91.1	75	125	4,565	0.205	20	

Sample ID	21080780-001AMS	SampType:	MS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102190			
Client ID:	ZZZZZZ	Batch ID:	40782	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494726			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		6,040		47.1	4,713	2,006		85.6	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 sp



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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40782

Sample ID	21080780-001AMSD	SampType:	MSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102190		
Client ID:	ZZZZZZ	Batch ID:	40782	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494727		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		6,190		47.6	4,757	2,006	87.9	75	125	6,038	2.45	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 sp



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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40783

Sample ID	MB-40783	SampType:	MBLK	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230			
Client ID:	PBS	Batch ID:	40783	TestNo:	LDNR 29-B			Analysis Date:	8/27/2021	SeqNo:	2496187			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		< 50.0		50.0										

Sample ID	LCS-40783	SampType:	LCS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230			
Client ID:	LCSS	Batch ID:	40783	TestNo:	LDNR 29-B			Analysis Date:	8/27/2021	SeqNo:	2496188			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,820		50.0	5,000	0		96.4	75	125				

Sample ID	LCSD-40783	SampType:	LCSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230			
Client ID:	LCSS02	Batch ID:	40783	TestNo:	LDNR 29-B			Analysis Date:	8/27/2021	SeqNo:	2496189			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,600		50.0	5,000	0		92.0	75	125	4,819	4.63	20	

Sample ID	21080909-003AMS	SampType:	MS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230			
Client ID:	H-32 8-10	Batch ID:	40783	TestNo:	LDNR 29-B			Analysis Date:	8/27/2021	SeqNo:	2496194			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,640		47.6	4,757	336.9		90.4	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services

Project: Henning II 9403-010-0100

BatchID: 40783

Sample ID	21080909-003AMSD	SampType:	MSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230		
Client ID:	H-32 8-10	Batch ID:	40783	TestNo:	LDNR 29-B			Analysis Date:	8/27/2021	SeqNo:	2496195		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,560		47.6	4,757	336.9	88.8	75	125	4,638	1.64	20	

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 sp |



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40784

Sample ID	MB-40784	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230
Client ID:	PBS	Batch ID:	40784	TestNo:	SW6010B	SW3050B		Analysis Date:	8/27/2021	SeqNo:	2496169
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Arsenic		< 2.00		2.00							
Barium		< 1.00		1.00							
Cadmium		< 0.500		0.500							
Chromium		< 1.00		1.00							
Lead		< 1.00		1.00							
Selenium		< 4.00		4.00							
Strontium		< 1.00		1.00							
Zinc		< 1.00		1.00							

Sample ID	LCS-40784	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230
Client ID:	LCSS	Batch ID:	40784	TestNo:	SW6010B	SW3050B		Analysis Date:	8/27/2021	SeqNo:	2496170
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Arsenic		47.7		2.00	50.00	0	95.5	80	120		
Barium		48.2		1.00	50.00	0	96.3	80	120		
Cadmium		47.9		0.500	50.00	0	95.8	80	120		
Chromium		48.4		1.00	50.00	0	96.8	80	120		
Lead		47.5		1.00	50.00	0	95.0	80	120		
Selenium		46.7		4.00	50.00	0	93.3	80	120		
Strontium		48.0		1.00	50.00	0	96.0	80	120		
Zinc		46.4		1.00	50.00	0	92.8	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 sp



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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40784

Sample ID	LCSD-40784	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230
Client ID:	LCSS02	Batch ID:	40784	TestNo:	SW6010B		SW3050B	Analysis Date:	8/27/2021	SeqNo:	2496171
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.6	2.00	50.00	0	97.1	80	120	47.74	1.70	20	
Barium	48.5	1.00	50.00	0	97.1	80	120	48.16	0.788	20	
Cadmium	47.7	0.500	50.00	0	95.3	80	120	47.91	0.538	20	
Chromium	48.7	1.00	50.00	0	97.4	80	120	48.42	0.542	20	
Lead	48.0	1.00	50.00	0	96.1	80	120	47.50	1.13	20	
Selenium	46.9	4.00	50.00	0	93.9	80	120	46.66	0.566	20	
Strontium	48.3	1.00	50.00	0	96.7	80	120	47.98	0.747	20	
Zinc	47.7	1.00	50.00	0	95.4	80	120	46.39	2.81	20	

Sample ID	21080909-001AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230
Client ID:	H-32 2-4	Batch ID:	40784	TestNo:	SW6010B		SW3050B	Analysis Date:	8/27/2021	SeqNo:	2496173
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	43.4	1.87	46.86	5.315	81.3	75	125				
Barium	325	0.937	46.86	222.0	219	75	125				S
Cadmium	38.3	0.469	46.86	0.01919	81.7	75	125				
Chromium	54.6	0.937	46.86	11.62	91.8	75	125				
Lead	51.8	0.937	46.86	14.25	80.1	75	125				
Selenium	35.2	3.75	46.86	0.5409	74.0	75	125				S
Strontium	50.1	0.937	46.86	9.186	87.2	75	125				
Zinc	55.0	0.937	46.86	11.65	92.4	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40784

Sample ID	21080909-001AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	8/26/2021	RunNo:	102230
Client ID:	H-32 2-4	Batch ID:	40784	TestNo:	SW6010B		SW3050B	Analysis Date:	8/27/2021	SeqNo:	2496174
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	43.0	1.90	47.58	5.315	79.1	75	125	43.43	1.10	20	
Barium	216	0.952	47.58	222.0	-12.3	75	125	324.9	40.2	20	RS
Cadmium	38.4	0.476	47.58	0.01919	80.6	75	125	38.29	0.269	20	
Chromium	54.6	0.952	47.58	11.62	90.4	75	125	54.63	0.00283	20	
Lead	51.2	0.952	47.58	14.25	77.7	75	125	51.79	1.12	20	
Selenium	35.3	3.81	47.58	0.5409	73.0	75	125	35.24	0.152	20	S
Strontium	48.8	0.952	47.58	9.186	83.3	75	125	50.06	2.54	20	
Zinc	55.1	0.952	47.58	11.65	91.3	75	125	54.96	0.273	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



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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40789

Sample ID	21080909-001ADUP	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	8/26/2021	RunNo:	102224		
Client ID:	H-32 2-4	Batch ID:	40789	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	8/27/2021	SeqNo:	2495891		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		2.13		0.10						2.17	1.86	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 sp



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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40790

Sample ID	21080909-001ADUP	SampType:	DUP	TestCode:	CEC	Units:	meq/100g	Prep Date:	8/26/2021	RunNo:	102224
Client ID:	H-32 2-4	Batch ID:	40790	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	8/27/2021	SeqNo:	2495815
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		28.8		0.100						28.90	0.208 20

Sample ID	lcs-40790	SampType:	LCS	TestCode:	CEC	Units:	meq/100g	Prep Date:	8/26/2021	RunNo:	102224
Client ID:	LCSS	Batch ID:	40790	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	8/27/2021	SeqNo:	2495829
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		21.5		0.100	25.00	0	86.0	76	124		

Sample ID	lcsd-40790	SampType:	LCSD	TestCode:	CEC	Units:	meq/100g	Prep Date:	8/26/2021	RunNo:	102224
Client ID:	LCSS02	Batch ID:	40790	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	8/27/2021	SeqNo:	2495830
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		21.0		0.100	25.00	0	83.8	76	124	21.50	2.59 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 sp



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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40809

Sample ID	21080909-001ADUP	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	8/26/2021	RunNo:	102228		
Client ID:	H-32 2-4	Batch ID:	40809	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	8/26/2021	SeqNo:	2496138		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		3.31		0.10						3.45	4.24	20	
Soluble Calcium		0.60		0.02						0.59	0.28	20	
Soluble Magnesium		0.35		0.05						0.35	0.64	20	
Soluble Sodium		2.28		0.25						2.37	4.03	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40843

Sample ID	MB-40843	SampType:	MBLK	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	9/1/2021	RunNo:	102344
Client ID:	PBS	Batch ID:	40843	TestNo:	29B/SW7471 SW7471A	Analysis Date:	9/2/2021	SeqNo:	2498617		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		< 0.100		0.100							

Sample ID	LCS-40843	SampType:	LCS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	9/1/2021	RunNo:	102344
Client ID:	LCSS	Batch ID:	40843	TestNo:	29B/SW7471 SW7471A	Analysis Date:	9/2/2021	SeqNo:	2498618		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.903		0.100	0.8330	0	108	80	120		

Sample ID	LCSD-40843	SampType:	LCSD	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:	9/1/2021	RunNo:	102344
Client ID:	LCSS02	Batch ID:	40843	TestNo:	29B/SW7471 SW7471A	Analysis Date:	9/2/2021	SeqNo:	2498619		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		0.908		0.100	0.8330	0	109	80	120	0.9029	0.536 20

Sample ID	21080909-001APDS	SampType:	PDS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:		RunNo:	102344
Client ID:	H-32 2-4	Batch ID:	40843	TestNo:	29B/SW7471 SW7471A	Analysis Date:	9/2/2021	SeqNo:	2498665		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Mercury		9.33		0.0968	0.833	0.447	88.9	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 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#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: 40843

Sample ID	21080909-001APDS	SampType:	PDS	TestCode:	HG_S_29B	Units:	mg/Kg-dry	Prep Date:		RunNo:	102344		
Client ID:	H-32 2-4	Batch ID:	40843	TestNo:	29B/SW7471 SW7471A			Analysis Date:	9/2/2021	SeqNo:	2498666		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.797		0.0968	0.8063	0	98.8	80	120	0.7528	5.66	0	

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#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R102138

Sample ID	21080695-011ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	102138		
Client ID:	ZZZZZZ	Batch ID:	R102138	TestNo:	LDNR 29-B			Analysis Date:	8/17/2021	SeqNo:	2493465		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		6.90		1.00						7.40	6.99	20	

Sample ID	21080866-006ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	102138		
Client ID:	ZZZZZZ	Batch ID:	R102138	TestNo:	LDNR 29-B			Analysis Date:	8/23/2021	SeqNo:	2493486		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		22.7		1.00						22.10	2.68	20	

Sample ID	21080909-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	102138		
Client ID:	H-32 2-4	Batch ID:	R102138	TestNo:	LDNR 29-B			Analysis Date:	8/23/2021	SeqNo:	2493506		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		17.0		1.00						13.00	26.7	20	R

Sample ID	21080924-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	102138		
Client ID:	ZZZZZZ	Batch ID:	R102138	TestNo:	LDNR 29-B			Analysis Date:	8/23/2021	SeqNo:	2493526		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		19.0		1.00						19.00	0	20	

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#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R102182

Sample ID	MB-R102182	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	102182
Client ID:	PBS	Batch ID:	R102182	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494595
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R102182	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	102182
Client ID:	ZZZZZ	Batch ID:	R102182	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494596
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.44		0.10	0.46	0	95.6	90	110		

Sample ID	LCS2-R102182	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	102182
Client ID:	ZZZZZ	Batch ID:	R102182	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494597
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		51.9		0.10	53.00	0	97.9	90	110		

Sample ID	21080909-001ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	102182
Client ID:	H-32 2-4	Batch ID:	R102182	TestNo:	LDNR 29-B			Analysis Date:	8/26/2021	SeqNo:	2494599
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.40		0.10						0.40	0.51 20

Qualifiers:
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 S Spike Recovery outside accepted recovery limits
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QC SUMMARY REPORT

WO#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R102380

Sample ID	MBLK	SampType:	MBLK	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	102380			
Client ID:	PBW	Batch ID:	R102380	TestNo:	SW9056A			Analysis Date:	9/2/2021	SeqNo:	2499222			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250		0.250										

Sample ID	LCS	SampType:	LCS	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	102380			
Client ID:	LCSW	Batch ID:	R102380	TestNo:	SW9056A			Analysis Date:	9/2/2021	SeqNo:	2499223			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		9.86		0.250	10.00	0		98.6	80	120				

Sample ID	LCSD	SampType:	LCSD	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	102380			
Client ID:	LCSS02	Batch ID:	R102380	TestNo:	SW9056A			Analysis Date:	9/2/2021	SeqNo:	2499224			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		9.84		0.250	10.00	0		98.4	80	120	9.862	0.199	15	

Sample ID	21090038-001BMS	SampType:	MS	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	102380			
Client ID:	ZZZZZZ	Batch ID:	R102380	TestNo:	SW9056A			Analysis Date:	9/2/2021	SeqNo:	2499242			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		34.4		1.25	25.00	6.730		111	80	120				

Qualifiers:
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 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#: 21080909
 03-Sep-21

Client: ICON Environmental Services
Project: Henning II 9403-010-0100

BatchID: R102380

Sample ID	21090038-001BMSD	SampType:	MSD	TestCode:	9056_LEACH	Units:	mg/L	Prep Date:		RunNo:	102380		
Client ID:	ZZZZZZ	Batch ID:	R102380	TestNo:	SW9056A			Analysis Date:	9/2/2021	SeqNo:	2499243		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		34.1		1.25	25.00	6.730	110	80	120	34.37	0.763	15	

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

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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **21080909**

RcptNo: **1**

Logged by:	Danielle Hollier	8/20/2021 11:30:00 AM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	8/20/2021 11:54:40 AM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	8/23/2021 2:37:29 PM	<i>Caitlin Duplantis</i>

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
-----------	---------	-----------	-------------	---------	-----------	-----------



Chain of Custody

Laboratory Number: **21050909**

Client Information: **ICON** Billing Information: **SAME** PO Number: _____

Company Name: **ICON** Project Name/Number: **HEMNING II** Matrix Code: _____

Contact Name: _____ Quote Number: **QA03-010-0100**

Address: _____ Sampler's Signature: *[Signature]*

City, State Zip: _____ Ext: _____ Required QC Level: _____

Phone Number: _____ Ext: _____ Bill Monthly: Yes No

Fax Number: _____ E-mail Address: _____ Shipping Method: **UPS / FedEx / NOW**

Matrix Legend:
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information		Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type P=Plastic, G=Glass, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ O ₂	Requested Tests	Comments
			Date	Time					
			Matrix						
H-12B H-32 2-4	<input type="checkbox"/> Drinking Water	Standard	8.17.21	1355	G	SO			
H-13 H-32 A-6	<input type="checkbox"/> Distribution	RUSH	8.17.21	1400	G	SO			
H-13 H-32 8-10	<input type="checkbox"/> Special	1 Day	8.17.21	1410	G	SO			
H-23 H-32 10-12	<input type="checkbox"/> State	2 Day	8.17.21	1415	G	SO			
H-23 H-32 18-20	<input type="checkbox"/> Other	Other	8.17.21	1435	G	SO			
H-32			8.17.21	1550	G	SO			

Relinquished by: *[Signature]* Date/Time: **8-20-21 1130** Received by: *[Signature]* Date/Time: **8-20-21 1130**

Field Notes: _____

Received at lab on ice? Yes No Temp: _____

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.

8800 North US 31
Columbus, IN
47291 USA
P 812-375-0531
F 812-375-0731

328 Lay Road, Suite 100
Fort Wayne, IN
46825 USA
P 260-471-7000
F 260-471-7777

909 Executive Dr
Warsaw, IN
46590 USA
P 574-287-3305
F 574-289-6588

3371 Cleveland Road, Suite 100A
South Bend, IN
46628 USA
P 574-277-0707
F 574-273-9899

2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-233-0483
F 337-233-6540



Chain of Custody

Laboratory Number: **21080909**

Client Information: **ICON** Billing Information: **SAME** PO Number: **HEMNING II** Matrix Code: **9403-010-C100**

Company Name: **ICON** Contact Name: **ICON** Address: **ICON**

City, State Zip: **ICON** Phone Number: **ICON** Fax Number: **ICON** E-mail Address: **ICON**

Project Name/Number: **HEMNING II** Quote Number: **9403-010-C100** Sampler's Signature: *[Signature]*

Required QC Level: **ICON** Bill Monthly: Yes No Shipping Method: **UPS / FedEx / NOW**

Ext: **ICON** Ext: **ICON** DHL / Element / Hand / Mail

Page 2 of 3

Matrix Code

DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 PW = Produced Water
 CF = Completion Fluid

SOL = Solid
 SO = Soil
 SW = Swab
 NGL = Natural Gas Liquid

Sample ID/Description	Which Regulations Apply:		Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information		Rush turn times will incur a surcharge and must be pre-approved by (lab.)	Container Type Quantity	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₈	Requested Tests	Comments		
	Relinquished by			Date/Time							Received by	Date/Time
	Date	Time		Grab / Composite	Matrix							
H-33	2-A	8.18.21	1535	G	SO		1					
H-33	G-8	8.18.21	1545	G	SO		1					
H-33	8-10	8.18.21	1550	G	SO		1					
H-33	10-12	8.18.21	1555	G	SO		1					
H-33	16-18	8.18.21	1610	G	SO		1					

Relinquished by: *[Signature]* Date/Time: **8-20-21 1130**

Received by: *[Signature]* Date/Time: **8-20-21 1130**

Field Notes: **ICON**

Received at lab on ice? Yes No Temp: **ICON**

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 Columbus, IN
 47201 USA
 P 812-375-0531
 F 812-375-0731

328 Ley Road, Suite 100
 Fort Wayne, IN
 46825 USA
 P 260-471-7000
 F 260-471-7777

908 Executive Dr
 Warsaw, IN
 46080 USA
 P 574-267-3305
 F 574-269-8569

3371 Cleveland Road, Suite 100A
 South Bend, IN
 46528 USA
 P 574-277-9707
 F 574-273-5698

2417 W. Pinhook Rd
 Lafayette, LA
 70508 USA
 P 337-235-0483
 F 337-233-6540



Chain of Custody

Laboratory Number: **21050909**

Client Information: **ICON** Billing Information: **SAME**
 Company Name: **ICON** PO Number:
 Contact Name: Quote Number:
 Address: Required QC Level
 City, State Zip: Ext: Bill Monthly Yes No
 Phone Number: Ext: Shipping Method: **UPS / FedEx / NOW**
 Fax Number: Ext: **DHL / Element (Hand) Mail**
 E-mail Address: Ext:

Project Name/Number: **HEAVYMETAL**
 Matrix Code: **9403-010-0100**
 Supplier's Signature: *Jeffrey Miller*
 Shipping Method:

DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Page 3 of 3
 Matrix Code

Sample ID/Description	Which Regulations Apply:		Turn Time	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Collection Information	Matrix	Quantity	Container Type P=Plastic, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₈	Requested Tests	Comments	
	Date											Date/Time
	Date	Time										
H-3A	<input type="checkbox"/> RCRA	<input type="checkbox"/> Drinking Water	8.19.21	1445	G	SO	1	P	---	CEC/ESP/SARIC		
H-3A	<input type="checkbox"/> POTW	<input type="checkbox"/> Distribution	8.19.21	1450	G	SO	1	P	---	29B Metals		
H-3A	<input type="checkbox"/> NPDES	<input type="checkbox"/> Special	8.19.21	1455	G	SO	1	P	---	% Moisture		
H-3A	<input type="checkbox"/> USDA/FDA	<input type="checkbox"/> State	8.19.21	1505	G	SO	1	P	---			
H-3A	<input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Other	8.19.21	1520	G	SO	1	P	---			
H-3A			8.19.21	1530	G	SO	1	P	---			
H-3A			8.19.21	1550	G	SO	1	P	---			

Relinquished by: *Jeffrey Miller* Date/Time: **8-20-21 1130**
 Received by: *[Signature]* Date/Time: **8-20-21 1130**
 Field Notes:

Received at lab on ice? Yes No Temp:

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2417 W. Pinhook Rd
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 F 337-233-6540



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

August 31, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX: (225) 344-6654

RE: Henning 9403-010-0100

Order No.: 21080992

Dear Greg Miller:

Element Materials Technology Lafayette received 5 sample(s) on 8/24/2021 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 that reads '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#: 21080992
Date: 8/31/2021

CLIENT: ICON Environmental Services

Project: Henning 9403-010-0100

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

Analytical Report

(consolidated)

WO#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 10:55:00 AM
Project: Henning 9403-010-0100
Lab ID: 21080992-001 **Matrix:** AQUEOUS
Client Sample ID: H-34

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.133	0.133		mg/L	1	8/25/2021 7:41:00 PM
TPH (Oil Range)	< 0.123	0.123		mg/L	1	8/25/2021 7:41:00 PM
Surr: 4-Terphenyl-d14	104	51.4 - 146		%Rec	1	8/25/2021 7:41:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	8/26/2021 10:17:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	89.8	70 - 130		%Rec	1	8/26/2021 10:17:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	8/26/2021 10:17:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	8/26/2021 10:17:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	8/26/2021 10:17:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	8/26/2021 10:17:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	8/26/2021 10:17:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	8/26/2021 10:17:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	87.4	70 - 130		%Rec	1	8/26/2021 10:17:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	8/27/2021 6:42:42 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	359	12.5		mg/L	50	8/25/2021 1:11:33 PM
Sulfate	54.6	12.5		mg/L	50	8/25/2021 1:11:33 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.154	0.0100		mg/L	1	8/25/2021 8:23:39 PM
Cadmium	< 0.00500	0.00500		mg/L	1	8/25/2021 8:23:39 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		



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

(consolidated)

WO#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 10:55:00 AM
Project: Henning 9403-010-0100
Lab ID: 21080992-001 **Matrix:** AQUEOUS
Client Sample ID: H-34

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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METALS IN GROUND WATER
METALS IN WATER BY ICP, TOTALS

SW6010B

Analyst: **STS**

Calcium	84.9	0.500		mg/L	1	8/25/2021 8:23:39 PM
Chromium	< 0.0100	0.0100		mg/L	1	8/25/2021 8:23:39 PM
Iron	1.02	0.0100		mg/L	1	8/25/2021 8:23:39 PM
Lead	< 0.0100	0.0100		mg/L	1	8/25/2021 8:23:39 PM
Magnesium	30.6	0.500		mg/L	1	8/25/2021 8:23:39 PM
Manganese	0.0931	0.0100		mg/L	1	8/25/2021 8:23:39 PM
Potassium	< 5.00	5.00		mg/L	1	8/25/2021 8:23:39 PM
Sodium	216	5.00		mg/L	1	8/25/2021 8:23:39 PM
Strontium	0.440	0.0100		mg/L	1	8/25/2021 8:23:39 PM
Zinc	< 0.0100	0.0100		mg/L	1	8/25/2021 8:23:39 PM

METALS IN GROUND WATER
METALS IN WATER BY ICP-MS, TOTAL

SW6020A

Analyst: **MRB**

Arsenic	< 0.00250	0.00250		mg/L	10	8/26/2021 11:02:38 AM
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ALKALINITY; TOTAL, CARB, BICARB

SM2320 B

Analyst: **MAB**

Alkalinity, Bicarbonate (As CaCO3)	190	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Total (As CaCO3)	190	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM

TOTAL DISSOLVED SOLIDS

SM2540C

Analyst: **GMS**

Total Dissolved Solids (Residue, Filterable)	995	100		mg/L	5	8/24/2021 3:00:00 PM
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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

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WO#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 12:00:00 PM
Project: Henning 9403-010-0100
Lab ID: 21080992-002 **Matrix:** AQUEOUS
Client Sample ID: H-32A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.194	0.130		mg/L	1	8/25/2021 8:11:00 PM
TPH (Oil Range)	< 0.120	0.120		mg/L	1	8/25/2021 8:11:00 PM
Surr: 4-Terphenyl-d14	111	51.4 - 146		%Rec	1	8/25/2021 8:11:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	8/26/2021 10:44:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	91.8	70 - 130		%Rec	1	8/26/2021 10:44:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	8/26/2021 10:44:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	8/26/2021 10:44:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	8/26/2021 10:44:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	8/26/2021 10:44:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	8/26/2021 10:44:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	8/26/2021 10:44:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	90.0	70 - 130		%Rec	1	8/26/2021 10:44:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BXB
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	8/27/2021 6:44:58 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	213	12.5		mg/L	50	8/25/2021 1:25:21 PM
Sulfate	74.3	12.5		mg/L	50	8/25/2021 1:25:21 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0795	0.0100		mg/L	1	8/25/2021 8:30:36 PM
Cadmium	< 0.00500	0.00500		mg/L	1	8/25/2021 8:30:36 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		



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

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WO#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 12:00:00 PM
Project: Henning 9403-010-0100
Lab ID: 21080992-002 **Matrix:** AQUEOUS
Client Sample ID: H-32A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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METALS IN GROUND WATER **SW6010B** Analyst: **STS**
METALS IN WATER BY ICP, TOTALS

Calcium	56.0	0.500		mg/L	1	8/25/2021 8:30:36 PM
Chromium	< 0.0100	0.0100		mg/L	1	8/25/2021 8:30:36 PM
Iron	0.438	0.0100		mg/L	1	8/25/2021 8:30:36 PM
Lead	< 0.0100	0.0100		mg/L	1	8/25/2021 8:30:36 PM
Magnesium	19.6	0.500		mg/L	1	8/25/2021 8:30:36 PM
Manganese	0.244	0.0100		mg/L	1	8/25/2021 8:30:36 PM
Potassium	< 5.00	5.00		mg/L	1	8/25/2021 8:30:36 PM
Sodium	229	5.00		mg/L	1	8/25/2021 8:30:36 PM
Strontium	0.292	0.0100		mg/L	1	8/25/2021 8:30:36 PM
Zinc	< 0.0100	0.0100		mg/L	1	8/25/2021 8:30:36 PM

METALS IN GROUND WATER **SW6020A** Analyst: **MRB**
METALS IN WATER BY ICP-MS, TOTAL

Arsenic	< 0.00250	0.00250		mg/L	10	8/26/2021 11:27:52 AM
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ALKALINITY; TOTAL, CARB, BICARB **SM2320 B** Analyst: **MAB**

Alkalinity, Bicarbonate (As CaCO3)	290	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Total (As CaCO3)	290	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM

TOTAL DISSOLVED SOLIDS **SM2540C** Analyst: **GMS**

Total Dissolved Solids (Residue, Filterable)	795	100		mg/L	5	8/24/2021 3:00:00 PM
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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#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 1:50:00 PM
Project: Henning 9403-010-0100
Lab ID: 21080992-003 **Matrix:** AQUEOUS
Client Sample ID: H-32B

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.143	0.143		mg/L	1	8/26/2021 10:50:00 AM
TPH (Oil Range)	< 0.122	0.122		mg/L	1	8/26/2021 10:50:00 AM
Surr: 4-Terphenyl-d14	85.9	51.4 - 146		%Rec	1	8/26/2021 10:50:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	8/26/2021 11:11:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	90.2	70 - 130		%Rec	1	8/26/2021 11:11:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	8/26/2021 11:11:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	8/26/2021 11:11:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	8/26/2021 11:11:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	8/26/2021 11:11:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	8/26/2021 11:11:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	8/26/2021 11:11:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	88.4	70 - 130		%Rec	1	8/26/2021 11:11:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BBX
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	8/27/2021 6:47:15 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	157	12.5		mg/L	50	8/25/2021 1:39:09 PM
Sulfate	323	12.5		mg/L	50	8/25/2021 1:39:09 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0381	0.0100		mg/L	1	8/25/2021 8:37:32 PM
Cadmium	< 0.00500	0.00500		mg/L	1	8/25/2021 8:37:32 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
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 1:50:00 PM
Project: Henning 9403-010-0100
Lab ID: 21080992-003 **Matrix:** AQUEOUS
Client Sample ID: H-32B

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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METALS IN GROUND WATER
METALS IN WATER BY ICP, TOTALS

SW6010B

Analyst: **STS**

Calcium	97.8	0.500		mg/L	1	8/25/2021 8:37:32 PM
Chromium	< 0.0100	0.0100		mg/L	1	8/25/2021 8:37:32 PM
Iron	0.443	0.0100		mg/L	1	8/25/2021 8:37:32 PM
Lead	< 0.0100	0.0100		mg/L	1	8/25/2021 8:37:32 PM
Magnesium	42.9	0.500		mg/L	1	8/25/2021 8:37:32 PM
Manganese	0.667	0.0100		mg/L	1	8/25/2021 8:37:32 PM
Potassium	< 5.00	5.00		mg/L	1	8/25/2021 8:37:32 PM
Sodium	260	5.00		mg/L	1	8/25/2021 8:37:32 PM
Strontium	0.571	0.0100		mg/L	1	8/25/2021 8:37:32 PM
Zinc	< 0.0100	0.0100		mg/L	1	8/25/2021 8:37:32 PM

METALS IN GROUND WATER
METALS IN WATER BY ICP-MS, TOTAL

SW6020A

Analyst: **MRB**

Arsenic	< 0.00250	0.00250		mg/L	10	8/26/2021 11:30:41 AM
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ALKALINITY; TOTAL, CARB, BICARB

SM2320 B

Analyst: **MAB**

Alkalinity, Bicarbonate (As CaCO3)	372	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Total (As CaCO3)	372	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM

TOTAL DISSOLVED SOLIDS

SM2540C

Analyst: **GMS**

Total Dissolved Solids (Residue, Filterable)	1,120	100		mg/L	5	8/24/2021 3:00:00 PM
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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
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Analytical Report

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WO#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 2:50:00 PM
Project: Henning 9403-010-0100
Lab ID: 21080992-004 **Matrix:** AQUEOUS
Client Sample ID: H-33

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.240	0.136		mg/L	1	8/26/2021 11:18:00 AM
TPH (Oil Range)	< 0.125	0.125		mg/L	1	8/26/2021 11:18:00 AM
Surr: 4-Terphenyl-d14	106	51.4 - 146		%Rec	1	8/26/2021 11:18:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	8/26/2021 11:38:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	90.6	70 - 130		%Rec	1	8/26/2021 11:38:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	8/26/2021 11:38:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	8/26/2021 11:38:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	8/26/2021 11:38:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	8/26/2021 11:38:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	8/26/2021 11:38:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	8/26/2021 11:38:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	87.4	70 - 130		%Rec	1	8/26/2021 11:38:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: BBX
MERCURY IN GROUND WATER,TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	8/27/2021 6:49:32 AM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	496	12.5		mg/L	50	8/25/2021 1:52:57 PM
Sulfate	163	12.5		mg/L	50	8/25/2021 1:52:57 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0370	0.0100		mg/L	1	8/25/2021 8:39:52 PM
Cadmium	< 0.00500	0.00500		mg/L	1	8/25/2021 8:39:52 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
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21080992

Date Reported: 8/31/2021

CLIENT: ICON Environmental Services **Collection Date:** 8/23/2021 2:50:00 PM
Project: Henning 9403-010-0100
Lab ID: 21080992-004 **Matrix:** AQUEOUS
Client Sample ID: H-33

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**METALS IN GROUND WATER
 METALS IN WATER BY ICP, TOTALS**

SW6010B

Analyst: **STS**

Calcium	109	0.500		mg/L	1	8/25/2021 8:39:52 PM
Chromium	< 0.0100	0.0100		mg/L	1	8/25/2021 8:39:52 PM
Iron	0.365	0.0100		mg/L	1	8/25/2021 8:39:52 PM
Lead	< 0.0100	0.0100		mg/L	1	8/25/2021 8:39:52 PM
Magnesium	40.5	0.500		mg/L	1	8/25/2021 8:39:52 PM
Manganese	0.199	0.0100		mg/L	1	8/25/2021 8:39:52 PM
Potassium	< 5.00	5.00		mg/L	1	8/25/2021 8:39:52 PM
Sodium	372	5.00		mg/L	1	8/25/2021 8:39:52 PM
Strontium	0.547	0.0100		mg/L	1	8/25/2021 8:39:52 PM
Zinc	< 0.0100	0.0100		mg/L	1	8/25/2021 8:39:52 PM

**METALS IN GROUND WATER
 METALS IN WATER BY ICP-MS, TOTAL**

SW6020A

Analyst: **MRB**

Arsenic	< 0.00250	0.00250		mg/L	10	8/26/2021 11:33:29 AM
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ALKALINITY; TOTAL, CARB, BICARB

SM2320 B

Analyst: **MAB**

Alkalinity, Bicarbonate (As CaCO3)	315	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM
Alkalinity, Total (As CaCO3)	315	10.0		mgCaCO3/L	1	8/31/2021 10:08:00 AM

TOTAL DISSOLVED SOLIDS

SM2540C

Analyst: **GMS**

Total Dissolved Solids (Residue, Filterable)	1,400	100		mg/L	5	8/24/2021 3:00:00 PM
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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

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WO#: **21080992**

Date Reported: **8/31/2021**

CLIENT: ICON Environmental Services

Collection Date: 8/23/2021

Project: Henning 9403-010-0100

Lab ID: 21080992-005

Matrix: AQUEOUS

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
BTEX/TPH-G IN WATER BY SW8021/8015				SW8015B		Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	8/27/2021 12:05:00 AM
Surr: alpha, alpha, alpha-Trifluorotoluene	90.8	70 - 130		%Rec	1	8/27/2021 12:05:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015				SW8021B		Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	8/27/2021 12:05:00 AM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	8/27/2021 12:05:00 AM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	8/27/2021 12:05:00 AM
o-Xylene	< 0.00500	0.00500		mg/L	1	8/27/2021 12:05:00 AM
Toluene	< 0.0100	0.0100		mg/L	1	8/27/2021 12:05:00 AM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	8/27/2021 12:05:00 AM
Surr: alpha, alpha, alpha-Trifluorotoluene	88.4	70 - 130		%Rec	1	8/27/2021 12:05:00 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

QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40744

Sample ID: LCS-D40744	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 8/23/2021	RunNo: 102207						
Client ID: LCSW	Batch ID: 40744	TestNo: SW8015B	SW3511	Analysis Date: 8/25/2021	SeqNo: 2495346						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	1.85	0.136	1.794	0	103	70	130
Surr: 4-Terphenyl-d14	0.0757		0.05979		127	51.4	146

Sample ID: LCSD-D40744	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 8/23/2021	RunNo: 102207						
Client ID: LCSS02	Batch ID: 40744	TestNo: SW8015B	SW3511	Analysis Date: 8/25/2021	SeqNo: 2495347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)	1.84	0.135	1.786	0	103	70	130	1.847	0.452	14.1
Surr: 4-Terphenyl-d14	0.0749		0.05954		126	51.4	146		0	40

Sample ID: LCSD-M40744	SampType: LCSD	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 8/23/2021	RunNo: 102207						
Client ID: LCSS02	Batch ID: 40744	TestNo: SW8015B	SW3511	Analysis Date: 8/25/2021	SeqNo: 2495348						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	2.04	0.125	1.784	0	115	70	130	2.096	2.48	23.2
Surr: 4-Terphenyl-d14	0.0769		0.05947		129	51.4	146		0	40

Sample ID: LCS-M40744	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 8/23/2021	RunNo: 102207						
Client ID: LCSW	Batch ID: 40744	TestNo: SW8015B	SW3511	Analysis Date: 8/25/2021	SeqNo: 2495349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range)	2.10	0.125	1.788	0	117	70	130
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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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40744

Sample ID: LCS-M40744	SampType: LCS	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 8/23/2021	RunNo: 102207						
Client ID: LCSW	Batch ID: 40744	TestNo: SW8015B	SW3511	Analysis Date: 8/25/2021	SeqNo: 2495349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14 0.0830 0.05959 139 51.4 146

Sample ID: MB-40744	SampType: MBLK	TestCode: 8015_DO_W_	Units: mg/L	Prep Date: 8/23/2021	RunNo: 102207						
Client ID: PBW	Batch ID: 40744	TestNo: SW8015B	SW3511	Analysis Date: 8/25/2021	SeqNo: 2495350						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) < 0.134 0.134
 TPH (Oil Range) < 0.123 0.123
 Surr: 4-Terphenyl-d14 0.0632 0.05875 108 51.4 146

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40766

Sample ID: MB-40766	SampType: MBLK	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102199
Client ID: PBW	Batch ID: 40766	TestNo: SW7470A		Analysis Date: 8/27/2021	SeqNo: 2495074
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-40766	SampType: LCS	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102199
Client ID: LCSW	Batch ID: 40766	TestNo: SW7470A		Analysis Date: 8/27/2021	SeqNo: 2495077
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 80 120

Sample ID: LCSD-40766	SampType: LCSD	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102199
Client ID: LCSS02	Batch ID: 40766	TestNo: SW7470A		Analysis Date: 8/27/2021	SeqNo: 2495078
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 80 120 0.01101 0.328 20

Sample ID: 21080781-003DMS	SampType: MS	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102199
Client ID: ZZZZZZ	Batch ID: 40766	TestNo: SW7470A		Analysis Date: 8/27/2021	SeqNo: 2495081
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 75 125

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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40766

Sample ID: 21080781-003DMSD	SampType: MSD	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102199						
Client ID: ZZZZZZ	Batch ID: 40766	TestNo: SW7470A	Analysis Date: 8/27/2021	SeqNo: 2495082							
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	75	125	0.01049	0.109	20	

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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40771

Sample ID: MB-40771	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102158						
Client ID: PBW	Batch ID: 40771	TestNo: SW6010B		Analysis Date: 8/25/2021	SeqNo: 2493842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	< 0.0100	0.0100									
Cadmium	< 0.00500	0.00500									
Calcium	< 0.500	0.500									
Chromium	< 0.0100	0.0100									
Iron	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Magnesium	< 0.500	0.500									
Manganese	< 0.0100	0.0100									
Potassium	< 5.00	5.00									
Sodium	< 10.0	10.0									
Strontium	< 0.0100	0.0100									
Zinc	< 0.0100	0.0100									

Sample ID: LCS-40771	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102158						
Client ID: LCSW	Batch ID: 40771	TestNo: SW6010B		Analysis Date: 8/25/2021	SeqNo: 2493843						
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	102	80	120				
Cadmium	0.511	0.00500	0.5000	0	102	80	120				
Calcium	51.2	0.500	50.00	0	102	80	120				
Chromium	0.511	0.0100	0.5000	0	102	80	120				
Iron	0.518	0.0100	0.5000	0	104	80	120				
Lead	0.505	0.0100	0.5000	0	101	80	120				
Magnesium	50.9	0.500	50.00	0	102	80	120				
Manganese	0.508	0.0100	0.5000	0	102	80	120				

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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40771

Sample ID: LCS-40771	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102158						
Client ID: LCSW	Batch ID: 40771	TestNo: SW6010B	Analysis Date: 8/25/2021	SeqNo: 2493843							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	51.8	5.00	50.00	0	104	80	120				
Sodium	50.8	10.0	50.00	0	102	80	120				
Strontium	0.513	0.0100	0.5000	0	103	80	120				
Zinc	0.505	0.0100	0.5000	0	101	80	120				

Sample ID: LCSD-40771	SampType: LCSD	TestCode: 6010_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102158						
Client ID: LCSS02	Batch ID: 40771	TestNo: SW6010B	Analysis Date: 8/25/2021	SeqNo: 2493844							
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	98.2	80	120	0.5076	3.36	20	
Cadmium	0.495	0.00500	0.5000	0	99.1	80	120	0.5108	3.07	20	
Calcium	49.7	0.500	50.00	0	99.4	80	120	51.23	3.00	20	
Chromium	0.492	0.0100	0.5000	0	98.4	80	120	0.5108	3.71	20	
Iron	0.492	0.0100	0.5000	0	98.3	80	120	0.5181	5.26	20	
Lead	0.491	0.0100	0.5000	0	98.2	80	120	0.5046	2.76	20	
Magnesium	48.6	0.500	50.00	0	97.2	80	120	50.89	4.61	20	
Manganese	0.490	0.0100	0.5000	0	98.0	80	120	0.5076	3.54	20	
Potassium	49.2	5.00	50.00	0	98.5	80	120	51.78	5.05	20	
Sodium	47.8	10.0	50.00	0	95.6	80	120	50.76	5.95	20	
Strontium	0.496	0.0100	0.5000	0	99.2	80	120	0.5130	3.33	20	
Zinc	0.489	0.0100	0.5000	0	97.8	80	120	0.5050	3.21	20	

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 sp



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40771

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.647	0.0100	0.5000	0.1541	98.7	75	125				
Cadmium	0.509	0.00500	0.5000	0	102	75	125				
Calcium	134	0.500	50.00	84.90	98.6	75	125				
Chromium	0.501	0.0100	0.5000	0.005220	99.2	75	125				
Iron	1.53	0.0100	0.5000	1.021	101	75	125				
Lead	0.488	0.0100	0.5000	0	97.5	75	125				
Magnesium	81.1	0.500	50.00	30.63	101	75	125				
Manganese	0.584	0.0100	0.5000	0.09308	98.2	75	125				
Potassium	55.1	5.00	50.00	3.170	104	75	125				
Sodium	265	10.0	50.00	215.9	98.8	75	125				
Strontium	0.935	0.0100	0.5000	0.4405	98.8	75	125				
Zinc	0.504	0.0100	0.5000	0	101	75	125				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.666	0.0100	0.5000	0.1541	102	75	125	0.6474	2.84	20	
Cadmium	0.518	0.00500	0.5000	0	104	75	125	0.5085	1.93	20	
Calcium	137	0.500	50.00	84.90	105	75	125	134.2	2.30	20	
Chromium	0.513	0.0100	0.5000	0.005220	102	75	125	0.5013	2.40	20	
Iron	1.60	0.0100	0.5000	1.021	117	75	125	1.526	5.05	20	
Lead	0.496	0.0100	0.5000	0	99.3	75	125	0.4876	1.76	20	
Magnesium	82.5	0.500	50.00	30.63	104	75	125	81.06	1.82	20	
Manganese	0.597	0.0100	0.5000	0.09308	101	75	125	0.5841	2.25	20	

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40771

Sample ID: 21080992-001DMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102158						
Client ID: H-34	Batch ID: 40771	TestNo: SW6010B	Analysis Date: 8/25/2021	SeqNo: 2493850							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	56.0	5.00	50.00	3.170	106	75	125	55.06	1.65	20	
Sodium	272	10.0	50.00	215.9	111	75	125	265.3	2.32	20	
Strontium	0.957	0.0100	0.5000	0.4405	103	75	125	0.9347	2.38	20	
Zinc	0.514	0.0100	0.5000	0	103	75	125	0.5042	2.03	20	

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40772

Sample ID: MB-40772	SampType: MBLK	TestCode: 6020A_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102173
Client ID: PBW	Batch ID: 40772	TestNo: SW6020A		Analysis Date: 8/26/2021	SeqNo: 2494466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic < 0.000250 0.000250

Sample ID: LCS-40772	SampType: LCS	TestCode: 6020A_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102173
Client ID: LCSW	Batch ID: 40772	TestNo: SW6020A		Analysis Date: 8/26/2021	SeqNo: 2494467
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.482 0.00500 0.500 0 96.3 80 120

Sample ID: LCSD-40772	SampType: LCSD	TestCode: 6020A_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102173
Client ID: LCSS02	Batch ID: 40772	TestNo: SW6020A		Analysis Date: 8/26/2021	SeqNo: 2494468
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.481 0.00500 0.500 0 96.2 80 120 0.482 0.107 20

Sample ID: 21080992-001DMS	SampType: MS	TestCode: 6020A_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102173
Client ID: H-34	Batch ID: 40772	TestNo: SW6020A		Analysis Date: 8/26/2021	SeqNo: 2494472
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.488 0.00500 0.500 0.000928 97.4 75 125

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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: 40772

Sample ID: 21080992-001DMSD	SampType: MSD	TestCode: 6020A_W	Units: mg/L	Prep Date: 8/25/2021	RunNo: 102173						
Client ID: H-34	Batch ID: 40772	TestNo: SW6020A	Analysis Date: 8/26/2021	SeqNo: 2494473							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.498	0.00500	0.500	0.000928	99.4	75	125	0.488	2.02	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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102096

Sample ID: MB-R102096	SampType: MBLK	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 102096						
Client ID: PBW	Batch ID: R102096	TestNo: SM2540C		Analysis Date: 8/24/2021	SeqNo: 2493357						
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-R102096	SampType: LCS	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 102096						
Client ID: LCSW	Batch ID: R102096	TestNo: SM2540C		Analysis Date: 8/24/2021	SeqNo: 2493358						
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-R102096	SampType: LCSD	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 102096						
Client ID: LCSS02	Batch ID: R102096	TestNo: SM2540C		Analysis Date: 8/24/2021	SeqNo: 2493359						
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 1,012 0.197 10

Sample ID: 21080785-001BDUP	SampType: DUP	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 102096						
Client ID: ZZZZZ	Batch ID: R102096	TestNo: SM2540C		Analysis Date: 8/24/2021	SeqNo: 2493363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 18,400 2,000 18,200 1.09 10

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 sp



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

QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102096

Sample ID: 21080785-001BDUP	SampType: DUP	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 102096						
Client ID: ZZZZZZ	Batch ID: R102096	TestNo: SM2540C		Analysis Date: 8/24/2021	SeqNo: 2493363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102166

Sample ID: MBLK	SampType: MBLK	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 102166						
Client ID: PBW	Batch ID: R102166	TestNo: SW9056A		Analysis Date: 8/25/2021	SeqNo: 2494166						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	< 0.250	0.250									
Sulfate	< 0.250	0.250									

Sample ID: LCS	SampType: LCS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 102166						
Client ID: LCSW	Batch ID: R102166	TestNo: SW9056A		Analysis Date: 8/25/2021	SeqNo: 2494167						
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	80	120				
Sulfate	10.5	0.250	10.00	0	105	80	120				

Sample ID: LCSD	SampType: LCSD	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 102166						
Client ID: LCSS02	Batch ID: R102166	TestNo: SW9056A		Analysis Date: 8/25/2021	SeqNo: 2494168						
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	80	120	10.07	0.184	15	
Sulfate	10.5	0.250	10.00	0	105	80	120	10.49	0.338	15	

Sample ID: 21080992-004BMS	SampType: MS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 102166						
Client ID: H-33	Batch ID: R102166	TestNo: SW9056A		Analysis Date: 8/25/2021	SeqNo: 2494179						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	782	12.5	250.0	496.2	114	80	120				
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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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102166

Sample ID: 21080992-004BMS	SampType: MS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 102166						
Client ID: H-33	Batch ID: R102166	TestNo: SW9056A		Analysis Date: 8/25/2021	SeqNo: 2494179						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	444	12.5	250.0	162.6	113	80	120				
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Sample ID: 21080992-004BMSD	SampType: MSD	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 102166						
Client ID: H-33	Batch ID: R102166	TestNo: SW9056A		Analysis Date: 8/25/2021	SeqNo: 2494180						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	791	12.5	250.0	496.2	118	80	120	782.2	1.11	15	
Sulfate	435	12.5	250.0	162.6	109	80	120	443.9	2.10	15	

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102195

Sample ID: GAS LCS	SampType: LCS	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 102195						
Client ID: LCSW	Batch ID: R102195	TestNo: SW8015B		Analysis Date: 8/26/2021	SeqNo: 2494992						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) 13.0 0.150 12.50 0 104 80 130

Sample ID: GAS LCSD	SampType: LCSD	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 102195						
Client ID: LCSS02	Batch ID: R102195	TestNo: SW8015B		Analysis Date: 8/26/2021	SeqNo: 2494993						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) 12.8 0.150 12.50 0 103 80 130 13.05 1.57 20

Sample ID: MBLK	SampType: MBLK	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 102195						
Client ID: PBW	Batch ID: R102195	TestNo: SW8015B		Analysis Date: 8/26/2021	SeqNo: 2494999						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) < 0.150 0.150
 Surr: alpha, alpha, alpha-Trifluorotoluene 0.0455 0.05000 91.0 70 130

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102196

Sample ID: BTEX LCS	SampType: LCS	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 102196						
Client ID: LCSW	Batch ID: R102196	TestNo: SW8021B		Analysis Date: 8/26/2021	SeqNo: 2495000						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0487	0.00500	0.05000	0	97.4	72	120				
Ethylbenzene	0.0488	0.00500	0.05000	0	97.6	76	129				
m,p-Xylene	0.0973	0.0100	0.1000	0	97.3	75	125				
o-Xylene	0.0480	0.00500	0.05000	0	96.0	75	125				
Toluene	0.0478	0.0100	0.05000	0	95.6	78	120				
Xylenes, Total	0.145	0.0500	0.1500	0	96.9	75	125				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0435		0.05000		87.0	70	130				

Sample ID: BTEX LCSD	SampType: LCSD	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 102196						
Client ID: LCSS02	Batch ID: R102196	TestNo: SW8021B		Analysis Date: 8/26/2021	SeqNo: 2495001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0478	0.00500	0.05000	0	95.6	72	120	0.04870	1.87	20	
Ethylbenzene	0.0485	0.00500	0.05000	0	97.0	76	129	0.04880	0.617	20	
m,p-Xylene	0.0969	0.0100	0.1000	0	96.9	75	125	0.09730	0.412	20	
o-Xylene	0.0478	0.00500	0.05000	0	95.6	75	125	0.04800	0.418	20	
Toluene	0.0472	0.0100	0.05000	0	94.4	78	120	0.04780	1.26	20	
Xylenes, Total	0.145	0.0500	0.1500	0	96.5	75	125	0.1454	0.483	20	
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0438		0.05000		87.6	70	130		0	20	

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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102196

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0466	0.00500	0.05000	0	93.2	26	161				
Ethylbenzene	0.0457	0.00500	0.05000	0	91.4	66	153				
m,p-Xylene	0.0937	0.0100	0.1000	0.0005000	93.2	48	154				
o-Xylene	0.0465	0.00500	0.05000	0	93.0	48	154				
Toluene	0.0464	0.0100	0.05000	0.0003000	92.2	68	141				
Xylenes, Total	0.140	0.0500	0.1500	0.0005000	93.2	48	154				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0434		0.05000		86.8	70	130				

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0479	0.00500	0.05000	0	95.8	26	161	0.04660	2.75	20	
Ethylbenzene	0.0468	0.00500	0.05000	0	93.6	66	153	0.04570	2.38	20	
m,p-Xylene	0.0949	0.0100	0.1000	0.0005000	94.4	48	154	0.09370	1.27	20	
o-Xylene	0.0471	0.00500	0.05000	0	94.2	48	154	0.04650	1.28	20	
Toluene	0.0475	0.0100	0.05000	0.0003000	94.4	68	141	0.04640	2.34	20	
Xylenes, Total	0.142	0.0500	0.1500	0.0005000	94.4	48	154	0.1403	1.27	20	
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0436		0.05000		87.2	70	130		0	20	

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102196

Sample ID: MBLK	SampType: MBLK	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 102196						
Client ID: PBW	Batch ID: R102196	TestNo: SW8021B		Analysis Date: 8/26/2021	SeqNo: 2495014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	< 0.00500	0.00500									
Ethylbenzene	< 0.00500	0.00500									
m,p-Xylene	< 0.0100	0.0100									
o-Xylene	< 0.00500	0.00500									
Toluene	< 0.0100	0.0100									
Xylenes, Total	< 0.0500	0.0500									
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0441		0.05000		88.2	70	130				

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 sp



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QC SUMMARY REPORT

WO#: 21080992
 03-Sep-21

Client: ICON Environmental Services

Project: Henning 9403-010-0100

BatchID: R102314

Sample ID: MB-R102314	SampType: MBLK	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 102314						
Client ID: PBW	Batch ID: R102314	TestNo: SM2320 B		Analysis Date: 8/31/2021	SeqNo: 2498077						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	< 10.0	10.0
Alkalinity, Carbonate (As CaCO3)	< 10.0	10.0
Alkalinity, Total (As CaCO3)	< 10.0	10.0

Sample ID: 21080973-001CDUP	SampType: DUP	TestCode: ALK	Units: mgCaCO3/L	Prep Date:	RunNo: 102314						
Client ID: ZZZZZZ	Batch ID: R102314	TestNo: SM2320 B		Analysis Date: 8/31/2021	SeqNo: 2498080						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	118	10.0						115.0	2.15	20
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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 sp



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Sample Log-In Check List

Client Name: ICON_ENV Work Order Number: 21080992 RcptNo: 1

Logged by:	Danielle Hollier	8/24/2021 1:20:00 PM	<i>Danielle Hollier</i>
Completed By:	Danielle Hollier	8/24/2021 1:43:07 PM	<i>Danielle Hollier</i>
Reviewed By:	Caitlin Duplantis	8/26/2021 12:28:57 PM	<i>Caitlin Duplantis</i>

Chain of Custody

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

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Not Present			



Laboratory Number: 21080992

Company Name: Contact Name: Address: City, State Zip: Phone Number: Fax Number: E-mail Address:	Client Information: Icon Enviromental	Billing Information: Same	PO Number:	Project Name/Number: Henning	Page 1 of 1
	Jason Sills		Quote Number: 5762	9403-010-0100	Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid O = Oil SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
	2049 Commerical Dr.		Required QC Level	Sampler's Signature <i>Jason Sills</i>	
	Port Allen, La 70707		Bill Monthly	Shipping Method:	
	225-344-8490 Ext:	Ext:	<input type="checkbox"/> Yes <input type="checkbox"/> No	UPS / FedEx / Airborne DHL / Element / Hand / Mail	

Which Regulations Apply:	Turn Time	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Collection Information		Quantity	Container	Pres.	Requested Tests								Comments
			Date	Time				Grab / Composite	Matrix	Type	HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	TDS	Cations/Anions	Chlorides	BTEX/TPH_G	
<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC <input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Standard <input checked="" type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other															Metals: As, Ba, Cd, Cr, Fe, Mn, Pb, Sr, Zn, Hg Cations: Na, Ca, K, Mg Anions: Alk Carbonate Alk Bicarbonate Sulfate
Sample ID/Description																
H-3A		8.23.21	1055	G	AQ	7	P/V	HCL/HNO3	X	X	X	X	X	X		
H-32A		8.23.21	1200	G	AQ	7	P/V	HCL/HNO3	X	X	X	X	X	X		
H-32B		8.23.21	1350	G	AQ	7	P/V	HCL/HNO3	X	X	X	X	X	X		
H-33		8.23.21	1450	G	AQ	7	P/V	HCL/HNO3	X	X	X	X	X	X		
Trip Blank						3	V	HCL			X					

DA 8-24-21

	Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
1	<i>Jason Sills</i>	8/24/21 1156	<i>Samuel Daniel</i>	8/24/21 1156	
2					Received at lab on ice?
3	<i>Samuel Daniel</i>	8/24/21 1320	<i>[Signature]</i>	8-24-21 1320	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 4.6°C (41.0)

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.



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

November 25, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II/9403-10-0100

Order No.: 21110837

Dear Greg Miller:

Element Materials Technology Lafayette received 24 sample(s) on 11/15/2021 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 that reads '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#: 21110837
Date: 11/25/2021

CLIENT: ICON Environmental Services

Project: Henning II/9403-10-0100

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 8:55:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-001 **Matrix:** SOIL
Client Sample ID H-22 W (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	1,980	0.944		mg/Kg-dry	1	11/23/2021 1:37:10 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	22.6	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 9:15:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-002 **Matrix:** SOIL
Client Sample ID H-22 S (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	3,050	0.978		mg/Kg-dry	1	11/23/2021 1:39:29 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	10.6	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 9:25:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-003 **Matrix:** SOIL
Client Sample ID H-22 N (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	1,850	0.970		mg/Kg-dry	1	11/23/2021 1:41:47 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	10.3	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 9:35:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-004 **Matrix:** SOIL
Client Sample ID H-22 E (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	984	0.914		mg/Kg-dry	1	11/23/2021 1:44:04 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.2	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 11:10:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-005 **Matrix:** SOIL
Client Sample ID H-8 E (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	803	0.956		mg/Kg-dry	1	11/23/2021 1:46:22 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	20.3	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 11:35:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-006 **Matrix:** SOIL
Client Sample ID H-8 W (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	2,540	0.953		mg/Kg-dry	1	11/23/2021 1:48:40 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.5	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 11:40:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-007 **Matrix:** SOIL
Client Sample ID H-8 S (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	2,530	0.960		mg/Kg-dry	1	11/23/2021 1:50:58 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	13.1	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 11:50:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-008 **Matrix:** SOIL
Client Sample ID H-8 N (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	3,330	0.967		mg/Kg-dry	1	11/23/2021 1:53:16 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	13.0	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 1:10:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-009 **Matrix:** SOIL
Client Sample ID H-16 N (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	785	0.949		mg/Kg-dry	1	11/23/2021 1:55:34 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.2	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 1:25:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-010 **Matrix:** SOIL
Client Sample ID H-16 W (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	1,760	0.946		mg/Kg-dry	1	11/23/2021 2:02:28 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	20.0	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 1:40:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-011 **Matrix:** SOIL
Client Sample ID H-16 E (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	95.5	0.982		mg/Kg-dry	1	11/23/2021 2:04:46 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.5	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 1:50:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-012 **Matrix:** SOIL
Client Sample ID H-16 S (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	68.8	0.966		mg/Kg-dry	1	11/23/2021 2:07:04 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.6	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 2:45:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-013 **Matrix:** SOIL
Client Sample ID H-24 S (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	5,900	9.71		mg/Kg-dry	10	11/23/2021 4:53:01 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	29.6	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 3:10:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-014 **Matrix:** SOIL
Client Sample ID H-28 W (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	357	0.932		mg/Kg-dry	1	11/23/2021 2:11:41 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.2	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 4:15:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-015 **Matrix:** SOIL
Client Sample ID H-28 S (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	4,240	0.995		mg/Kg-dry	1	11/23/2021 2:20:53 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	25.1	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/11/2021 4:40:00 PM
Project: Henning II/9403-10-0100
Lab ID: 21110837-016 **Matrix:** SOIL
Client Sample ID H-28 E (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	1,870	0.951		mg/Kg-dry	1	11/23/2021 2:32:22 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	22.9	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 7:55:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-017 **Matrix:** SOIL
Client Sample ID H-28 N (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	1,670	0.935		mg/Kg-dry	1	11/23/2021 2:34:41 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	26.1	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 8:15:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-018 **Matrix:** SOIL
Client Sample ID H-24 N (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	3,130	0.990		mg/Kg-dry	1	11/23/2021 2:36:59 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	23.4	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 8:50:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-019 **Matrix:** SOIL
Client Sample ID H-24 E (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	5,890	9.60		mg/Kg-dry	10	11/23/2021 4:55:19 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.2	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 9:00:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-020 **Matrix:** SOIL
Client Sample ID H-24 W (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	4,550	0.991		mg/Kg-dry	1	11/23/2021 2:41:36 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.1	1.00		wt%	1	11/16/2021 10:00:00 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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Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 10:40:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-021 **Matrix:** SOIL
Client Sample ID H-4 N (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	2,170	0.987		mg/Kg-dry	1	11/23/2021 2:43:55 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.6	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 10:50:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-022 **Matrix:** SOIL
Client Sample ID H-4 E (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	3,700	0.975		mg/Kg-dry	1	11/23/2021 2:46:13 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.5	1.00		wt%	1	11/16/2021 10:00:00 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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 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 11:10:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-023 **Matrix:** SOIL
Client Sample ID H-4 S (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	891	0.972		mg/Kg-dry	1	11/23/2021 2:48:31 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	24.6	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837

Date Reported: 11/25/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/12/2021 11:20:00 AM
Project: Henning II/9403-10-0100
Lab ID: 21110837-024 **Matrix:** SOIL
Client Sample ID H-4 W (0-2')

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	6,620	9.53		mg/Kg-dry	10	11/23/2021 4:57:37 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.9	1.00		wt%	1	11/16/2021 10:00:00 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#: 21110837
 25-Nov-21

Client: ICON Environmental Services

Project: Henning II/9403-10-0100

BatchID: 41701

Sample ID	MB-41701	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	PBS	Batch ID:	41701	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556689			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium < 1.00 1.00

Sample ID	LCS-41701	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	LCSS	Batch ID:	41701	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556690			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium 57.2 1.00 50.00 0 114 80 120

Sample ID	LCSD-41701	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	LCSS02	Batch ID:	41701	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556691			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium 56.6 1.00 50.00 0 113 80 120 57.21 1.02 20

Sample ID	21110369-001BMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	ZZZZZZ	Batch ID:	41701	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556693			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium 178 0.983 49.16 128.5 101 75 125

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 sp



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QC SUMMARY REPORT

WO#: 21110837
 25-Nov-21

Client: ICON Environmental Services
Project: Henning II/9403-10-0100

BatchID: 41701

Sample ID	21110369-001BMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555											
Client ID:	ZZZZZZ	Batch ID:	41701	TestNo:	SW6010B		SW3050B	Analysis Date:	11/23/2021	SeqNo:	2556694											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Barium		124		0.919		45.93		128.5		-10.1		75		125		178.2		36.0		20		RS

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	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 sp



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QC SUMMARY REPORT

WO#: 21110837
 25-Nov-21

Client: ICON Environmental Services
Project: Henning II/9403-10-0100

BatchID: 41702

Sample ID	MB-41702	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	PBS	Batch ID:	41702	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556721			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		< 1.00		1.00										

Sample ID	LCS-41702	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	LCSS	Batch ID:	41702	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556722			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		52.7		1.00	50.00	0		105	80	120				

Sample ID	LCSD-41702	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	LCSS02	Batch ID:	41702	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556723			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		53.5		1.00	50.00	0		107	80	120	52.75	1.47	20	

Sample ID	21110837-015AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555			
Client ID:	H-28 S (0-2')	Batch ID:	41702	TestNo:	SW6010B	SW3050B		Analysis Date:	11/23/2021	SeqNo:	2556725			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		4,360		0.963	48.15	4,244		237	75	125				S

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 sp



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QC SUMMARY REPORT

WO#: 21110837
 25-Nov-21

Client: ICON Environmental Services
Project: Henning II/9403-10-0100

BatchID: 41702

Sample ID	21110837-015AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	11/19/2021	RunNo:	104555											
Client ID:	H-28 S (0-2')	Batch ID:	41702	TestNo:	SW6010B		SW3050B	Analysis Date:	11/23/2021	SeqNo:	2556728											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Barium		4,240		0.937		46.83		4,244		-17.2		75		125		4,358		2.84		20		S

NOTES:

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

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 sp |



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QC SUMMARY REPORT

WO#: 21110837
 25-Nov-21

Client: ICON Environmental Services
Project: Henning II/9403-10-0100

BatchID: R104581

Sample ID	21110578-001Adup	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104581					
Client ID:	ZZZZZZ	Batch ID: R104581	TestNo: LDNR 29-B	Analysis Date: 11/10/2021	SeqNo: 2557320						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.2	1.00						12.00	16.8	20	

Sample ID	21110779-002ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104581					
Client ID:	ZZZZZZ	Batch ID: R104581	TestNo: LDNR 29-B	Analysis Date: 11/15/2021	SeqNo: 2557327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.3	1.00						14.00	2.12	20	

Sample ID	21110837-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104581					
Client ID:	H-22 W (0-2')	Batch ID: R104581	TestNo: LDNR 29-B	Analysis Date: 11/16/2021	SeqNo: 2557338						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	20.5	1.00						22.60	9.74	20	

Sample ID	21110847-010ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104581					
Client ID:	ZZZZZZ	Batch ID: R104581	TestNo: LDNR 29-B	Analysis Date: 11/16/2021	SeqNo: 2557372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	86.0	1.00						85.70	0.35	20	

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 sp



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QC SUMMARY REPORT

WO#: 21110837
 25-Nov-21

Client: ICON Environmental Services
Project: Henning II/9403-10-0100

BatchID: R104581

Sample ID	21110847-028ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104581		
Client ID:	ZZZZZZ	Batch ID:	R104581	TestNo:	LDNR 29-B			Analysis Date:	11/16/2021	SeqNo:	2557391		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		83.2		1.00						82.50	0.84	20	

Sample ID	21110847-043ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104581		
Client ID:	ZZZZZZ	Batch ID:	R104581	TestNo:	LDNR 29-B			Analysis Date:	11/16/2021	SeqNo:	2557407		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		80.1		1.00						81.10	1.24	20	

Sample ID	21110847-071Adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104581		
Client ID:	ZZZZZZ	Batch ID:	R104581	TestNo:	LDNR 29-B			Analysis Date:	11/16/2021	SeqNo:	2557436		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		85.3		1.00						83.80	1.77	20	

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 sp



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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **21110837** RcptNo: **1**

Logged by:	Tammy Thibodeaux	11/15/2021 8:50:00 AM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	11/15/2021 10:26:14 AM	<i>Tammy Thibodeaux</i>
Reviewed By:	Caitlin Duplantis	11/15/2021 2:20:41 PM	<i>Caitlin Duplantis</i>

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
-----------	---------	-----------	-------------	---------	-----------	-----------



Chain of Custody

Laboratory Number: **2110837**

Client Information: Company Name: KON Environmental Contact Name: Jason S. ILS Address: 204 Commercial Dr. City, State Zip: Per Allen LA 70667 Phone Number: 225-344-8440 Fax Number: E-mail Address:		Billing Information: PO Number: Quote Number: Required QC Level: Bill Monthly: <input type="checkbox"/> Yes <input type="checkbox"/> No Ext:		Project Name/Number: Hemmy II 9403-010-0100 Sampler's Signature: <i>[Signature]</i> Shipping Method: UPS / FedEx / NOW DHL / Element / Hand / Mail		Page 1 of 3 Matrix Code DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge O = Oil F = Food NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid	
--	--	--	--	--	--	---	--

Sample ID/Description	Which Regulations Apply:		Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type Quantity	Pres. HCl, HNO ₃ , H ₂ SO ₄ NaOH, Na ₂ S ₂ O ₃	Requested Tests	Comments		
	Collection Information								Date/Time	Received by
	Date	Time								
H-22W (0-2')	<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC	<input type="checkbox"/> Drinking Water <input type="checkbox"/> Distribution <input type="checkbox"/> Special <input type="checkbox"/> Slate <input type="checkbox"/> Other	<input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other		P	-	X Barium X % Moisture			
H-22S (0-2')										
H-22N (0-2')										
H-22E (0-2')										
H-8E (0-2')										
H-8V (0-2')										
H-8S (0-2')										
H-8N (0-2')										
H-16N (0-2')										

Requisitioned by: <i>[Signature]</i>	Date/Time: 11/15/21 0850	Received by: <i>[Signature]</i>	Date/Time: 11/15/21 0850	Field Notes: Received at lab on ice? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:
--	---	---	---	---

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.

9301 Innovation Drive, Suite 115 Daleville, IN 47334-0569 USA P 765-378-4103 F 765-378-4109	625 Washington St, Suite 300 Columbus, IN 47201-6231 USA P 812-375-0531 F 812-375-0731	2121 East Washington Boulevard Fort Wayne, IN 46803-1328 USA P 260-471-7000 F 260-471-7777	909 Executive Dr Warsaw, IN 46580-2368 USA P 574-267-3305 F 574-269-6669	3371 Cleveland Road, Suite 100A South Bend, IN 46528-9780 USA P 574-277-0707 F 574-273-5699	2417 W. Pinhook Rd Lafayette, LA 70508-3344 USA P 337-233-0483 F 337-233-6540
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Chain of Custody

Laboratory Number: **2110837**

Client Information:		Billing Information:	
Company Name: CON Environmental	PO Number:	Project Name/Number: Heming II	Page 2 of 3
Contact Name: Dan Sells	Quote Number:	Sampler's Signature: <i>[Signature]</i>	Matrix Code: DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge SOL = Solid SO = Soil F = Food SW = Swab NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid
Address:	Required QC Level:	Shipping Method: UPS / FedEx <input checked="" type="checkbox"/> NOW Hand / Mail	
City, State Zip:	Bill Monthly: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Phone Number:	Ext:		
Fax Number:			
E-mail Address:			

Sample ID/Description	Turn Time		(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres. HCl, HNO ₃ , H ₂ SO ₄ NaOH, Na ₂ S ₂ O ₃	Requested Tests	Comments
	Standard	RUSH		Type	Quantity			
	<input type="checkbox"/>	<input type="checkbox"/>		P=Plastic G=Glass, V=Vial				
H-16 W (0-2')	<input type="checkbox"/>	<input checked="" type="checkbox"/>		P	1			
H-16 E (0-2')								
H-16 S (0-2')								
H-24 S (0-2')								
H-28 W (0-2')								
H-28 S (0-2')								
H-28 E (0-2')								
H-28 N (0-2')								
H-24 N (0-2')								

Relinquished by: <i>[Signature]</i>	Date/Time: 11/15/21 08:55	Received by: <i>[Signature]</i>	Date/Time: 11/15/21 08:50
Field Notes:		Received at lab on ice? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Temp:	

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.

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47334-0269 USA
P 765-378-4103
F 765-378-4109

629 Washington St. Suite 300
Columbus, IN
47201-8231 USA
P 812-375-0531
F 812-375-0731

2121 East Washington Boulevard
Fort Wayne, IN
46803-1328 USA
P 260-471-7000
F 260-471-7777

909 Executive Dr
Warsaw, IN
46680-2368 USA
P 574-267-3305
F 574-269-5569

3371 Cleveland Road, Suite 100A
South Bend, IN
46629-9780 USA
P 574-277-0797
F 574-273-5699

2417 W. Pinhook Rd
Lafayette, LA
70508-3344 USA
P 337-233-0463
F 337-233-6540



Chain of Custody

Chain of Custody

Laboratory Number: 21110821

Client Information: **ICON Environmental**
 Contact Name: **Jason Sills**
 Address: **SAME**
 City, State Zip: _____
 Phone Number: _____
 Fax Number: _____
 E-mail Address: _____

Billing Information: _____
 PO Number: _____
 Quote Number: _____
 Required QC Level: _____

Project Name/Number: **Henning II**
 Matrix Code: **9423-010-0100**
 Sampler's Signature: *[Signature]*
 Shipping Method: **UPS / FedEx / NOW**
 DHL / Element / Hand / Mail

Matrix Code Legend:
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 PW = Produced Water
 CF = Completion Fluid

Sample ID/Description	Turn Time		Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests	Comments
	Standard	RUSH		Quantity	Type			
	<input type="checkbox"/>	<input type="checkbox"/>						
H-24E (0-2')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11/2/21 0850	G	P	-		
H-24W (0-2')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0900	S	X			
H-4N (0-2')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1040					
H-4E (0-2')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1050					
H-4S (0-2')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1110					
H-4W (0-2')	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1120					

Refinquisitioned by: *[Signature]* Date/Time: 11/5/21 0850
 Received by: *[Signature]* Date/Time: 11/15/21 0850
 Field Notes: _____
 Received at lab on ice? Yes No Temp: _____

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.

9301 Innovation Drive, Suite 115
 Daleville, IN 47334-0569 USA
 P 765-375-4103
 F 765-375-4109

629 Washington St. Suite 300
 Columbus, IN 47201-6221 USA
 P 812-375-0531
 F 812-375-0731

328 Ley Road, Suite 100
 Fort Wayne, IN 46825 USA
 P 260-471-7000
 F 260-471-7777

909 Executive Dr
 Warsaw, IN 46500-2308 USA
 P 574-267-3305
 F 574-269-0599

3371 Cleveland Road, Suite 100A
 South Bend, IN 46502-8790 USA
 P 574-277-0707
 F 574-273-5699

2417 W. Pinhook Rd
 Lafayette, LA 70508-3344 USA
 P 337-235-0483
 F 337-233-6540



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 17, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II/9403-010-0100

Order No.: 21111079

Dear Greg Miller:

Element Materials Technology Lafayette received 32 sample(s) on 11/19/2021 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 that reads '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#: 21111079
Date: 12/17/2021

CLIENT: ICON Environmental Services

Project: Henning II/9403-010-0100

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/15/2021 4:55:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-001 **Matrix:** SOIL
Client Sample ID H-16 R 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A		Analyst: SGP
Chloride	218	6.23		mg/Kg-dry	20	12/14/2021 4:55:16 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	2,160	0.968		mg/Kg-dry	1	12/7/2021 7:22:08 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.3	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/15/2021 5:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-002 **Matrix:** SOIL
Client Sample ID H-16 R 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	6.71	0.10	*	mmhos/cm	1	12/7/2021 11:30:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A		Analyst: SGP
Chloride	3,090	40.6		mg/Kg-dry	100	12/7/2021 11:40:03 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.6	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/15/2021 5:10:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-003 **Matrix:** SOIL
Client Sample ID H-16 R 50-50.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	2.40	0.10		mmhos/cm	1	12/7/2021 11:30:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A	29B	Analyst: SGP
Chloride	639	14.2		mg/Kg-dry	50	12/7/2021 11:53:50 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.5	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 7:40:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-004 **Matrix:** SOIL
Client Sample ID H-12 R 0-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
						Analyst: JMI
Electrical Conductivity	0.60	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
EXCHANGEABLE SODIUM PERCENTAGE						
						Analyst: BXB
Exchangeable Sodium %	4.92	0.10		%	1	12/17/2021
SODIUM ADSORPTION RATIO						
						Analyst: STS
Sodium Adsorption Ratio	5.96	0.10			1	12/10/2021
Soluble Calcium	1.16	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.34	0.05		meq/L	1	12/10/2021
Soluble Sodium	5.17	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC						
						Analyst: SGP
Chloride	42.9	2.02		mg/Kg-dry	10	12/10/2021 11:22:49 AM
PERCENT MOISTURE						
						Analyst: BXB
Percent Moisture	12.6	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 7:45:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-005 **Matrix:** SOIL
Client Sample ID H-12 R 1-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
						Analyst: JMI
Electrical Conductivity	0.76	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
EXCHANGEABLE SODIUM PERCENTAGE						
						Analyst: BXB
Exchangeable Sodium %	10.8	0.10		%	1	12/17/2021
SODIUM ADSORPTION RATIO						
						Analyst: STS
Sodium Adsorption Ratio	9.53	0.10			1	12/10/2021
Soluble Calcium	0.56	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.34	0.05		meq/L	1	12/10/2021
Soluble Sodium	6.40	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC						
						Analyst: SGP
Chloride	80.6	4.05		mg/Kg-dry	20	12/10/2021 11:36:25 AM
PERCENT MOISTURE						
						Analyst: BXB
Percent Moisture	15.8	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 7:50:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-006 **Matrix:** SOIL
Client Sample ID H-12 R 2-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
						Analyst: JMI
Electrical Conductivity	1.46	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
EXCHANGEABLE SODIUM PERCENTAGE						
						Analyst: BXB
Exchangeable Sodium %	9.72	0.10		%	1	12/17/2021
SODIUM ADSORPTION RATIO						
						Analyst: STS
Sodium Adsorption Ratio	16.3	0.10	*		1	12/10/2021
Soluble Calcium	0.86	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.38	0.05		meq/L	1	12/10/2021
Soluble Sodium	12.8	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC						
						Analyst: SGP
Chloride	184	12.2		mg/Kg-dry	50	12/10/2021 11:50:13 AM
PERCENT MOISTURE						
						Analyst: BXB
Percent Moisture	16.8	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 12:50:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-007 **Matrix:** SOIL
Client Sample ID H-12 R 76-78

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	4.80	0.10	*	mmhos/cm	1	12/7/2021 11:30:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A		Analyst: SGP
Chloride	1,020	18.9		mg/Kg-dry	100	12/8/2021 12:07:37 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.4	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 4:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-008 **Matrix:** SOIL
Client Sample ID H-21 R 0-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.60	0.10		mmhos/cm	1	12/7/2021 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	5.77	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	4.62	0.10			1	12/10/2021
Soluble Calcium	1.14	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.56	0.05		meq/L	1	12/10/2021
Soluble Sodium	4.26	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	60.1	2.07		mg/Kg-dry	10	12/8/2021 12:21:25 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	15.0	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

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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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 4:10:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-009 **Matrix:** SOIL
Client Sample ID H-21 R 1-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.63	0.10		mmhos/cm	1	12/7/2021 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	14.9	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	6.25	0.10			1	12/10/2021
Soluble Calcium	0.72	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.45	0.05		meq/L	1	12/10/2021
Soluble Sodium	4.77	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	96.1	1.72		mg/Kg-dry	10	12/8/2021 1:02:49 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	15.7	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

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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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 4:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-010 **Matrix:** SOIL
Client Sample ID H-21 R 2-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.15	0.10		mmhos/cm	1	12/7/2021 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	20.8	0.10	*	%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	12.4	0.10	*		1	12/10/2021
Soluble Calcium	0.73	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.35	0.05		meq/L	1	12/10/2021
Soluble Sodium	9.08	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	371	6.74		mg/Kg-dry	20	12/8/2021 1:16:37 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	19.4	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 4:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-011 **Matrix:** SOIL
Client Sample ID H-21 R 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	3.98	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A		Analyst: SGP
Chloride	1,250	28.3		mg/Kg-dry	100	12/10/2021 12:04:01 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.0	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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
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 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/17/2021 5:00:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-012 **Matrix:** SOIL
Client Sample ID H-21 R 22-24

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.34	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	247	4.74		mg/Kg-dry	20	12/10/2021 12:17:49 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.6	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 8:40:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-013 **Matrix:** SOIL
Client Sample ID H-21 W 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.88	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	5.43	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	5.97	0.10			1	12/10/2021
Soluble Calcium	1.34	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.75	0.05		meq/L	1	12/10/2021
Soluble Sodium	6.11	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	152	4.15		mg/Kg-dry	20	12/10/2021 12:31:37 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.2	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 8:35:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-014 **Matrix:** SOIL
Client Sample ID H-21 W 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.24	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	6.36	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	7.93	0.10			1	12/10/2021
Soluble Calcium	1.59	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.98	0.05		meq/L	1	12/10/2021
Soluble Sodium	8.99	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	232	4.48		mg/Kg-dry	20	12/10/2021 12:45:25 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	15.3	1.00		wt%	1	11/22/2021 1:00:00 PM

Qualifiers:

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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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 Lafayette, LA 70508-3344
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WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 8:30:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-015 **Matrix:** SOIL
Client Sample ID H-21 W 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	3.67	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	3.91	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	5.65	0.10			1	12/10/2021
Soluble Calcium	14.3	0.02		meq/L	1	12/10/2021
Soluble Magnesium	7.23	0.05		meq/L	1	12/10/2021
Soluble Sodium	18.5	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	810	19.7		mg/Kg-dry	100	12/10/2021 12:59:14 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.6	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

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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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 9:50:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-016 **Matrix:** SOIL
Client Sample ID MW-6 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.58	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	7.70	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	8.76	0.10			1	12/10/2021
Soluble Calcium	3.41	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.73	0.05		meq/L	1	12/10/2021
Soluble Sodium	12.6	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	216	10.4		mg/Kg-dry	50	12/10/2021 1:13:03 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	20.1	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 9:55:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-017 **Matrix:** SOIL
Client Sample ID MW-6 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	2.23	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	10.1	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	13.6	0.10	*		1	12/10/2021
Soluble Calcium	2.37	0.02		meq/L	1	12/10/2021
Soluble Magnesium	0.88	0.05		meq/L	1	12/10/2021
Soluble Sodium	17.4	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	586	12.5		mg/Kg-dry	50	12/10/2021 2:22:04 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.8	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

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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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 10:00:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-018 **Matrix:** SOIL
Client Sample ID MW-6 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	3.19	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	4.58	0.10		%	1	12/17/2021
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	8.11	0.10			1	12/10/2021
Soluble Calcium	9.42	0.02		meq/L	1	12/10/2021
Soluble Magnesium	3.60	0.05		meq/L	1	12/10/2021
Soluble Sodium	20.7	0.25		meq/L	1	12/10/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	848	11.8		mg/Kg-dry	50	12/10/2021 2:35:52 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.5	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 11:35:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-019 **Matrix:** SOIL
Client Sample ID MW-6 18-20

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	4.04	0.10	*	mmhos/cm	1	12/10/2021 11:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A		Analyst: SGP
Chloride	1,020	22.8		mg/Kg-dry	100	12/10/2021 2:49:39 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.7	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 11:30:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-020 **Matrix:** SOIL
Client Sample ID MW-6 30-32

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.18	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A		Analyst: SGP
Chloride	204	4.36		mg/Kg-dry	20	12/10/2021 3:03:27 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.6	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 11:25:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-021 **Matrix:** SOIL
Client Sample ID MW-6 38-40

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.83	0.10		mmhos/cm	1	12/10/2021 11:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	309	9.85		mg/Kg-dry	50	12/10/2021 3:17:13 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	21.4	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 3:10:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-022 **Matrix:** SOIL
Client Sample ID H-15N 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	85.9	0.987		mg/Kg-dry	1	12/7/2021 7:29:03 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.9	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 3:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-023 **Matrix:** SOIL
Client Sample ID H-15N 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN SOIL BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015					SW3550C	
TPH (Diesel Range)	< 10.0	10.0		mg/Kg	1	11/30/2021 9:34:00 PM
TPH (Oil Range)	< 10.0	10.0		mg/Kg	1	11/30/2021 9:34:00 PM
Surr: 4-Terphenyl-d14	69.0	33 - 152		%Rec	1	11/30/2021 9:34:00 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	19.0	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 3:40:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-024 **Matrix:** SOIL
Client Sample ID H-15W 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	515	0.925		mg/Kg-dry	1	12/7/2021 7:31:21 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.3	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/18/2021 3:50:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21111079-025 **Matrix:** SOIL
Client Sample ID H-15W 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN SOIL BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015					SW3550C	
TPH (Diesel Range)	< 10.0	10.0		mg/Kg	1	11/30/2021 10:15:00 PM
TPH (Oil Range)	< 10.0	10.0		mg/Kg	1	11/30/2021 10:15:00 PM
Surr: 4-Terphenyl-d14	73.9	33 - 152		%Rec	1	11/30/2021 10:15:00 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.3	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2021 8:45:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-026 **Matrix:** SOIL
Client Sample ID H-15E 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	79.7	0.974		mg/Kg-dry	1	12/7/2021 7:33:40 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.1	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2021 8:50:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-027 **Matrix:** SOIL
Client Sample ID H-15E 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN SOIL BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015					SW3550C	
TPH (Diesel Range)	< 10.0	10.0		mg/Kg	1	11/30/2021 10:57:00 PM
TPH (Oil Range)	< 15.0	15.0		mg/Kg	1	11/30/2021 10:57:00 PM
Surr: 4-Terphenyl-d14	77.0	33 - 152		%Rec	1	11/30/2021 10:57:00 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	15.2	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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WO#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2021 9:05:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-028 **Matrix:** SOIL
Client Sample ID H-15S 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	202	0.955		mg/Kg-dry	1	12/7/2021 7:35:57 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	22.0	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2021 9:15:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-029 **Matrix:** SOIL
Client Sample ID H-15S 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN SOIL BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN SOIL BY SW8015					SW3550C	
TPH (Diesel Range)	< 10.0	10.0		mg/Kg	1	11/30/2021 11:11:00 PM
TPH (Oil Range)	< 10.0	10.0		mg/Kg	1	11/30/2021 11:11:00 PM
Surr: 4-Terphenyl-d14	75.8	33 - 152		%Rec	1	11/30/2021 11:11:00 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.7	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2021 10:00:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-030 **Matrix:** SOIL
Client Sample ID H-11 S 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	659	0.952		mg/Kg-dry	1	12/7/2021 7:38:15 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.3	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2021 10:05:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-031 **Matrix:** SOIL
Client Sample ID H-11 E 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	253	0.922		mg/Kg-dry	1	12/7/2021 7:40:34 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.2	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079

Date Reported: 12/17/2021

CLIENT: ICON Environmental Services **Collection Date:** 11/19/2021 10:15:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21111079-032 **Matrix:** SOIL
Client Sample ID H-11 N 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	2,050	0.929		mg/Kg-dry	1	12/7/2021 7:47:28 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.2	1.00		wt%	1	11/24/2021 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 41784

Sample ID	21111079-023AMS-	SampType: MS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/29/2021	RunNo: 104725					
Client ID:	H-15N 6-8	Batch ID: 41784	TestNo: SW8015B	SW3550C	Analysis Date: 11/30/2021	SeqNo: 2561220					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)	71.9	10.0	100.0	5.357	66.6	23.4	123				
Surr: 4-Terphenyl-d14	2.41		3.333		72.3	33	152				

Sample ID	21111079-023AMSD	SampType: MSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/29/2021	RunNo: 104725					
Client ID:	H-15N 6-8	Batch ID: 41784	TestNo: SW8015B	SW3550C	Analysis Date: 11/30/2021	SeqNo: 2561221					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)	69.9	10.0	100.0	5.357	64.5	23.4	123	71.92	2.85	35.6	
Surr: 4-Terphenyl-d14	2.34		3.333		70.3	33	152		0	40	

Sample ID	21111079-025AMS-	SampType: MS	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/29/2021	RunNo: 104725					
Client ID:	H-15W 6-8	Batch ID: 41784	TestNo: SW8015B	SW3550C	Analysis Date: 11/30/2021	SeqNo: 2561223					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	64.7	10.0	100.0	8.457	56.3	14.5	174				
Surr: 4-Terphenyl-d14	2.28		3.333		68.4	33	152				

Sample ID	21111079-025AMSD	SampType: MSD	TestCode: 8015_DO_S	Units: mg/Kg	Prep Date: 11/29/2021	RunNo: 104725					
Client ID:	H-15W 6-8	Batch ID: 41784	TestNo: SW8015B	SW3550C	Analysis Date: 11/30/2021	SeqNo: 2561224					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	83.5	10.0	100.0	8.457	75.0	14.5	174	64.73	25.3	48.8	

Qualifiers:

- | | | |
|---|--|------------------------|
| * Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 41784

Sample ID	21111079-025AMSD	SampType:	MSD	TestCode:	8015_DO_S	Units:	mg/Kg	Prep Date:	11/29/2021	RunNo:	104725			
Client ID:	H-15W 6-8	Batch ID:	41784	TestNo:	SW8015B	SW3550C		Analysis Date:	11/30/2021	SeqNo:	2561224			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14		2.49			3.333			74.8	33	152		0	40	

Sample ID	LCSD-D41784	SampType:	LCSD	TestCode:	8015_DO_S	Units:	mg/Kg	Prep Date:	11/29/2021	RunNo:	104725			
Client ID:	LCSS02	Batch ID:	41784	TestNo:	SW8015B	SW3550C		Analysis Date:	11/30/2021	SeqNo:	2561244			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)		81.1		10.0	100.0	0		81.1	63.4	109	64.70	22.5	21.9	R
Surr: 4-Terphenyl-d14		2.69			3.333			80.6	33	152		0	40	

NOTES:
 R - LCS/LCSD RPD above the control limit. Recovery of the analyte was within the acceptance limits in both LCS/LCSD. The RPD between the MS/MSD is within LCS RPD limits.

Sample ID	LCSD-M41784	SampType:	LCSD	TestCode:	8015_DO_S	Units:	mg/Kg	Prep Date:	11/29/2021	RunNo:	104725			
Client ID:	LCSS02	Batch ID:	41784	TestNo:	SW8015B	SW3550C		Analysis Date:	11/30/2021	SeqNo:	2561245			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)		76.8		10.0	100.0	0		76.8	63.9	120	66.99	13.7	20.7	
Surr: 4-Terphenyl-d14		2.71			3.333			81.2	33	152		0	40	

Sample ID	LCS-M41784	SampType:	LCS	TestCode:	8015_DO_S	Units:	mg/Kg	Prep Date:	11/29/2021	RunNo:	104725			
Client ID:	LCSS	Batch ID:	41784	TestNo:	SW8015B	SW3550C		Analysis Date:	11/30/2021	SeqNo:	2561246			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)		67.0		10.0	100.0	0		67.0	63.9	120				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21111079
 17-Dec-21

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 41784

Sample ID	LCS-M41784	SampType:	LCS	TestCode:	8015_DO_S	Units:	mg/Kg	Prep Date:	11/29/2021	RunNo:	104725			
Client ID:	LCSS	Batch ID:	41784	TestNo:	SW8015B	SW3550C		Analysis Date:	11/30/2021	SeqNo:	2561246			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14 2.34 3.333 70.1 33 152

Sample ID	MB-41784	SampType:	MBLK	TestCode:	8015_DO_S	Units:	mg/Kg	Prep Date:	11/29/2021	RunNo:	104725			
Client ID:	PBS	Batch ID:	41784	TestNo:	SW8015B	SW3550C		Analysis Date:	11/30/2021	SeqNo:	2561247			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) < 10.0 10.0
 TPH (Oil Range) < 10.0 10.0
 Surr: 4-Terphenyl-d14 2.17 3.333 65.2 33 152

Sample ID	LCS-D41784	SampType:	ics	TestCode:	8015_DO_S	Units:	mg/Kg	Prep Date:	11/29/2021	RunNo:	104725			
Client ID:	LCSS	Batch ID:	41784	TestNo:	SW8015B	SW3550C		Analysis Date:	12/1/2021	SeqNo:	2562478			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 64.7 10.0 100.0 0 64.7 63.4 109
 Surr: 4-Terphenyl-d14 2.06 3.333 61.7 33 152

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21111079
 17-Dec-21

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 41856

Sample ID	MB-41856	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/3/2021	RunNo:	104895			
Client ID:	PBS	Batch ID:	41856	TestNo:	SW6010B	SW3050B		Analysis Date:	12/7/2021	SeqNo:	2564868			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium < 1.00 1.00

Sample ID	LCS-41856	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/3/2021	RunNo:	104895			
Client ID:	LCSS	Batch ID:	41856	TestNo:	SW6010B	SW3050B		Analysis Date:	12/7/2021	SeqNo:	2564869			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium 49.8 1.00 50.00 0 99.6 80 120

Sample ID	LCSD-41856	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/3/2021	RunNo:	104895			
Client ID:	LCSS02	Batch ID:	41856	TestNo:	SW6010B	SW3050B		Analysis Date:	12/7/2021	SeqNo:	2564870			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium 49.8 1.00 50.00 0 99.6 80 120 49.80 0.0161 20

Sample ID	21111079-001AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/3/2021	RunNo:	104895			
Client ID:	pm	Batch ID:	41856	TestNo:	SW6010B	SW3050B		Analysis Date:	12/7/2021	SeqNo:	2564880			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium 2,010 0.912 45.58 2,162 -336 75 125 S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 41856

Sample ID	21111079-001AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/3/2021	RunNo:	104895											
Client ID:	pm	Batch ID:	41856	TestNo:	SW6010B		SW3050B	Analysis Date:	12/7/2021	SeqNo:	2564881											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Barium		2,070		0.938		46.89		2,162		-205		75		125		2,010		2.78		20		S

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 41934

Sample ID	21111079-015ADUP	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	12/10/2021	RunNo:	105021		
Client ID:	H-21 W 8-10	Batch ID:	41934	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	12/10/2021	SeqNo:	2569472		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		5.84		0.10						5.65	3.35	20	
Soluble Calcium		14.5		0.02						14.31	1.65	20	
Soluble Magnesium		7.34		0.05						7.23	1.52	20	
Soluble Sodium		19.3		0.25						18.53	4.15	20	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42013

Sample ID	21111079-015ADUP	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	12/16/2021	RunNo:	105207		
Client ID:	H-21 W 8-10	Batch ID:	42013	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	12/17/2021	SeqNo:	2574488		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		4.01		0.10						3.91	2.53	20	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R104706

Sample ID	21111049-101ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104706					
Client ID:	ZZZZZZ	Batch ID: R104706	TestNo: LDNR 29-B		Analysis Date: 11/22/2021	SeqNo: 2560186					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	21.6	1.00						23.20	7.14	20	

Sample ID	21111049-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104706					
Client ID:	ZZZZZZ	Batch ID: R104706	TestNo: LDNR 29-B		Analysis Date: 11/22/2021	SeqNo: 2560207					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.9	1.00						18.20	1.66	20	

Sample ID	21111049-021ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104706					
Client ID:	ZZZZZZ	Batch ID: R104706	TestNo: LDNR 29-B		Analysis Date: 11/22/2021	SeqNo: 2560228					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	28.2	1.00						28.10	0.36	20	

Sample ID	21111049-041ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 104706					
Client ID:	ZZZZZZ	Batch ID: R104706	TestNo: LDNR 29-B		Analysis Date: 11/22/2021	SeqNo: 2560249					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	29.2	1.00						26.30	10.5	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: R104706

Sample ID	21111049-061ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104706		
Client ID:	ZZZZZZ	Batch ID:	R104706	TestNo:	LDNR 29-B			Analysis Date:	11/22/2021	SeqNo:	2560270		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		20.8		1.00						20.60	0.97	20	

Sample ID	21111049-081ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104706		
Client ID:	ZZZZZZ	Batch ID:	R104706	TestNo:	LDNR 29-B			Analysis Date:	11/22/2021	SeqNo:	2560291		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		17.1		1.00						18.70	8.94	20	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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 Website: www.element.com

QC SUMMARY REPORT

WO#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R104838

Sample ID	21111079-015ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838		
Client ID:	H-21 W 8-10	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/24/2021	SeqNo:	2563608		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		18.5		1.00						18.60	0.54	20	

Sample ID	21111085-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838		
Client ID:	ZZZZZ	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/24/2021	SeqNo:	2563627		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		15.1		1.00						15.10	0	20	

Sample ID	21111085-021ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838		
Client ID:	ZZZZZ	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/24/2021	SeqNo:	2563648		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		25.1		1.00						23.00	8.73	20	

Sample ID	21111120-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838		
Client ID:	ZZZZZ	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/29/2021	SeqNo:	2563663		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		92.9		1.00						92.90	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R104838

Sample ID	21111120-021ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838			
Client ID:	ZZZZZZ	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/29/2021	SeqNo:	2563684			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		85.6		1.00							85.20	0.47	20	

Sample ID	21111120-041ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838			
Client ID:	ZZZZZZ	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/29/2021	SeqNo:	2563705			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		81.0		1.00							81.30	0.37	20	

Sample ID	21111120-061ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838			
Client ID:	ZZZZZZ	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/29/2021	SeqNo:	2563726			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		54.9		1.00							54.80	0.18	20	

Sample ID	21111120-081ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	104838			
Client ID:	ZZZZZZ	Batch ID:	R104838	TestNo:	LDNR 29-B			Analysis Date:	11/29/2021	SeqNo:	2563747			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		73.2		1.00							64.70	12.3	20	

Qualifiers:

- | | | |
|---|--|------------------------|
| * Value exceeds Maximum Contaminant Level. | 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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R104869

Sample ID MB-R104868	SampType: MBLK	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 104869						
Client ID: PBS	Batch ID: R104869	TestNo: LDNR 29-B		Analysis Date: 12/7/2021	SeqNo: 2564311						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Electrical Conductivity	< 0.10	0.10									

Sample ID LCS1-R104868	SampType: LCS1	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 104869						
Client ID: ZZZZZ	Batch ID: R104869	TestNo: LDNR 29-B		Analysis Date: 12/7/2021	SeqNo: 2564312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Electrical Conductivity	0.50	0.10	0.50	0	99.6	90	110				

Sample ID LCS2-R104868	SampType: LCS2	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 104869						
Client ID: ZZZZZ	Batch ID: R104869	TestNo: LDNR 29-B		Analysis Date: 12/7/2021	SeqNo: 2564313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Electrical Conductivity	50.5	0.10	53.00	0	95.3	90	110				

Sample ID 21111049-101ADUP	SampType: DUP	TestCode: EC_S	Units: mmhos/cm	Prep Date:	RunNo: 104869						
Client ID: ZZZZZ	Batch ID: R104869	TestNo: LDNR 29-B		Analysis Date: 12/7/2021	SeqNo: 2564315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Electrical Conductivity	0.55	0.10						0.55	0.36	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R104937

Sample ID	mblk	SampType: MBLK	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 104937
Client ID:	PBS	Batch ID: R104937	TestNo: SW9056A		Analysis Date: 12/7/2021	SeqNo: 2566178
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride		< 0.250	0.250			

Sample ID	lcs	SampType: LCS	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 104937
Client ID:	LCSS	Batch ID: R104937	TestNo: SW9056A		Analysis Date: 12/7/2021	SeqNo: 2566179
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride		9.97	0.250	10.00	0	99.7 80 120

Sample ID	lcsd	SampType: LCSD	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 104937
Client ID:	LCSS02	Batch ID: R104937	TestNo: SW9056A		Analysis Date: 12/7/2021	SeqNo: 2566180
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 80 120 9.968 0.461 15

Sample ID	21111075-001ams	SampType: MS	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 104937
Client ID:	ZZZZZZ	Batch ID: R104937	TestNo: SW9056A		Analysis Date: 12/7/2021	SeqNo: 2566182
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride		1,830	46.4	928.0	828.9	108 80 120

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R104937

Sample ID	21111075-001amsd	SampType:	MSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	104937		
Client ID:	ZZZZZZ	Batch ID:	R104937	TestNo:	SW9056A			Analysis Date:	12/7/2021	SeqNo:	2566183		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		1,860		46.4	928.0	828.9	111	80	120	1,831	1.62	15	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105004

Sample ID	MB-R104948	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105004
Client ID:	PBS	Batch ID:	R105004	TestNo:	LDNR 29-B			Analysis Date:	12/10/2021	SeqNo:	2567926
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R104948	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105004
Client ID:	ZZZZZ	Batch ID:	R105004	TestNo:	LDNR 29-B			Analysis Date:	12/10/2021	SeqNo:	2567928
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.52		0.10	0.50	0	102	90	110		

Sample ID	LCS2-R104948	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105004
Client ID:	ZZZZZ	Batch ID:	R105004	TestNo:	LDNR 29-B			Analysis Date:	12/10/2021	SeqNo:	2567930
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		54.2		0.10	53.00	0	102	90	110		

Sample ID	21111079-015ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105004
Client ID:	H-21 W 8-10	Batch ID:	R105004	TestNo:	LDNR 29-B			Analysis Date:	12/10/2021	SeqNo:	2567939
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		3.65		0.10						3.67	0.55 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105038

Sample ID	mblk	SampType:	MBLK	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105038			
Client ID:	PBS	Batch ID:	R105038	TestNo:	SW9056A			Analysis Date:	12/10/2021	SeqNo:	2568919			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250		0.250										

Sample ID	lcs	SampType:	LCS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105038			
Client ID:	LCSS	Batch ID:	R105038	TestNo:	SW9056A			Analysis Date:	12/10/2021	SeqNo:	2568920			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		9.98		0.250	10.00	0		99.8	80	120				

Sample ID	lcsd	SampType:	LCSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105038			
Client ID:	LCSS02	Batch ID:	R105038	TestNo:	SW9056A			Analysis Date:	12/10/2021	SeqNo:	2568921			
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	80	120	9.981	0.980	15	

Sample ID	21111079-016ams	SampType:	MS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105038			
Client ID:	MW-6 0-2	Batch ID:	R105038	TestNo:	SW9056A			Analysis Date:	12/10/2021	SeqNo:	2568932			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		420		10.4	208.8	216.4		97.5	80	120				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105038

Sample ID	21111079-016amsd	SampType:	MSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105038											
Client ID:	MW-6 0-2	Batch ID:	R105038	TestNo:	SW9056A			Analysis Date:	12/10/2021	SeqNo:	2568933											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Chloride		435		10.4		208.8		216.4		105		80		120		420.0		3.53		15		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- 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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105113

Sample ID	mblk	SampType:	MBLK	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105113
Client ID:	PBS	Batch ID:	R105113	TestNo:	SW9056A			Analysis Date:	12/14/2021	SeqNo:	2571047
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Chloride		< 0.250		0.250							

Sample ID	lcs	SampType:	LCS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105113
Client ID:	LCSS	Batch ID:	R105113	TestNo:	SW9056A			Analysis Date:	12/14/2021	SeqNo:	2571048
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	80	120		

Sample ID	lcsd	SampType:	LCSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105113
Client ID:	LCSS02	Batch ID:	R105113	TestNo:	SW9056A			Analysis Date:	12/14/2021	SeqNo:	2571049
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	80	120	10.04	0.153 15

Sample ID	21111260-001ams	SampType:	MS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105113
Client ID:	ZZZZZZ	Batch ID:	R105113	TestNo:	SW9056A			Analysis Date:	12/14/2021	SeqNo:	2571059
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Chloride		1,970		53.8	1,077	764.8	112	80	120		

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21111079
 17-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105113

Sample ID	21111260-001amsd	SampType:	MSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105113		
Client ID:	ZZZZZZ	Batch ID:	R105113	TestNo:	SW9056A			Analysis Date:	12/14/2021	SeqNo:	2571060		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		1,880		53.8	1,077	764.8	103	80	120	1,973	4.94	15	

Qualifiers:

- | | | | | | |
|----|---|-----|--|----|----------------------|
| * | Value exceeds Maximum Contaminant Level. | 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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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **21111079** RcptNo: **1**

Logged by:	Tammy Thibodeaux	11/19/2021 12:27:00 PM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	11/19/2021 1:09:28 PM	<i>Tammy Thibodeaux</i>
Reviewed By:	Caitlin Duplantis	12/6/2021 1:05:26 PM	<i>Caitlin Duplantis</i>

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Jason Sills"/>	Date	<input type="text" value="12/6/2021"/>
By Whom:	<input type="text" value="Caitlin Duplantis"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Is EC needed on the 4th, 5th, and 6th samples listed on COC? ESP/SAR only requested"/>		
Client Instructions:	<input type="text" value="Please add EC to those samples."/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.6	Good	Not Present			



Chain of Custody

Laboratory Number: 2111019

Company Name: ICON Environmental
 Contact Name: Jason Sills
 Address: 2049 Commercial Dr
 City, State Zip: POA Albany, LA 70617
 Phone Number: 225-344-8140 Ext: _____
 Fax Number: _____
 E-mail Address: _____

Client Information: Billing Information: PO Number: _____
 Quote Number: _____
 Required QC Level: _____

Project Name/Number: Heavy II
9403-010-0100
 Sampler's Signature: _____
 Shipping Method: UPS / FedEx / NOW
DHL / Element / Hand / Mail

Matrix Code: 4
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> PCTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/IRISC	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information		Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type P=Plastic, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests		Comments	
			Date					Quantity	%		SAR/ESP
			Date	Time							
H-16 R (0-2')			11/15/21	1655	G	SO					
H-16 R (14-16')			↓	1705							
H-16 R (50-50.5')				1710							
H-12 R (0-1')			11/17/21	0740							
H-12 R (1-2')				0745							
H-12 R (2-3')				0750							
H-21 R (76-78')				1250							
H-21 R (0-1')				1605							
H-21 R (1-2')				1610							

Refinquired by: _____ Date/Time: 11/15/21 1655

Received by: Philo Date/Time: 11/19/21 1607

Field Notes: Received at lab on ice by: g. g. g.
 Yes No Temp: _____

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.

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 P 812-375-0531 F 812-375-0731

328 Ley Road, Suite 100 Fort Wayne, IN 46625 USA
 P 260-471-7000 F 260-471-7777

909 Executive Dr Warsaw, IN 46580-2368 USA
 P 574-267-3305 F 574-269-6569

3371 Cleveland Road, Suite 100A South Bend, IN 46628-9790 USA
 P 574-277-0707 F 574-273-5699

2417 W. Pinhook Rd Lafayette, LA 70508-3344 USA
 P 337-235-0483 F 337-233-6540



Chain of Custody

Laboratory Number: **2111079**

Page **2** of **4**

Client Information: Company Name: **ICON** PO Number: **Hermitage II**
 Contact Name: **Jason Sills** Quote Number: **9405-010-0100**
 Address: **SAME** Required QC Level: **None**

Which Regulations Apply: RCRA Drinking Water Standard RUSH 1 Day 2 Day Other
 POTW Distribution Special State USDA/FDA RECAP/RISC Other

Collection Information: Date: **11/17/21** Time: **1615** Matrix: **So**
 Date: **11/18/21** Time: **0840** Matrix: **So**
 Date: **11/18/21** Time: **0835** Matrix: **So**
 Date: **11/18/21** Time: **0950** Matrix: **So**
 Date: **11/18/21** Time: **0455** Matrix: **So**
 Date: **11/18/21** Time: **1000** Matrix: **So**

Matrix Code: DW = Drinking Water, WW = Waste Water, GW = Ground Water, AQ = Aqueous, OT = Other, SL = Sludge, SOL = Solid, O = Oil, SO = Soil, F = Food, SW = Swab, NG = Natural Gas, NGL = Natural Gas Liquid, PW = Produced Water, CF = Completion Fluid

Shipping Method: UPS / FedEx / NOW, DHL / Element / Hand / Mail

Sample ID/Description	Collection Information		Turn Time	Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container		Pres.	Requested Tests		Comments
	Date	Time			Grab / Composite	Matrix		Quantity	Type	
H-21R (2-3')	11/17/21	1615	G	So	P	P	-	X	SAR/ESP	
H-21R (10-12')	11/18/21	1620	G	So	P	P	-	X	SAR/ESP	
H-21R (22-24')	11/18/21	1700	G	So	P	P	-	X	SAR/ESP	
H-21 W (0-2')	11/18/21	0840	G	So	P	P	-	X	SAR/ESP	
H-21 W (6-8')	11/18/21	0835	G	So	P	P	-	X	SAR/ESP	
H-21 W (8-10')	11/18/21	0950	G	So	P	P	-	X	SAR/ESP	
MW-6 (0-2')	11/18/21	0455	G	So	P	P	-	X	SAR/ESP	
MW-6 (4-6')	11/18/21	0455	G	So	P	P	-	X	SAR/ESP	
MW-6 (8-10')	11/18/21	1000	G	So	P	P	-	X	SAR/ESP	

Relinquished by: [Signature] **Date/Time:** 11/19/21 09:07

Received by: [Signature] **Date/Time:** 11/19/21 09:07

Field Notes: Received at lab on ice? Yes No Temp: **41F**

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Element Materials Technology reserves the right to return unused sample portions.

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 P 337-235-0483 F 337-233-6540



Chain of Custody

Laboratory Number: **2111019**

Page **4** of **4**

Client Information: Company Name: **KON** PO Number: **Henry II**
 Contact Name: **Jason Sills** Quote Number: **9403-010-0103**
 Address: **SAME** Required QC Level: **Bill Monthly**
 City, State Zip: **Ext:** Yes No
 Phone Number: **Ext:** Yes No
 Fax Number: **Ext:** Yes No
 E-mail Address:

Matrix Code
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge SOL = Solid
 O = Oil SO = Soil
 F = Food SW = Swab
 NGL = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Shipping Method:
 UPS / FedEx / NOW
 DHL / Element / Hand / Mail

Sampler's Signature: *[Signature]*

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/IRIS	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information			Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type P=Plastic, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests					Comments				
			Date		Time				Matrix	Quantity	G=Glass, V=Vial	X % Moisture	X Bq		X TPI-D/O			
			Date	Time	Matrix													
H-15 S (0-2')			11/14/11	0905	G	SO	1	P										
H-15 S (6-8')				0915														
H-11 S (0-2')				1000														
H-11 E (0-2')				1005														
H-11 N (0-2')				1015														

Relinquished by: *[Signature]* **Date/Time:** **11/14/11 0905**

Received by: *[Signature]* **Date/Time:** **11/15/11 1207**

Field Notes: Received at lab on ice? Yes No Temp: **4°C**

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.

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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 28, 2021

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II/9403-010-0100

Order No.: 21120186

Dear Greg Miller:

Element Materials Technology Lafayette received 12 sample(s) on 12/3/2021 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 that reads '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#: 21120186

Date: 12/28/2021

CLIENT: ICON Environmental Services

Project: Henning II/9403-010-0100

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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 2417 W. Pinhook Road
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Analytical Report

(consolidated)

WO#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 10:55:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21120186-001 **Matrix:** SOIL
Client Sample ID H-18 R 0-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	472	0.996		mg/Kg-dry	1	12/27/2021 6:35:36 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.9	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 11:05:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21120186-002 **Matrix:** SOIL
Client Sample ID H-18 R 0-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
ELECTRICAL CONDUCTIVITY @ SATURATION						Analyst: JMI
Electrical Conductivity	1.08	0.10		mmhos/cm	1	12/21/2021 1:30:00 PM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						Analyst: BXB
Exchangeable Sodium %	10.5	0.10		%	1	12/22/2021
29B SALTS						
SODIUM ADSORPTION RATIO						Analyst: STS
Sodium Adsorption Ratio	9.81	0.10			1	12/22/2021
Soluble Calcium	1.06	0.02		meq/L	1	12/22/2021
Soluble Magnesium	0.50	0.05		meq/L	1	12/22/2021
Soluble Sodium	8.67	0.25		meq/L	1	12/22/2021
PERCENT MOISTURE						Analyst: BXB
Percent Moisture	17.3	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 11:10:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21120186-003 **Matrix:** SOIL
Client Sample ID H-18 R 1-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS				LDNR 29-B		Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.71	0.10		mmhos/cm	1	12/21/2021 1:30:00 PM
29B SALTS				LDNR 29-B	LDNR 29-B	Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	14.4	0.10		%	1	12/22/2021
29B SALTS				LDNR 29-B	LDNR 29-B	Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	19.0	0.10	*		1	12/22/2021
Soluble Calcium	0.83	0.02		meq/L	1	12/22/2021
Soluble Magnesium	0.48	0.05		meq/L	1	12/22/2021
Soluble Sodium	15.3	0.25		meq/L	1	12/22/2021
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.2	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 11:15:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21120186-004 **Matrix:** SOIL
Client Sample ID H-18 R 2-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.30	0.10		mmhos/cm	1	12/21/2021 1:30:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	18.6	0.10	*	%	1	12/22/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	18.7	0.10	*		1	12/22/2021
Soluble Calcium	0.40	0.02		meq/L	1	12/22/2021
Soluble Magnesium	0.32	0.05		meq/L	1	12/22/2021
Soluble Sodium	11.3	0.25		meq/L	1	12/22/2021
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.8	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 10:40:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21120186-005 **Matrix:** SOIL
Client Sample ID H-18 R 18-20

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	7.33	0.10	*	mmhos/cm	1	12/21/2021 1:30:00 PM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	2,810	64.4		mg/Kg-dry	200	12/21/2021 5:53:27 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	22.9	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 10:35:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21120186-006 **Matrix:** SOIL
Client Sample ID H-18 R 26-28

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	2.48	0.10		mmhos/cm	1	12/21/2021 1:30:00 PM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	699	12.8		mg/Kg-dry	50	12/21/2021 6:07:15 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.3	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 12:15:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21120186-007 **Matrix:** SOIL
Client Sample ID H-18 NW 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	745	18.5		mg/Kg-dry	100	12/21/2021 6:21:04 PM
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	628	0.939		mg/Kg-dry	1	12/27/2021 6:37:54 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	14.4	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 12:20:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21120186-008 **Matrix:** SOIL
Client Sample ID H-18 NW 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	7.11	0.10	*	mmhos/cm	1	12/21/2021 1:30:00 PM
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	14.2	0.10		%	1	12/22/2021
29B SALTS					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	28.4	0.10	*		1	12/22/2021
Soluble Calcium	7.01	0.02		meq/L	1	12/22/2021
Soluble Magnesium	3.31	0.05		meq/L	1	12/22/2021
Soluble Sodium	64.5	0.25		meq/L	1	12/22/2021
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	2,180	54.6		mg/Kg-dry	200	12/21/2021 6:34:52 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	19.9	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 12:25:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21120186-009 **Matrix:** SOIL
Client Sample ID H-18 NW 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	5.87	0.10	*	mmhos/cm	1	12/21/2021 1:30:00 PM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	1,600	22.7		mg/Kg-dry	100	12/21/2021 6:48:40 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	13.7	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 12:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21120186-010 **Matrix:** SOIL
Client Sample ID H-18 NW 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	4.12	0.10	*	mmhos/cm	1	12/21/2021 1:30:00 PM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	2,000	38.7		mg/Kg-dry	100	12/21/2021 7:30:04 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	22.4	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 12:35:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21120186-011 **Matrix:** SOIL
Client Sample ID H-18 NW 16-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	8.54	0.10	*	mmhos/cm	1	12/21/2021 1:30:00 PM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	2,770	49.2		mg/Kg-dry	200	12/21/2021 7:43:52 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	21.3	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186

Date Reported: 12/28/2021

CLIENT: ICON Environmental Services **Collection Date:** 12/3/2021 12:40:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21120186-012 **Matrix:** SOIL
Client Sample ID H-18 NW 22-24

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.06	0.10		mmhos/cm	1	12/21/2021 1:30:00 PM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	305	6.61		mg/Kg-dry	20	12/21/2021 7:57:40 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.5	1.00		wt%	1	12/8/2021 10:00:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42072

Sample ID	21120179-001ADUP	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	12/21/2021	RunNo:	105376		
Client ID:	ZZZZZZ	Batch ID:	42072	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	12/22/2021	SeqNo:	2580323		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		9.14		0.10						8.90	2.66	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- 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 sp



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42075

Sample ID	MB-42075	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	PBS	Batch ID:	42075	TestNo:	SW6010B	SW3050B		Analysis Date:	12/27/2021	SeqNo:	2582673
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		< 1.00		1.00							

Sample ID	LCS-42075	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	LCSS	Batch ID:	42075	TestNo:	SW6010B	SW3050B		Analysis Date:	12/27/2021	SeqNo:	2582674
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		50.7		1.00	50.00	0	101	80	120		

Sample ID	LCSD-42075	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	LCSS02	Batch ID:	42075	TestNo:	SW6010B	SW3050B		Analysis Date:	12/27/2021	SeqNo:	2582675
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		50.9		1.00	50.00	0	102	80	120	50.67	0.471 20

Sample ID	21120184-003AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	ZZZZZZ	Batch ID:	42075	TestNo:	SW6010B	SW3050B		Analysis Date:	12/27/2021	SeqNo:	2582677
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		152		0.957	47.85	106.6	95.7	75	125		

Qualifiers:

- | | | |
|--|--|--|
| * Value exceeds Maximum Contaminant Level. | 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 sp |



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 42075

Sample ID	21120184-003AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/21/2021	RunNo:	105418		
Client ID:	ZZZZZZ	Batch ID:	42075	TestNo:	SW6010B	SW3050B		Analysis Date:	12/27/2021	SeqNo:	2582678		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		157		0.972	48.60	106.6	103	75	125	152.4	2.82	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected
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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42102

Sample ID	21120184-001ADUP	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	12/22/2021	RunNo:	105372		
Client ID:	ZZZZZZ	Batch ID:	42102	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	12/22/2021	SeqNo:	2580201		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		1.07		0.10						1.07	0.50	20	
Soluble Calcium		3.51		0.02						3.54	0.62	20	
Soluble Magnesium		0.94		0.05						0.94	0.14	20	
Soluble Sodium		1.59		0.25						1.61	0.76	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- 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 sp



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105061

Sample ID	21120162-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105061					
Client ID:	ZZZZZZ	Batch ID: R105061	TestNo: LDNR 29-B	Analysis Date: 12/7/2021	SeqNo: 2569604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	62.3	1.00						64.50	3.47	20	

Sample ID	21120162-021ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105061					
Client ID:	ZZZZZZ	Batch ID: R105061	TestNo: LDNR 29-B	Analysis Date: 12/7/2021	SeqNo: 2569625						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	54.8	1.00						56.10	2.34	20	

Sample ID	21120179-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105061					
Client ID:	ZZZZZZ	Batch ID: R105061	TestNo: LDNR 29-B	Analysis Date: 12/7/2021	SeqNo: 2569640						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.7	1.00						15.50	5.30	20	

Sample ID	21120179-021ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105061					
Client ID:	ZZZZZZ	Batch ID: R105061	TestNo: LDNR 29-B	Analysis Date: 12/7/2021	SeqNo: 2569661						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	21.2	1.00						19.30	9.38	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 sp



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105061

Sample ID	21120184-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105061					
Client ID:	ZZZZZZ	Batch ID: R105061	TestNo: LDNR 29-B	Analysis Date: 12/8/2021	SeqNo: 2569673						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	15.3	1.00						16.10	5.10	20	

Sample ID	21120186-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105061					
Client ID:	H-18 R 0-4	Batch ID: R105061	TestNo: LDNR 29-B	Analysis Date: 12/8/2021	SeqNo: 2569684						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	20.2	1.00						17.90	12.1	20	

Sample ID	21120069-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105061					
Client ID:	ZZZZZZ	Batch ID: R105061	TestNo: LDNR 29-B	Analysis Date: 12/6/2021	SeqNo: 2569700						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	47.9	1.00						49.40	3.08	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- 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 sp



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105311

Sample ID	MB-R105308	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105311
Client ID:	PBS	Batch ID:	R105311	TestNo:	LDNR 29-B			Analysis Date:	12/21/2021	SeqNo:	2577999
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R105308	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105311
Client ID:	ZZZZZ	Batch ID:	R105311	TestNo:	LDNR 29-B			Analysis Date:	12/21/2021	SeqNo:	2578000
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.53		0.10	0.50	0	106	90	110		

Sample ID	LCS2-R105308	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105311
Client ID:	ZZZZZ	Batch ID:	R105311	TestNo:	LDNR 29-B			Analysis Date:	12/21/2021	SeqNo:	2578001
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		57.7		0.10	53.00	0	109	90	110		

Sample ID	21120186-001ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105311
Client ID:	H-18 R 0-4	Batch ID:	R105311	TestNo:	LDNR 29-B			Analysis Date:	12/21/2021	SeqNo:	2578003
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.90		0.10						0.89	1.01 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	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 sp



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105338

Sample ID	mblk	SampType:	MBLK	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105338			
Client ID:	PBS	Batch ID:	R105338	TestNo:	SW9056A			Analysis Date:	12/21/2021	SeqNo:	2578718			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250		0.250										

Sample ID	lcs	SampType:	LCS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105338			
Client ID:	LCSS	Batch ID:	R105338	TestNo:	SW9056A			Analysis Date:	12/21/2021	SeqNo:	2578719			
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	80	120				

Sample ID	lcsd	SampType:	LCSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105338			
Client ID:	LCSS02	Batch ID:	R105338	TestNo:	SW9056A			Analysis Date:	12/21/2021	SeqNo:	2578720			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.2		0.250	10.00	0		102	80	120	10.10	1.30	15	

Sample ID	21120179-020ams	SampType:	MS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105338			
Client ID:	ZZZZZZ	Batch ID:	R105338	TestNo:	SW9056A			Analysis Date:	12/21/2021	SeqNo:	2578737			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		1,000		13.5	270.2	779.4		83.4	80	120				

Qualifiers:

- | | | |
|--|--|--|
| * Value exceeds Maximum Contaminant Level. | 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 sp |



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105338

Sample ID	21120179-020amsd	SampType: MSD	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105338					
Client ID:	ZZZZZZ	Batch ID: R105338	TestNo: SW9056A	Analysis Date: 12/21/2021	SeqNo: 2578738						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1,030	13.5	270.2	779.4	93.9	80	120	1,005	2.76	15	

Sample ID	21120187-003ams	SampType: MS	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105338					
Client ID:	ZZZZZZ	Batch ID: R105338	TestNo: SW9056A	Analysis Date: 12/21/2021	SeqNo: 2578768						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	229	9.65	193.0	8.591	114	80	120				

Sample ID	21120187-003amsd	SampType: MSD	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105338					
Client ID:	ZZZZZZ	Batch ID: R105338	TestNo: SW9056A	Analysis Date: 12/21/2021	SeqNo: 2578769						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	244	9.65	193.0	8.591	122	80	120	228.9	6.42	15	S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- 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 sp



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QC SUMMARY REPORT

WO#: 21120186
 28-Dec-21

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: R105338-2

Sample ID	mblk	SampType: MBLK	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105338
Client ID:	PBS	Batch ID: R105338-2	TestNo: SW9056A	Analysis Date: 12/21/2021	SeqNo: 2578747	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	< 0.250	0.250				

Sample ID	lcs	SampType: LCS	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105338
Client ID:	LCSS	Batch ID: R105338-2	TestNo: SW9056A	Analysis Date: 12/21/2021	SeqNo: 2578748	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.5	0.250	10.00	0	105	80 120

Sample ID	lcsd	SampType: LCSD	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105338
Client ID:	LCSS02	Batch ID: R105338-2	TestNo: SW9056A	Analysis Date: 12/21/2021	SeqNo: 2578749	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.5	0.250	10.00	0	105	80 120 10.47 0.129 15

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- 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 sp



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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **21120186**

RcptNo: **1**

Logged by:	Tammy Thibodeaux	12/3/2021 4:05:00 PM	
Completed By:	Tammy Thibodeaux	12/3/2021 5:50:33 PM	
Reviewed By:	Cristina Thibeaux	12/6/2021 1:04:09 PM	

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Cristina Thibeaux"/>	Date	<input type="text" value="12/6/2021"/>
By Whom:	<input type="text" value="Katie Bell"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text" value="add Soluble Chloride to the list of parameters for all H-18NW"/>		

18. Additional remarks:
 Improper error correction(s) made by client.
 Ba: TT Ba or 6010 Ba?> response: 6010 Ba, as per Jason Sills

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
-----------	---------	-----------	-------------	---------	-----------	-----------



Chain of Custody

Laboratory Number: **21120186**

Client Information: **Billing Information:** **PO Number:** **Project Name/Number:** **Page 1 of 2**

Icon Environmental **SPME**

Jasen Gills **Quote Number:**

2049 Commercial Dr. **Required QC Level**

Port Allen, LA 70767 **Ext:**

225.344.8498 **Bill Monthly**

225.344.4654 **Yes**

j.gills@iconenv.com **No**

Matrix Code

DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 SOL = Solid
 O = Oil
 SO = Soil
 F = Food
 SW = Swab
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC	Turn Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information		Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type Quantity	Pres. HCl, HNO ₃ , H ₂ SO ₄ NaOH, Na ₂ S ₂ O ₃	Requested Tests				Comments
			Date					ESD	Sdable CI-	Berium	CCT 12/6/21	
			Date	Time								
H-18R	0-4'	12.3.21	1055	G	60	P						
H-18R	0-1'	12.3.21	1105									
H-18R	1-2'	12.3.21	1110									
H-18R	2-3'	12.3.21	1115									
H-18R	18-20'	12.3.21	1040									
H-18R	24-28'	12.3.21	1035									
H-18NW	0-2'	12.3.21	1215									
H-18NW	4-6'	12.3.21	1220									
H-18NW	8-10'	12.3.21	1225									

Relinquished by: **Date/Time:** **Received by:** **Date/Time:** **Field Notes:**

1 *KathC* 12/31/1005 *Thilo* 12/31/1005

2

3

Received at lab on ice? Yes No Temp: _____

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.

8800 North US 31
 Columbus, IN 47201 USA
 P 812-375-0531
 F 812-375-0731

328 Ley Road, Suite 100
 Fort Wayne, IN 46825 USA
 P 260-471-7000
 F 260-471-7777

989 Executive Dr
 Warsaw, IN 46580 USA
 P 574-267-3305
 F 574-269-6969

3371 Cleveland Road, Suite 100A
 South Bend, IN 46628 USA
 P 574-277-0707
 F 574-273-5699

2417 W. Pinhook Rd
 Lafayette, LA 70508 USA
 P 337-235-0483
 F 337-233-6540



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
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January 10, 2022

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II-9403-010-0100

Order No.: 21120329

Dear Greg Miller:

Element Materials Technology Lafayette received 19 sample(s) on 12/7/2021 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 that reads 'Cristina Thibeaux'.

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



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2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
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Case Narrative

WO#: 21120329
Date: 1/10/2022

CLIENT: ICON Environmental Services

Project: Henning II-9403-010-0100

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 11/29/2021 12:55:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-001 **Matrix:** SOLID
Client Sample ID MW-7 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.34	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	8.70	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	8.88	0.10			1	1/6/2022
Soluble Calcium	1.79	0.02		meq/L	1	1/6/2022
Soluble Magnesium	1.29	0.05		meq/L	1	1/6/2022
Soluble Sodium	11.0	0.25		meq/L	1	1/6/2022
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	67.5	0.952		mg/Kg-dry	1	1/4/2022 6:49:21 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	15.6	1.00		wt%	1	12/10/2021 10:00:00 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
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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 11/29/2021 1:00:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-002 **Matrix:** SOLID
Client Sample ID MW-7 6-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR)					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.31	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR)					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	7.85	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR)					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.29	0.10			1	1/6/2022
Soluble Calcium	1.66	0.02		meq/L	1	1/6/2022
Soluble Magnesium	1.26	0.05		meq/L	1	1/6/2022
Soluble Sodium	10.0	0.25		meq/L	1	1/6/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.2	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 11/29/2021 1:05:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-003 **Matrix:** SOLID
Client Sample ID MW-7 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR)						Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	
Electrical Conductivity	1.28	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR)						Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	
Exchangeable Sodium %	8.43	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR)						Analyst: STS
SODIUM ADSORPTION RATIO					LDNR 29-B	
Sodium Adsorption Ratio	7.20	0.10			1	1/6/2022
Soluble Calcium	1.89	0.02		meq/L	1	1/6/2022
Soluble Magnesium	1.38	0.05		meq/L	1	1/6/2022
Soluble Sodium	9.20	0.25		meq/L	1	1/6/2022
PERCENT MOISTURE						Analyst: BXB
PERCENT MOISTURE					LDNR 29-B	
Percent Moisture	20.4	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 11/29/2021 1:10:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-004 **Matrix:** SOLID
Client Sample ID MW-7 12-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR)					LDNR 29-B	Analyst: JMI
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	1.83	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR)					LDNR 29-B	LDNR 29-B Analyst: BXB
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	6.19	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR)					LDNR 29-B	LDNR 29-B Analyst: STS
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.90	0.10			1	1/6/2022
Soluble Calcium	3.96	0.02		meq/L	1	1/6/2022
Soluble Magnesium	2.86	0.05		meq/L	1	1/6/2022
Soluble Sodium	10.9	0.25		meq/L	1	1/6/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	19.5	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 11/29/2021 2:25:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-005 **Matrix:** SOLID
Client Sample ID MW-7 16-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	2.63	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	721	17.5		mg/Kg-dry	50	12/29/2021 11:51:38 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	21.5	1.00		wt%	1	12/10/2021 10:00:00 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
	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 11/29/2021 2:20:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-006 **Matrix:** SOLID
Client Sample ID MW-7 32-34

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.15	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	98.7	4.24		mg/Kg-dry	20	12/29/2021 12:05:26 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.7	1.00		wt%	1	12/10/2021 10:00:00 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
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 11/29/2021 2:15:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-007 **Matrix:** SOLID
Client Sample ID MW-7 38-40

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.13	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	114	5.40		mg/Kg-dry	20	12/29/2021 12:19:14 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	19.9	1.00		wt%	1	12/10/2021 10:00:00 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
	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/1/2021 9:45:00 AM
Project: Henning II-9403-010-0100
Lab ID: 21120329-008 **Matrix:** SOLID
Client Sample ID MW-1 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.69	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	4.80	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	7.51	0.10			1	1/6/2022
Soluble Calcium	1.38	0.02		meq/L	1	1/6/2022
Soluble Magnesium	0.56	0.05		meq/L	1	1/6/2022
Soluble Sodium	7.40	0.25		meq/L	1	1/6/2022
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	945	0.924		mg/Kg-dry	1	1/4/2022 6:56:19 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	19.6	1.00		wt%	1	12/10/2021 10:00:00 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
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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/1/2021 9:50:00 AM
Project: Henning II-9403-010-0100
Lab ID: 21120329-009 **Matrix:** SOLID
Client Sample ID MW-1 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.01	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	8.20	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	3.85	0.10			1	1/6/2022
Soluble Calcium	6.45	0.02		meq/L	1	1/6/2022
Soluble Magnesium	1.91	0.05		meq/L	1	1/6/2022
Soluble Sodium	7.88	0.25		meq/L	1	1/6/2022
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	239	0.929		mg/Kg-dry	1	1/4/2022 6:58:40 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.0	1.00		wt%	1	12/10/2021 10:00:00 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
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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/1/2021 3:00:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-010 **Matrix:** SOLID
Client Sample ID MW-1 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.75	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.0	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/1/2021 3:05:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-011 **Matrix:** SOLID
Client Sample ID MW-1 20-22

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.49	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC				SW9056A		Analyst: SGP
Chloride	41.3	2.31		mg/Kg-dry	10	12/29/2021 12:33:02 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.1	1.00		wt%	1	12/10/2021 10:00:00 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
	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/1/2021 2:55:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-012 **Matrix:** SOLID
Client Sample ID MW-1 48-50

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.52	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	31.7	2.33		mg/Kg-dry	10	12/29/2021 12:46:49 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.1	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/1/2021 2:50:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-013 **Matrix:** SOLID
Client Sample ID MW-1 58-60

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.54	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	155	17.6		mg/Kg-dry	50	12/30/2021 12:57:27 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	32.0	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/2/2021 1:50:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-014 **Matrix:** SOLID
Client Sample ID MW-9 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.81	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	8.28	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	7.38	0.10			1	1/6/2022
Soluble Calcium	1.00	0.02		meq/L	1	1/6/2022
Soluble Magnesium	0.59	0.05		meq/L	1	1/6/2022
Soluble Sodium	6.57	0.25		meq/L	1	1/6/2022
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	136	0.970		mg/Kg-dry	1	1/4/2022 7:00:58 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	14.2	1.00		wt%	1	12/10/2021 10:00:00 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
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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/2/2021 1:55:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-015 **Matrix:** SOLID
Client Sample ID MW-9 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR)						
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.94	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
29B SALTS (EC, ESP, SAR)						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	11.6	0.10		%	1	1/6/2022
29B SALTS (EC, ESP, SAR)						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	8.58	0.10			1	1/6/2022
Soluble Calcium	0.94	0.02		meq/L	1	1/6/2022
Soluble Magnesium	0.57	0.05		meq/L	1	1/6/2022
Soluble Sodium	7.48	0.25		meq/L	1	1/6/2022
METALS IN SOIL OR SLUDGE BY ICP						
Barium	233	0.954		mg/Kg-dry	1	1/4/2022 7:03:17 PM
PERCENT MOISTURE						
Percent Moisture	14.3	1.00		wt%	1	12/10/2021 10:00:00 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
	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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 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/2/2021 2:00:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-016 **Matrix:** SOLID
Client Sample ID MW-9 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.53	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.6	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/2/2021 2:05:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-017 **Matrix:** SOLID
Client Sample ID MW-9 12-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.97	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.3	1.00		wt%	1	12/10/2021 10:00:00 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
	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#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/2/2021 2:10:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-018 **Matrix:** SOLID
Client Sample ID MW-9 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.71	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.8	1.00		wt%	1	12/10/2021 10:00:00 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
	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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120329

Date Reported: 1/10/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/2/2021 2:15:00 PM
Project: Henning II-9403-010-0100
Lab ID: 21120329-019 **Matrix:** SOLID
Client Sample ID MW-9 20-22

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.75	0.10		mmhos/cm	1	12/29/2021 10:05:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.8	1.00		wt%	1	12/10/2021 10:00:00 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
	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: 42125

Sample ID	MB-42125	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/28/2021	RunNo:	105620			
Client ID:	PBS	Batch ID:	42125	TestNo:	SW6010B	SW3050B		Analysis Date:	1/4/2022	SeqNo:	2587624			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		< 1.00		1.00										

Sample ID	LCS-42125	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/28/2021	RunNo:	105620			
Client ID:	LCSS	Batch ID:	42125	TestNo:	SW6010B	SW3050B		Analysis Date:	1/4/2022	SeqNo:	2587625			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		48.4		1.00	50.00	0		96.7	80	120				

Sample ID	LCSD-42125	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/28/2021	RunNo:	105620			
Client ID:	LCSS02	Batch ID:	42125	TestNo:	SW6010B	SW3050B		Analysis Date:	1/4/2022	SeqNo:	2587626			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		48.6		1.00	50.00	0		97.2	80	120	48.36	0.481	20	

Sample ID	21120329-001AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/28/2021	RunNo:	105620			
Client ID:	MW-7 4-6	Batch ID:	42125	TestNo:	SW6010B	SW3050B		Analysis Date:	1/4/2022	SeqNo:	2587628			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		107		0.954	47.69	67.53		82.8	75	125				

Qualifiers:

- | | | | | | |
|-----|-------------------------------------|----|--|---|--|
| E | Value above quantitation range | 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 sp |



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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services

Project: Henning II-9403-010-0100

BatchID: 42125

Sample ID	21120329-001AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	12/28/2021	RunNo:	105620		
Client ID:	MW-7 4-6	Batch ID:	42125	TestNo:	SW6010B	SW3050B		Analysis Date:	1/4/2022	SeqNo:	2587629		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		116		1.00	50.00	67.53	97.4	75	125	107.0	8.27	20	

Qualifiers:

- | | | | | | |
|-----|-------------------------------------|----|--|---|--|
| E | Value above quantitation range | 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 sp |



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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: 42159

Sample ID	21120329-001adup	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	12/30/2021	RunNo:	105722		
Client ID:	MW-7 4-6	Batch ID:	42159	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/6/2022	SeqNo:	2591523		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		8.90		0.10						8.88	0.16	20	
Soluble Calcium		1.79		0.02						1.79	0.21	20	
Soluble Magnesium		1.28		0.05						1.29	0.36	20	
Soluble Sodium		11.0		0.25						11.03	0.02	20	

Sample ID	21120352-001adup	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	12/30/2021	RunNo:	105722		
Client ID:	ZZZZZZ	Batch ID:	42159	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/6/2022	SeqNo:	2591549		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		4.72		0.10						4.77	1.07	20	
Soluble Calcium		1.50		0.02						1.49	0.50	20	
Soluble Magnesium		1.14		0.05						1.14	0.20	20	
Soluble Sodium		5.41		0.25						5.46	0.89	20	

Qualifiers:

E	Value above quantitation range	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 sp



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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: 42195

Sample ID	21120329-001adup	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	1/5/2022	RunNo:	105737		
Client ID:	MW-7 4-6	Batch ID:	42195	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/6/2022	SeqNo:	2591973		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		8.56		0.10						8.70	1.62	20	

Qualifiers:

- | | | | | | |
|-----|-------------------------------------|----|--|---|--|
| E | Value above quantitation range | 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 sp |



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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: R105165

Sample ID	21120329-001adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105165
Client ID:	MW-7 4-6	Batch ID:	R105165	TestNo:	LDNR 29-B			Analysis Date:	12/10/2021	SeqNo:	2572517
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture		15.6		1.00						15.60	0 20

Sample ID	21120352-001adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105165
Client ID:	ZZZZZZ	Batch ID:	R105165	TestNo:	LDNR 29-B			Analysis Date:	12/10/2021	SeqNo:	2572538
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture		11.4		1.00						11.40	0 20

Qualifiers:

- | | | | | | |
|-----|-------------------------------------|----|--|---|--|
| E | Value above quantitation range | 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 sp |



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: R105476

Sample ID	MB-R105473	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105476
Client ID:	PBS	Batch ID:	R105476	TestNo:	LDNR 29-B			Analysis Date:	12/29/2021	SeqNo:	2583919
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R105473	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105476
Client ID:	ZZZZZ	Batch ID:	R105476	TestNo:	LDNR 29-B			Analysis Date:	12/29/2021	SeqNo:	2583920
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.47		0.10	0.50	0	93.3	90	110		

Sample ID	LCS2-R105473	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105476
Client ID:	ZZZZZ	Batch ID:	R105476	TestNo:	LDNR 29-B			Analysis Date:	12/29/2021	SeqNo:	2583921
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		51.2		0.10	53.00	0	96.6	90	110		

Sample ID	21120329-001ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105476
Client ID:	MW-7 4-6	Batch ID:	R105476	TestNo:	LDNR 29-B			Analysis Date:	12/29/2021	SeqNo:	2583923
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		1.35		0.10						1.34	0.30 20

Qualifiers:

E	Value above quantitation range	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 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#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: R105517

Sample ID	mblk	SampType: MBLK	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105517
Client ID:	PBS	Batch ID: R105517	TestNo: SW9056A	Analysis Date: 12/29/2021	SeqNo: 2584933	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	< 0.250	0.250				

Sample ID	lcs	SampType: LCS	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105517
Client ID:	LCSS	Batch ID: R105517	TestNo: SW9056A	Analysis Date: 12/29/2021	SeqNo: 2584934	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.2	0.250	10.00	0	102	80 120

Sample ID	lcsd	SampType: LCSD	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105517
Client ID:	LCSS02	Batch ID: R105517	TestNo: SW9056A	Analysis Date: 12/29/2021	SeqNo: 2584935	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.7	0.250	10.00	0	107	80 120 10.17 5.13 15

Sample ID	21120234-076ams	SampType: MS	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 105517
Client ID:	ZZZZZZ	Batch ID: R105517	TestNo: SW9056A	Analysis Date: 12/29/2021	SeqNo: 2584940	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	195	4.10	82.00	111.8	102	80 120

Qualifiers:

E	Value above quantitation range	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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: R105517

Sample ID	21120234-076amsd	SampType:	MSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105517		
Client ID:	ZZZZZZ	Batch ID:	R105517	TestNo:	SW9056A			Analysis Date:	12/29/2021	SeqNo:	2584941		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		195		4.10	82.00	111.8	102	80	120	195.4	0.0299	15	

Qualifiers:

- | | | | | | |
|-----|-------------------------------------|----|--|---|--|
| E | Value above quantitation range | 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 sp |



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: R105550

Sample ID	MBLK	SampType:	MBLK	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105550
Client ID:	PBS	Batch ID:	R105550	TestNo:	SW9056A			Analysis Date:	12/30/2021	SeqNo:	2585820
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Chloride		< 0.250		0.250							

Sample ID	LCS	SampType:	LCS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105550
Client ID:	LCSS	Batch ID:	R105550	TestNo:	SW9056A			Analysis Date:	12/30/2021	SeqNo:	2585821
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Chloride		10.2		0.250	10.00	0	102	80	120		

Sample ID	LCSD	SampType:	LCSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105550
Client ID:	LCSS02	Batch ID:	R105550	TestNo:	SW9056A			Analysis Date:	12/30/2021	SeqNo:	2585822
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Chloride		10.7		0.250	10.00	0	107	80	120	10.23	4.71 15

Sample ID	21121295-002CMS	SampType:	MS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105550
Client ID:	ZZZZZZ	Batch ID:	R105550	TestNo:	SW9056A			Analysis Date:	12/30/2021	SeqNo:	2585826
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Chloride		62.5		0.250	5.000	58.05	88.7	80	120		E

Qualifiers:

E	Value above quantitation range	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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120329
 10-Jan-22

Client: ICON Environmental Services
Project: Henning II-9403-010-0100

BatchID: R105550

Sample ID	21121295-002CMSD	SampType:	MSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	105550											
Client ID:	ZZZZZZ	Batch ID:	R105550	TestNo:	SW9056A			Analysis Date:	12/30/2021	SeqNo:	2585827											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Chloride		61.4		0.250		5.000		58.05		66.4		80		120		62.48		1.80		15		ES

NOTES:
 S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control for the analyte as indicated by the LCS/LCSD.

Qualifiers:	E	Value above quantitation range	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 sp



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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **21120329** RcptNo: **1**

Logged by:	Tammy Thibodeaux	12/7/2021 3:15:00 PM	
Completed By:	Tammy Thibodeaux	12/8/2021 7:59:22 AM	
Reviewed By:	Cristina Thibeaux	12/14/2021 2:21:00 PM	

Chain of Custody

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

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
-----------	---------	-----------	-------------	---------	-----------	-----------



Chain of Custody

Laboratory Number: 21120329

Client Information: **Iron EAV**
 Name: **I Sills**
 Address: **2049 Commercial Dr**
 City, State Zip: **Port Allen LA 70767**
 Phone Number: **225 341 8440**
 Fax Number: **Ext**
 E-mail Address:

Billing Information: **PO Number:**
 Quote Number: **9403-00-000**
 Required QC Level:
 Bill Monthly Yes No

Project Name/Number: **Henning II**
 Sampler's Signature: **Chris I**
 Shipping Method: **UPS / FedEx / NOW**
DHL / Element / Hand / Mail

Page 1 of 3
 Matrix Code:
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge SOL = Solid
 O = Oil SO = Soil
 F = Food SW = Swab
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Sample ID/Description	Which Regulations Apply:			Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type Quantity	Pres. HCl, HNO ₃ , H ₂ SO ₄ NaOH, Na ₂ SO ₄	Requested Tests	Comments
	Collection Information		Matrix						
	Date	Time							
MW-7	4-6	11-29-21	1255	G	SAR	1			
MW-7	6-8		1300						
MW-7	8-10		1305						
MW-7	12-14		1310						
MW-7	16-18		1425						
MW-7	32-34		1420						
MW-7	38-40		1415						
MW-1	0-2	12-21	945						
MW-1	4-6		950						

Relinquished by: **Chris I** Date/Time: **12-7-21 1235** Received by: **Mark Brown** Date/Time: **12-7-21 1235** Field Notes: **RR**

Relinquished by: **Mark Brown** Date/Time: **12-7-21 1515** Received by: **Chris I** Date/Time: **12-7-21 1515** Field Notes: **RR**

Received at lab on ice? Yes No Temp:

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.

8800 North US 31
 Columbus, IN 47201 USA
 P 812-375-0531
 F 812-375-0731

328 Ley Road, Suite 100
 Fort Wayne, IN 46825 USA
 P 260-471-7000
 F 260-471-7777

909 Executive Dr
 Warsaw, IN 46580 USA
 P 874-267-3305
 F 874-269-6369

3371 Cleveland Road, Suite 100A
 South Bend, IN 46628 USA
 P 574-277-0707
 F 574-273-5699

2417 W. Pinhook Rd
 Lafayette, LA 70508 USA
 P 337-233-0483
 F 337-233-6540



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

January 12, 2022

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Hennings II/9403-010-0100

Order No.: 21120919

Dear Greg Miller:

Element Materials Technology Lafayette received 10 sample(s) on 12/17/2021 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 that reads '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#: 21120919
Date: 1/12/2022

CLIENT: ICON Environmental Services

Project: Hennings II/9403-010-0100

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
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Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/15/2021 8:00:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-001 **Matrix:** AQUEOUS
Client Sample ID M-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.130	0.130		mg/L	1	1/5/2022 7:08:00 AM
TPH (Oil Range)	< 0.120	0.120		mg/L	1	1/5/2022 7:08:00 AM
Surr: 4-Terphenyl-d14	78.2	51.4 - 146		%Rec	1	1/5/2022 7:08:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 1:18:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	121	70 - 130		%Rec	1	12/21/2021 1:18:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 1:18:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 1:18:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 1:18:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 1:18:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 1:18:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 1:18:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	110	70 - 130		%Rec	1	12/21/2021 1:18:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:22:02 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	1,610	25.0		mg/L	100	12/27/2021 4:14:02 PM
Sulfate	172	25.0		mg/L	100	12/27/2021 4:14:02 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.137	0.0100		mg/L	1	12/27/2021 9:29:59 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:29:59 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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/15/2021 8:00:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-001 **Matrix:** AQUEOUS
Client Sample ID M-11

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	346	0.500		mg/L	1	12/27/2021 9:29:59 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:29:59 PM
Iron	2.05	0.0100		mg/L	1	12/27/2021 9:29:59 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:29:59 PM
Magnesium	144	0.500		mg/L	1	12/27/2021 9:29:59 PM
Manganese	1.76	0.0100		mg/L	1	12/27/2021 9:29:59 PM
Potassium	5.95	5.00		mg/L	1	12/27/2021 9:29:59 PM
Sodium	478	5.00		mg/L	1	12/27/2021 9:29:59 PM
Strontium	1.64	0.0100		mg/L	1	12/27/2021 9:29:59 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/27/2021 9:29:59 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 9:40:27 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	325	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
Alkalinity, Total (As CaCO3)	325	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	1,900	100		mg/L	10	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	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/15/2021 1:45:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-002 **Matrix:** AQUEOUS
Client Sample ID MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.131	0.131		mg/L	1	1/5/2022 7:37:00 AM
TPH (Oil Range)	< 0.121	0.121		mg/L	1	1/5/2022 7:37:00 AM
Surr: 4-Terphenyl-d14	71.4	51.4 - 146		%Rec	1	1/5/2022 7:37:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 1:45:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	121	70 - 130		%Rec	1	12/21/2021 1:45:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 1:45:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 1:45:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 1:45:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 1:45:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 1:45:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 1:45:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	111	70 - 130		%Rec	1	12/21/2021 1:45:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:40:07 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	62.4	12.5		mg/L	50	12/27/2021 4:27:50 PM
Sulfate	571	12.5		mg/L	50	12/27/2021 4:27:50 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0200	0.0100		mg/L	1	12/27/2021 9:32:20 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:32:20 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
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/15/2021 1:45:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-002 **Matrix:** AQUEOUS
Client Sample ID MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	143	0.500		mg/L	1	12/27/2021 9:32:20 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:32:20 PM
Iron	0.892	0.0100		mg/L	1	12/27/2021 9:32:20 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:32:20 PM
Magnesium	67.0	0.500		mg/L	1	12/27/2021 9:32:20 PM
Manganese	0.828	0.0100		mg/L	1	12/27/2021 9:32:20 PM
Potassium	< 5.00	5.00		mg/L	1	12/27/2021 9:32:20 PM
Sodium	179	5.00		mg/L	1	12/27/2021 9:32:20 PM
Strontium	0.792	0.0100		mg/L	1	12/27/2021 9:32:20 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/27/2021 9:32:20 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 9:43:16 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	450	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
Alkalinity, Total (As CaCO3)	450	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	570	50.0		mg/L	5	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	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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/15/2021 4:30:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-003 **Matrix:** AQUEOUS
Client Sample ID MW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.133	0.133		mg/L	1	1/5/2022 8:07:00 AM
TPH (Oil Range)	< 0.123	0.123		mg/L	1	1/5/2022 8:07:00 AM
Surr: 4-Terphenyl-d14	109	51.4 - 146		%Rec	1	1/5/2022 8:07:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 2:12:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	120	70 - 130		%Rec	1	12/21/2021 2:12:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 2:12:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 2:12:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 2:12:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 2:12:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 2:12:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 2:12:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	109	70 - 130		%Rec	1	12/21/2021 2:12:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:42:26 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	239	12.5		mg/L	50	12/27/2021 4:41:38 PM
Sulfate	513	12.5		mg/L	50	12/27/2021 4:41:38 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0352	0.0100		mg/L	1	12/27/2021 9:34:41 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:34:41 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

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/15/2021 4:30:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-003 **Matrix:** AQUEOUS
Client Sample ID MW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER				SW6010B	Analyst: STS	
METALS IN WATER BY ICP, TOTALS						
Calcium	153	0.500		mg/L	1	12/27/2021 9:34:41 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:34:41 PM
Iron	0.628	0.0100		mg/L	1	12/27/2021 9:34:41 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:34:41 PM
Magnesium	68.7	0.500		mg/L	1	12/27/2021 9:34:41 PM
Manganese	1.43	0.0100		mg/L	1	12/27/2021 9:34:41 PM
Potassium	< 5.00	5.00		mg/L	1	12/27/2021 9:34:41 PM
Sodium	223	5.00		mg/L	1	12/27/2021 9:34:41 PM
Strontium	0.812	0.0100		mg/L	1	12/27/2021 9:34:41 PM
Zinc	0.0133	0.0100		mg/L	1	12/27/2021 9:34:41 PM
METALS IN GROUND WATER				SW6020A	Analyst: MRB	
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 9:46:04 AM
ALKALINITY; TOTAL, CARB, BICARB				SM2320 B	Analyst: MAB	
Alkalinity, Bicarbonate (As CaCO3)	340	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
Alkalinity, Total (As CaCO3)	340	20.0		mgCaCO3/L	1	12/28/2021 12:27:00 PM
TOTAL DISSOLVED SOLIDS				SM2540C	Analyst: HXW	
Total Dissolved Solids (Residue, Filterable)	1,540	50.0		mg/L	5	12/22/2021 11:36:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 7:50:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-004 **Matrix:** AQUEOUS
Client Sample ID MW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015						
TPH DRO/ORO IN WATER BY SW8015						
TPH (Diesel Range)	< 0.133	0.133		mg/L	1	1/6/2022 2:35:00 AM
TPH (Oil Range)	< 0.123	0.123		mg/L	1	1/6/2022 2:35:00 AM
Surr: 4-Terphenyl-d14	99.4	51.4 - 146		%Rec	1	1/6/2022 2:35:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015						
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 2:39:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	124	70 - 130		%Rec	1	12/21/2021 2:39:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015						
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 2:39:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 2:39:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 2:39:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 2:39:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 2:39:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 2:39:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	110	70 - 130		%Rec	1	12/21/2021 2:39:00 PM
METALS IN GROUND WATER						
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:44:44 PM
INORGANIC ANIONS IN WATER BY IC						
Chloride	2,580	50.0		mg/L	200	12/27/2021 6:32:01 PM
Sulfate	1,670	50.0		mg/L	200	12/27/2021 6:32:01 PM
METALS IN GROUND WATER						
METALS IN WATER BY ICP, TOTALS						
Barium	0.0479	0.0100		mg/L	1	12/27/2021 9:37:01 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:37:01 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		



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 7:50:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-004 **Matrix:** AQUEOUS
Client Sample ID MW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	679	0.500		mg/L	1	12/27/2021 9:37:01 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:37:01 PM
Iron	0.0540	0.0100		mg/L	1	12/27/2021 9:37:01 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:37:01 PM
Magnesium	307	0.500		mg/L	1	12/27/2021 9:37:01 PM
Manganese	1.54	0.0100		mg/L	1	12/27/2021 9:37:01 PM
Potassium	8.48	5.00		mg/L	1	12/27/2021 9:37:01 PM
Sodium	962	5.00		mg/L	1	12/27/2021 9:37:01 PM
Strontium	3.41	0.0100		mg/L	1	12/27/2021 9:37:01 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/27/2021 9:37:01 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 9:48:52 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	350	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Total (As CaCO3)	350	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	6,720	250		mg/L	25	12/22/2021 11:36:00 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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 Lafayette, LA 70508-3344
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 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 8:20:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-005 **Matrix:** AQUEOUS
Client Sample ID MW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.133	0.133		mg/L	1	1/6/2022 3:05:00 AM
TPH (Oil Range)	< 0.123	0.123		mg/L	1	1/6/2022 3:05:00 AM
Surr: 4-Terphenyl-d14	87.9	51.4 - 146		%Rec	1	1/6/2022 3:05:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 3:06:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	118	70 - 130		%Rec	1	12/21/2021 3:06:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 3:06:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 3:06:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 3:06:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 3:06:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 3:06:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 3:06:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	108	70 - 130		%Rec	1	12/21/2021 3:06:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:47:02 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	387	12.5		mg/L	50	12/27/2021 6:45:49 PM
Sulfate	441	12.5		mg/L	50	12/27/2021 6:45:49 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0263	0.0100		mg/L	1	12/27/2021 9:39:21 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:39:21 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
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 8:20:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-005 **Matrix:** AQUEOUS
Client Sample ID MW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	134	0.500		mg/L	1	12/27/2021 9:39:21 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:39:21 PM
Iron	0.199	0.0100		mg/L	1	12/27/2021 9:39:21 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:39:21 PM
Magnesium	59.1	0.500		mg/L	1	12/27/2021 9:39:21 PM
Manganese	1.00	0.0100		mg/L	1	12/27/2021 9:39:21 PM
Potassium	< 5.00	5.00		mg/L	1	12/27/2021 9:39:21 PM
Sodium	325	5.00		mg/L	1	12/27/2021 9:39:21 PM
Strontium	0.689	0.0100		mg/L	1	12/27/2021 9:39:21 PM
Zinc	0.0115	0.0100		mg/L	1	12/27/2021 9:39:21 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 9:51:40 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	375	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Total (As CaCO3)	375	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	835	50.0		mg/L	5	12/22/2021 11:36:00 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
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Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 8:40:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-006 **Matrix:** AQUEOUS
Client Sample ID MW-9D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.216	0.132		mg/L	1	1/6/2022 3:35:00 AM
TPH (Oil Range)	0.451	0.122		mg/L	1	1/6/2022 3:35:00 AM
Surr: 4-Terphenyl-d14	76.0	51.4 - 146		%Rec	1	1/6/2022 3:35:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 3:33:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	124	70 - 130		%Rec	1	12/21/2021 3:33:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 3:33:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 3:33:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 3:33:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 3:33:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 3:33:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 3:33:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	112	70 - 130		%Rec	1	12/21/2021 3:33:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:49:20 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	230	12.5		mg/L	50	12/27/2021 6:59:37 PM
Sulfate	698	12.5		mg/L	50	12/27/2021 6:59:37 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0648	0.0100		mg/L	1	12/27/2021 9:41:41 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:41:41 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		



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

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 8:40:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-006 **Matrix:** AQUEOUS
Client Sample ID MW-9D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	159	0.500		mg/L	1	12/27/2021 9:41:41 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:41:41 PM
Iron	4.06	0.0100		mg/L	1	12/27/2021 9:41:41 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:41:41 PM
Magnesium	81.7	0.500		mg/L	1	12/27/2021 9:41:41 PM
Manganese	1.68	0.0100		mg/L	1	12/27/2021 9:41:41 PM
Potassium	5.56	5.00		mg/L	1	12/27/2021 9:41:41 PM
Sodium	286	5.00		mg/L	1	12/27/2021 9:41:41 PM
Strontium	0.910	0.0100		mg/L	1	12/27/2021 9:41:41 PM
Zinc	0.0195	0.0100		mg/L	1	12/27/2021 9:41:41 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	0.00329	0.00250		mg/L	10	12/28/2021 9:54:28 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	398	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Total (As CaCO3)	398	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	370	50.0		mg/L	5	12/22/2021 11:36:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/17/2021 8:30:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-007 **Matrix:** AQUEOUS
Client Sample ID MW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.133	0.133		mg/L	1	1/6/2022 4:05:00 AM
TPH (Oil Range)	< 0.136	0.136		mg/L	1	1/6/2022 4:05:00 AM
Surr: 4-Terphenyl-d14	112	51.4 - 146		%Rec	1	1/6/2022 4:05:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 4:01:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	121	70 - 130		%Rec	1	12/21/2021 4:01:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:01:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:01:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 4:01:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:01:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 4:01:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 4:01:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	109	70 - 130		%Rec	1	12/21/2021 4:01:00 PM
MERCURY IN GROUND WATER, DISSOLVED					SW7470A	Analyst: KML
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 4:18:47 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	1,910	50.0		mg/L	200	12/27/2021 7:13:26 PM
Sulfate	575	50.0		mg/L	200	12/27/2021 7:13:26 PM
METALS IN WATER BY ICP, DISSOLVED					SW6010B	Analyst: STS
Barium	0.0504	0.0100		mg/L	1	12/27/2021 10:00:20 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 10:00:20 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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/17/2021 8:30:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-007 **Matrix:** AQUEOUS
Client Sample ID MW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, DISSOLVED			SW6010B		Analyst: STS	
Calcium	543	0.500		mg/L	1	12/27/2021 10:00:20 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 10:00:20 PM
Iron	0.131	0.0100		mg/L	1	12/27/2021 10:00:20 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 10:00:20 PM
Magnesium	180	0.500		mg/L	1	12/27/2021 10:00:20 PM
Manganese	3.75	0.0100		mg/L	1	12/27/2021 10:00:20 PM
Potassium	10.3	5.00		mg/L	1	12/27/2021 10:00:20 PM
Sodium	556	10.0		mg/L	1	12/27/2021 10:00:20 PM
Strontium	2.47	0.0100		mg/L	1	12/27/2021 10:00:20 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/27/2021 10:00:20 PM
METALS IN WATER BY ICP-MS, DISSOLVED			SW6020A		Analyst: MRB	
Arsenic	0.00322	0.000250		mg/L	1	12/21/2021 10:52:42 AM
ALKALINITY; TOTAL, CARB, BICARB			SM2320 B		Analyst: MAB	
Alkalinity, Bicarbonate (As CaCO3)	285	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Total (As CaCO3)	285	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
TOTAL DISSOLVED SOLIDS			SM2540C		Analyst: HXW	
Total Dissolved Solids (Residue, Filterable)	3,290	100		mg/L	10	12/22/2021 11:36:00 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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 11:35:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-008 **Matrix:** AQUEOUS
Client Sample ID SW-BO-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	0.182	0.135		mg/L	1	1/6/2022 4:35:00 AM
TPH (Oil Range)	0.130	0.124		mg/L	1	1/6/2022 4:35:00 AM
Surr: 4-Terphenyl-d14	109	51.4 - 146		%Rec	1	1/6/2022 4:35:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 4:28:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	122	70 - 130		%Rec	1	12/21/2021 4:28:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:28:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:28:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 4:28:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:28:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 4:28:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 4:28:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	111	70 - 130		%Rec	1	12/21/2021 4:28:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:51:38 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	23.3	1.25		mg/L	5	12/27/2021 7:27:14 PM
Sulfate	< 1.25	1.25		mg/L	5	12/27/2021 7:27:14 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.887	0.0100		mg/L	1	12/27/2021 9:48:39 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:48:39 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 11:35:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-008 **Matrix:** AQUEOUS
Client Sample ID SW-BO-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	11.9	0.500		mg/L	1	12/27/2021 9:48:39 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:48:39 PM
Iron	7.66	0.0100		mg/L	1	12/27/2021 9:48:39 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:48:39 PM
Magnesium	1.35	0.500		mg/L	1	12/27/2021 9:48:39 PM
Manganese	0.744	0.0100		mg/L	1	12/27/2021 9:48:39 PM
Potassium	< 5.00	5.00		mg/L	1	12/27/2021 9:48:39 PM
Sodium	21.3	5.00		mg/L	1	12/27/2021 9:48:39 PM
Strontium	0.108	0.0100		mg/L	1	12/27/2021 9:48:39 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/27/2021 9:48:39 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 9:57:15 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	62.5	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Total (As CaCO3)	62.5	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	130	50.0		mg/L	5	12/22/2021 11:36:00 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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 12:30:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-009 **Matrix:** AQUEOUS
Client Sample ID SW-BO-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.135	0.135		mg/L	1	1/6/2022 5:04:00 AM
TPH (Oil Range)	< 0.125	0.125		mg/L	1	1/6/2022 5:04:00 AM
Surr: 4-Terphenyl-d14	116	51.4 - 146		%Rec	1	1/6/2022 5:04:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 4:55:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	117	70 - 130		%Rec	1	12/21/2021 4:55:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:55:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:55:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 4:55:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 4:55:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 4:55:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 4:55:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	105	70 - 130		%Rec	1	12/21/2021 4:55:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:53:56 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	23.0	1.25		mg/L	5	12/27/2021 7:41:02 PM
Sulfate	< 1.25	1.25		mg/L	5	12/27/2021 7:41:02 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.742	0.0100		mg/L	1	12/27/2021 9:50:59 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/27/2021 9:50:59 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/16/2021 12:30:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21120919-009 **Matrix:** AQUEOUS
Client Sample ID SW-BO-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	11.8	0.500		mg/L	1	12/27/2021 9:50:59 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/27/2021 9:50:59 PM
Iron	0.601	0.0100		mg/L	1	12/27/2021 9:50:59 PM
Lead	< 0.0100	0.0100		mg/L	1	12/27/2021 9:50:59 PM
Magnesium	1.36	0.500		mg/L	1	12/27/2021 9:50:59 PM
Manganese	0.109	0.0100		mg/L	1	12/27/2021 9:50:59 PM
Potassium	< 5.00	5.00		mg/L	1	12/27/2021 9:50:59 PM
Sodium	23.2	5.00		mg/L	1	12/27/2021 9:50:59 PM
Strontium	0.106	0.0100		mg/L	1	12/27/2021 9:50:59 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/27/2021 9:50:59 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 10:00:03 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	65.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
Alkalinity, Total (As CaCO3)	65.0	20.0		mgCaCO3/L	1	12/30/2021 2:14:00 PM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	160	50.0		mg/L	5	12/22/2021 11:36:00 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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21120919

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/17/2021
Project: Hennings II/9403-010-0100
Lab ID: 21120919-010 **Matrix:** AQUEOUS
Client Sample ID Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
BTEX/TPH-G IN WATER BY SW8021/8015				SW8015B	Analyst: CRM	
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/21/2021 5:22:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	118	70 - 130		%Rec	1	12/21/2021 5:22:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015				SW8021B	Analyst: CRM	
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/21/2021 5:22:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/21/2021 5:22:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/21/2021 5:22:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/21/2021 5:22:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/21/2021 5:22:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/21/2021 5:22:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	107	70 - 130		%Rec	1	12/21/2021 5:22:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42061

Sample ID	21120845-013BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105450			
Client ID:	ZZZZZZ	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
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:	ZZZZZZ	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
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
 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

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									
Cadmium	< 0.00500	0.00500									
Calcium	< 0.500	0.500									
Chromium	< 0.0100	0.0100									
Iron	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Magnesium	< 0.500	0.500									
Manganese	< 0.0100	0.0100									
Potassium	< 5.00	5.00									
Sodium	< 10.0	10.0									
Strontium	< 0.0100	0.0100									
Zinc	< 0.0100	0.0100									

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				
Cadmium	0.468	0.00500	0.5000	0	93.7	80	120				
Calcium	45.7	0.500	50.00	0	91.3	80	120				
Chromium	0.466	0.0100	0.5000	0	93.2	80	120				
Iron	0.468	0.0100	0.5000	0	93.6	80	120				
Lead	0.461	0.0100	0.5000	0	92.2	80	120				
Magnesium	45.6	0.500	50.00	0	91.2	80	120				
Manganese	0.464	0.0100	0.5000	0	92.7	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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42061

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
Potassium	44.9	5.00	50.00	0	89.7	80	120				
Sodium	46.6	10.0	50.00	0	93.2	80	120				
Strontium	0.459	0.0100	0.5000	0	91.8	80	120				
Zinc	0.456	0.0100	0.5000	0	91.2	80	120				

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	
Cadmium	0.458	0.00500	0.5000	0	91.5	80	120	0.4683	2.30	20	
Calcium	45.0	0.500	50.00	0	90.0	80	120	45.67	1.47	20	
Chromium	0.458	0.0100	0.5000	0	91.7	80	120	0.4660	1.68	20	
Iron	0.469	0.0100	0.5000	0	93.8	80	120	0.4682	0.177	20	
Lead	0.458	0.0100	0.5000	0	91.5	80	120	0.4608	0.695	20	
Magnesium	44.9	0.500	50.00	0	89.9	80	120	45.60	1.45	20	
Manganese	0.458	0.0100	0.5000	0	91.6	80	120	0.4636	1.19	20	
Potassium	44.2	5.00	50.00	0	88.5	80	120	44.86	1.40	20	
Sodium	44.8	10.0	50.00	0	89.6	80	120	46.59	3.87	20	
Strontium	0.451	0.0100	0.5000	0	90.3	80	120	0.4588	1.66	20	
Zinc	0.449	0.0100	0.5000	0	89.8	80	120	0.4562	1.65	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42061

Sample ID	21120844-013BMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	ZZZZZZ	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				
Cadmium	0.447	0.00500	0.5000	0	89.4	75	125				
Calcium	58.2	0.500	50.00	20.58	75.3	75	125				
Chromium	0.448	0.0100	0.5000	0	89.7	75	125				
Iron	0.648	0.0100	0.5000	0.2695	75.8	75	125				
Lead	0.436	0.0100	0.5000	0	87.2	75	125				
Magnesium	44.6	0.500	50.00	6.071	77.0	75	125				
Manganese	0.507	0.0100	0.5000	0.08712	84.0	75	125				
Potassium	41.2	5.00	50.00	2.017	78.4	75	125				
Sodium	57.4	10.0	50.00	18.52	77.7	75	125				
Strontium	0.598	0.0100	0.5000	0.1557	88.4	75	125				
Zinc	0.435	0.0100	0.5000	0	86.9	75	125				

Sample ID	21120844-013BMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	ZZZZZZ	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	
Cadmium	0.460	0.00500	0.5000	0	92.1	75	125	0.4469	2.96	20	
Calcium	64.0	0.500	50.00	20.58	86.7	75	125	58.22	9.39	20	
Chromium	0.461	0.0100	0.5000	0	92.3	75	125	0.4485	2.84	20	
Iron	0.669	0.0100	0.5000	0.2695	79.9	75	125	0.6484	3.16	20	
Lead	0.448	0.0100	0.5000	0	89.6	75	125	0.4359	2.75	20	
Magnesium	50.1	0.500	50.00	6.071	88.1	75	125	44.55	11.7	20	
Manganese	0.526	0.0100	0.5000	0.08712	87.8	75	125	0.5071	3.64	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: 42061

Sample ID	21120844-013BMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105418
Client ID:	ZZZZZZ	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
Potassium	46.7	5.00	50.00	2.017	89.3	75	125	41.23	12.4	20	
Sodium	63.5	10.0	50.00	18.52	89.9	75	125	57.38	10.1	20	
Strontium	0.612	0.0100	0.5000	0.1557	91.3	75	125	0.5977	2.40	20	
Zinc	0.449	0.0100	0.5000	0	89.7	75	125	0.4347	3.16	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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42062

Sample ID	MB-42062	SampType:	MBLK	TestCode:	6020A_W	Units:	mg/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
Arsenic		< 0.000250		0.000250										

Sample ID	LCS-42062	SampType:	LCS	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105437			
Client ID:	LCSW	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
Arsenic		0.494		0.00500	0.500	0		98.9	80	120				

Sample ID	LCSD-42062	SampType:	LCSD	TestCode:	6020A_W	Units:	mg/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
Arsenic		0.492		0.00500	0.500	0		98.4	80	120	0.494	0.472	20	

Sample ID	21120844-013BMS	SampType:	MS	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105437			
Client ID:	ZZZZZZ	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
Arsenic		0.493		0.00500	0.500	0.000102		98.7	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42062

Sample ID	21120844-013BMSD	SampType:	MSD	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105437											
Client ID:	ZZZZZZ	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
Arsenic		0.516		0.00500		0.500		0.000102		103		75		125		0.493		4.54		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 sp



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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42066

Sample ID	MB-42066	SampType:	MBLK	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105636					
Client ID:	PBW	Batch ID:	42066	TestNo:	SW8015B		SW3511	Analysis Date:	1/4/2022	SeqNo:	2587968					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) < 0.138 0.138
 TPH (Oil Range) < 0.127 0.127
 Surr: 4-Terphenyl-d14 0.0439 0.06047 72.6 51.4 146

Sample ID	21120818-001DMS	SampType:	MS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105636					
Client ID:	ZZZZZZ	Batch ID:	42066	TestNo:	SW8015B		SW3511	Analysis Date:	1/5/2022	SeqNo:	2591501					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 1.97 0.131 1.731 0.03577 112 70 130
 Surr: 4-Terphenyl-d14 0.0660 0.05770 114 51.4 146

Sample ID	21120818-001DMSD	SampType:	MSD	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105636					
Client ID:	ZZZZZZ	Batch ID:	42066	TestNo:	SW8015B		SW3511	Analysis Date:	1/5/2022	SeqNo:	2591502					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 2.00 0.134 1.765 0.03577 111 70 130 1.970 1.35 21.9
 Surr: 4-Terphenyl-d14 0.0670 0.05882 114 51.4 146 0 40

Sample ID	LCS-D42066	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105636					
Client ID:	LCSW	Batch ID:	42066	TestNo:	SW8015B		SW3511	Analysis Date:	1/5/2022	SeqNo:	2591510					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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 sp



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42066

Sample ID	LCS-D42066	SampType: LCS	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 12/21/2021			RunNo: 105636		
Client ID:	LCSW	Batch ID: 42066	TestNo: SW8015B SW3511		Analysis Date: 1/5/2022			SeqNo: 2591510			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)	2.15	0.136	1.794	0	120	70	130				
Surr: 4-Terphenyl-d14	0.0735		0.05979		123	51.4	146				

Sample ID	LCSD-D42066	SampType: LCSD	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 12/21/2021			RunNo: 105636		
Client ID:	LCSS02	Batch ID: 42066	TestNo: SW8015B SW3511		Analysis Date: 1/5/2022			SeqNo: 2591511			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)	1.94	0.135	1.786	0	109	70	130	2.151	10.2	14.1	
Surr: 4-Terphenyl-d14	0.0682		0.05952		115	51.4	146		0	40	

Sample ID	LCSD-M42066	SampType: LCSD	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 12/21/2021			RunNo: 105636		
Client ID:	LCSS02	Batch ID: 42066	TestNo: SW8015B SW3511		Analysis Date: 1/5/2022			SeqNo: 2591512			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	2.06	0.125	1.788	0	115	70	130	1.695	19.5	23.2	
Surr: 4-Terphenyl-d14	0.0796		0.05961		134	51.4	146		0	40	

Sample ID	LCS-M42066	SampType: LCS	TestCode: 8015_DO_W_ Units: mg/L			Prep Date: 12/21/2021			RunNo: 105636		
Client ID:	LCSW	Batch ID: 42066	TestNo: SW8015B SW3511		Analysis Date: 1/5/2022			SeqNo: 2591513			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)	1.70	0.124	1.775	0	95.5	70	130				

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: 42066

Sample ID	LCS-M42066	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/21/2021	RunNo:	105636					
Client ID:	LCSW	Batch ID:	42066	TestNo:	SW8015B		SW3511	Analysis Date:	1/5/2022	SeqNo:	2591513					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14 0.0602 0.05917 102 51.4 146

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 sp |



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42094

Sample ID	LCS-D-M42094	SampType:	LCS-D	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724					
Client ID:	LCS02	Batch ID:	42094	TestNo:	SW8015B		SW3511	Analysis Date:	1/6/2022	SeqNo:	2591533					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)		1.90		0.126		1.796		0		106	70	130	1.854	2.31	23.2	
Surr: 4-Terphenyl-d14		0.0665				0.05988				111	51.4	146		0	40	

Sample ID	LCS-M42094	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724					
Client ID:	LCSW	Batch ID:	42094	TestNo:	SW8015B		SW3511	Analysis Date:	1/6/2022	SeqNo:	2591534					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)		1.85		0.125		1.779		0		104	70	130				
Surr: 4-Terphenyl-d14		0.0666				0.05929				112	51.4	146				

Sample ID	MB-42094	SampType:	MBLK	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724					
Client ID:	PBW	Batch ID:	42094	TestNo:	SW8015B		SW3511	Analysis Date:	1/6/2022	SeqNo:	2591557					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)		< 0.135		0.135												
TPH (Oil Range)		< 0.125		0.125												
Surr: 4-Terphenyl-d14		0.0635				0.05941				107	51.4	146				

Sample ID	LCS-D42094	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724					
Client ID:	LCSW	Batch ID:	42094	TestNo:	SW8015B		SW3511	Analysis Date:	1/6/2022	SeqNo:	2592337					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42094

Sample ID	LCS-D42094	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	LCSW	Batch ID:	42094	TestNo:	SW8015B		SW3511	Analysis Date:	1/6/2022	SeqNo:	2592337			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)		1.71		0.135	1.785	0		95.7	70	130				
Surr: 4-Terphenyl-d14		0.0609			0.05950			102	51.4	146				

Sample ID	LCSD-D42094	SampType:	LCSD	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	LCSS02	Batch ID:	42094	TestNo:	SW8015B		SW3511	Analysis Date:	1/6/2022	SeqNo:	2592338			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)		1.94		0.136	1.789	0		108	70	130	1.708	12.7	14.1	
Surr: 4-Terphenyl-d14		0.0699			0.05963			117	51.4	146		0	40	

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42167

Sample ID	MB-42167	SampType:	MBLK	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	PBW	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586614			
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-42167	SampType:	LCS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	LCSW	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586615			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00897		0.000200	0.01000	0		89.7	80	120				

Sample ID	LCSD-42167	SampType:	LCSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	LCSS02	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586616			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00932		0.000200	0.01000	0		93.2	80	120	0.008972	3.76	20	

Sample ID	21120919-001DMS	SampType:	MS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	M-11	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586619			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00807		0.000200	0.01000	0		80.7	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42167

Sample ID	21120919-001DMSD	SampType:	MSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581											
Client ID:	M-11	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586620											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Mercury		0.00820		0.000200		0.01000		0		82.0		75		125		0.008069		1.64		20		

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 sp |



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: 42168

Sample ID	MB-42168	SampType:	MBLK	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	PBW	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586723			
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-42168	SampType:	LCS	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	LCSW	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586724			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.00976 0.000200 0.01000 0 97.6 80 120

Sample ID	LCSD-42168	SampType:	LCSD	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	LCSS02	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586725			
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 80 120 0.009762 3.13 20

Sample ID	21120919-007DMS	SampType:	MS	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	MW-6	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586728			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.00824 0.000200 0.01000 0 82.4 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 sp



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42168

Sample ID	21120919-007DMSD	SampType:	MSD	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582											
Client ID:	MW-6	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586729											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Mercury		0.00859		0.000200		0.01000		0		85.9		75		125		0.008236		4.18		20		

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 sp |



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105302

Sample ID MB	SampType: MBLK	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105302
Client ID: PBW	Batch ID: R105302	TestNo: SW6020A		Analysis Date: 12/21/2021	SeqNo: 2577756
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	< 0.000250	0.000250			

Sample ID LCS	SampType: LCS	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105302
Client ID: LCSW	Batch ID: R105302	TestNo: SW6020A		Analysis Date: 12/21/2021	SeqNo: 2577757
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	0.0199	0.000250	0.0200	0	99.5 80 120

Sample ID LCSD	SampType: LCSD	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105302
Client ID: LCSS02	Batch ID: R105302	TestNo: SW6020A		Analysis Date: 12/21/2021	SeqNo: 2577758
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	0.0197	0.000250	0.0200	0	98.5 80 120 0.0199 0.980 20

Sample ID 21120919-007DMS	SampType: MS	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105302
Client ID: MW-6	Batch ID: R105302	TestNo: SW6020A		Analysis Date: 12/21/2021	SeqNo: 2577761
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	0.0257	0.000250	0.0200	0.00322	113 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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105302

Sample ID	21120919-007DMSD	SampType:	MSD	TestCode:	6020A_D	Units:	mg/L	Prep Date:		RunNo:	105302	
Client ID:	MW-6	Batch ID:	R105302	TestNo:	SW6020A			Analysis Date:	12/21/2021	SeqNo:	2577762	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.0260	0.000250	0.0200	0.00322	114	75	125	0.0257	0.943	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 sp



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

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:	ZZZZZZ	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
 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105303

Sample ID	21120845-011ADUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105303			
Client ID:	ZZZZZZ	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:	ZZZZZZ	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
 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#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105318

Sample ID	BTEX LCS	SampType: LCS	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 105318					
Client ID:	LCSW	Batch ID: R105318	TestNo: SW8021B	Analysis Date: 12/21/2021	SeqNo: 2578901						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0452	0.00500	0.05000	0	90.4	72	120				
Ethylbenzene	0.0451	0.00500	0.05000	0	90.2	76	129				
m,p-Xylene	0.0908	0.0100	0.1000	0	90.8	75	125				
o-Xylene	0.0450	0.00500	0.05000	0	90.0	75	125				
Toluene	0.0450	0.0100	0.05000	0	90.0	78	120				
Xylenes, Total	0.136	0.0500	0.1500	0	90.6	75	125				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0600		0.05000		120	70	130				

Sample ID	BTEX LCSD	SampType: LCSD	TestCode: 8021_BTEX_	Units: mg/L	Prep Date:	RunNo: 105318					
Client ID:	LCSS02	Batch ID: R105318	TestNo: SW8021B	Analysis Date: 12/21/2021	SeqNo: 2578902						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0475	0.00500	0.05000	0	95.0	72	120	0.04520	4.96	20	
Ethylbenzene	0.0472	0.00500	0.05000	0	94.4	76	129	0.04510	4.55	20	
m,p-Xylene	0.0942	0.0100	0.1000	0	94.2	75	125	0.09080	3.68	20	
o-Xylene	0.0466	0.00500	0.05000	0	93.2	75	125	0.04500	3.49	20	
Toluene	0.0470	0.0100	0.05000	0	94.0	78	120	0.04500	4.35	20	
Xylenes, Total	0.141	0.0500	0.1500	0	93.9	75	125	0.1359	3.61	20	
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0604		0.05000		121	70	130		0	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: R105318

Sample ID	MBLK	SampType:	MBLK	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	105318			
Client ID:	PBW	Batch ID:	R105318	TestNo:	SW8021B			Analysis Date:	12/21/2021	SeqNo:	2578913			
Analyte		Result		PQL		SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		< 0.00500		0.00500										
Ethylbenzene		< 0.00500		0.00500										
m,p-Xylene		< 0.0100		0.0100										
o-Xylene		< 0.00500		0.00500										
Toluene		< 0.0100		0.0100										
Xylenes, Total		< 0.0500		0.0500										
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0570				0.05000		114	70	130				

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 sp |



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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 Website: www.element.com

QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: R105319

Sample ID	MBLK	SampType:	MBLK	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	105319					
Client ID:	PBW	Batch ID:	R105319	TestNo:	SW8015B			Analysis Date:	12/21/2021	SeqNo:	2578096					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range)	< 0.150	0.150														
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0614		0.05000			123	70	130								

Sample ID	GAS LCS	SampType:	LCS	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	105319					
Client ID:	LCSW	Batch ID:	R105319	TestNo:	SW8015B			Analysis Date:	12/21/2021	SeqNo:	2578097					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range)	12.9	0.150	12.50	0	103	80	130									
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Sample ID	GAS LCSD	SampType:	LCSD	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	105319					
Client ID:	LCSS02	Batch ID:	R105319	TestNo:	SW8015B			Analysis Date:	12/21/2021	SeqNo:	2578098					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range)	11.4	0.150	12.50	0	91.2	80	130	12.94	12.6	20						
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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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105344

Sample ID	MB-R105344	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	PBW	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581451			
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-R105344	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	LCSW	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581452			
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-R105344	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	LCSS02	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581453			
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		101	85	115	1,004	0.0996	10	

Sample ID	21120955-001CDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	ZZZZZZ	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581468			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filterable)		1,860		50.0							1,890	1.60	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105344

Sample ID	21120955-001CDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	ZZZZZZ	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581468			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	21120919-008CDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	SW-BO-13	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581469			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filterable)		135		50.0							130.0	3.77	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#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105418

Sample ID	21120919-007DMS	SampType: MS	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105418					
Client ID:	MW-6	Batch ID: R105418	TestNo: SW6010B		Analysis Date: 12/27/2021	SeqNo: 2582590					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.548	0.0100	0.5000	0.05035	99.6	75	125				
Cadmium	0.544	0.00500	0.5000	0.002260	108	75	125				
Calcium	588	0.500	50.00	543.3	89.1	75	125				
Chromium	0.494	0.0100	0.5000	0	98.8	75	125				
Iron	0.627	0.0100	0.5000	0.1312	99.2	75	125				
Lead	0.488	0.0100	0.5000	0	97.6	75	125				
Magnesium	249	0.500	50.00	179.9	138	75	125				S
Manganese	4.14	0.0100	0.5000	3.749	78.6	75	125				
Potassium	91.8	5.00	50.00	10.30	163	75	125				S
Sodium	605	10.0	50.00	556.2	98.5	75	125				
Strontium	2.90	0.0100	0.5000	2.467	85.8	75	125				
Zinc	0.523	0.0100	0.5000	0	105	75	125				

Sample ID	21120919-007DMSD	SampType: MSD	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105418					
Client ID:	MW-6	Batch ID: R105418	TestNo: SW6010B		Analysis Date: 12/27/2021	SeqNo: 2582591					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.548	0.0100	0.5000	0.05035	99.5	75	125	0.5481	0.0456	20	
Cadmium	0.543	0.00500	0.5000	0.002260	108	75	125	0.5438	0.217	20	
Calcium	580	0.500	50.00	543.3	73.2	75	125	587.9	1.37	20	S
Chromium	0.495	0.0100	0.5000	0	99.0	75	125	0.4940	0.233	20	
Iron	0.627	0.0100	0.5000	0.1312	99.2	75	125	0.6272	0.0287	20	
Lead	0.493	0.0100	0.5000	0	98.7	75	125	0.4880	1.12	20	
Magnesium	245	0.500	50.00	179.9	131	75	125	249.2	1.54	20	S
Manganese	4.12	0.0100	0.5000	3.749	74.9	75	125	4.142	0.445	20	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



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105418

Sample ID	21120919-007DMSD	SampType:	MSD	TestCode:	6010-D	Units:	mg/L	Prep Date:		RunNo:	105418
Client ID:	MW-6	Batch ID:	R105418	TestNo:	SW6010B			Analysis Date:	12/27/2021	SeqNo:	2582591
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	90.4	5.00	50.00	10.30	160	75	125	91.78	1.48	20	S
Sodium	593	10.0	50.00	556.2	73.3	75	125	605.4	2.10	20	S
Strontium	2.88	0.0100	0.5000	2.467	83.3	75	125	2.896	0.436	20	
Zinc	0.523	0.0100	0.5000	0	105	75	125	0.5229	0.0994	20	

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

Sample ID	MB	SampType:	MBLK	TestCode:	6010-D	Units:	mg/L	Prep Date:		RunNo:	105418
Client ID:	PBW	Batch ID:	R105418	TestNo:	SW6010B			Analysis Date:	12/27/2021	SeqNo:	2582770
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	< 0.0100	0.0100									
Cadmium	< 0.00500	0.00500									
Calcium	< 0.500	0.500									
Chromium	< 0.0100	0.0100									
Iron	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Magnesium	< 0.500	0.500									
Manganese	< 0.0100	0.0100									
Potassium	< 5.00	5.00									
Sodium	< 10.0	10.0									
Strontium	< 0.0100	0.0100									
Zinc	< 0.0100	0.0100									

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

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



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105418

Sample ID	LCS	SampType:	LCS	TestCode:	6010-D	Units:	mg/L	Prep Date:	RunNo:	105418	
Client ID:	LCSSW	Batch ID:	R105418	TestNo:	SW6010B	Analysis Date:	12/27/2021	SeqNo:	2582771		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.507	0.0100	0.5000	0	101	80	120				
Cadmium	0.500	0.00500	0.5000	0	100	80	120				
Calcium	49.4	0.500	50.00	0	98.7	80	120				
Chromium	0.502	0.0100	0.5000	0	100	80	120				
Iron	0.510	0.0100	0.5000	0	102	80	120				
Lead	0.499	0.0100	0.5000	0	99.8	80	120				
Magnesium	49.2	0.500	50.00	0	98.4	80	120				
Manganese	0.503	0.0100	0.5000	0	101	80	120				
Potassium	48.3	5.00	50.00	0	96.6	80	120				
Sodium	47.3	10.0	50.00	0	94.5	80	120				
Strontium	0.495	0.0100	0.5000	0	99.1	80	120				
Zinc	0.493	0.0100	0.5000	0	98.6	80	120				

Sample ID	LCSD	SampType:	LCSD	TestCode:	6010-D	Units:	mg/L	Prep Date:	RunNo:	105418	
Client ID:	LCSS02	Batch ID:	R105418	TestNo:	SW6010B	Analysis Date:	12/27/2021	SeqNo:	2582772		
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	101	80	120	0.5066	0.271	20	
Cadmium	0.502	0.00500	0.5000	0	100	80	120	0.4999	0.421	20	
Calcium	49.4	0.500	50.00	0	98.9	80	120	49.36	0.142	20	
Chromium	0.500	0.0100	0.5000	0	100	80	120	0.5019	0.327	20	
Iron	0.507	0.0100	0.5000	0	101	80	120	0.5104	0.672	20	
Lead	0.493	0.0100	0.5000	0	98.6	80	120	0.4991	1.20	20	
Magnesium	49.3	0.500	50.00	0	98.6	80	120	49.21	0.179	20	
Manganese	0.501	0.0100	0.5000	0	100	80	120	0.5034	0.468	20	

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 sp



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105418

Sample ID	LCSD	SampType:	LCSD	TestCode:	6010-D	Units:	mg/L	Prep Date:		RunNo:	105418											
Client ID:	LCSS02	Batch ID:	R105418	TestNo:	SW6010B			Analysis Date:	12/27/2021	SeqNo:	2582772											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Potassium		48.5		5.00		50.00		0		96.9		80		120		48.31		0.335		20		
Sodium		49.3		10.0		50.00		0		98.5		80		120		47.26		4.16		20		
Strontium		0.494		0.0100		0.5000		0		98.9		80		120		0.4954		0.212		20		
Zinc		0.492		0.0100		0.5000		0		98.3		80		120		0.4928		0.242		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 sp



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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105427

Sample ID	mblk	SampType: MBLK	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105427
Client ID:	PBW	Batch ID: R105427	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2582046	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	< 0.250	0.250				
Sulfate	< 0.250	0.250				

Sample ID	lcs	SampType: LCS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105427
Client ID:	LCSW	Batch ID: R105427	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2582047	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.8	0.250	10.00	0	108	80 120
Sulfate	11.0	0.250	10.00	0	110	80 120

Sample ID	lcsd	SampType: LCS D	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105427
Client ID:	LCSS02	Batch ID: R105427	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2582048	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.8	0.250	10.00	0	108	80 120 10.78 0.186 15
Sulfate	11.0	0.250	10.00	0	110	80 120 10.98 0.0407 15

Sample ID	21120919-003cms	SampType: MS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105427
Client ID:	MW-8	Batch ID: R105427	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2582085	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	499	12.5	250.0	238.6	104	80 120

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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: R105427

Sample ID	21120919-003cms	SampType:	MS	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	105427			
Client ID:	MW-8	Batch ID:	R105427	TestNo:	SW9056A			Analysis Date:	12/27/2021	SeqNo:	2582085			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		756		12.5	250.0	513.1		97.3	80	120				

Sample ID	21120919-003cmsd	SampType:	MSD	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	105427			
Client ID:	MW-8	Batch ID:	R105427	TestNo:	SW9056A			Analysis Date:	12/27/2021	SeqNo:	2582086			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		512		12.5	250.0	238.6		109	80	120	499.4	2.44	15	
Sulfate		769		12.5	250.0	513.1		102	80	120	756.4	1.66	15	

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 sp |



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105441

Sample ID	MB-R105441	SampType:	MBLK	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105441
Client ID:	PBW	Batch ID:	R105441	TestNo:	SM2320 B			Analysis Date:	12/28/2021	SeqNo:	2582774
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Bicarbonate (As CaCO3)	< 20.0	20.0
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0
Alkalinity, Total (As CaCO3)	< 20.0	20.0

Sample ID	LCS-R105441	SampType:	LCS	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105441
Client ID:	LCSW	Batch ID:	R105441	TestNo:	SM2320 B			Analysis Date:	12/28/2021	SeqNo:	2582774
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Total (As CaCO3)	45.5	20.0	50.00	0	91.0	90	110
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Sample ID	21120818-001GDUP	SampType:	DUP	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105441
Client ID:	ZZZZZZ	Batch ID:	R105441	TestNo:	SM2320 B			Analysis Date:	12/28/2021	SeqNo:	2582779
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Bicarbonate (As CaCO3)	< 20.0	20.0						0	0	20
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0						0	0	20
Alkalinity, Total (As CaCO3)	< 20.0	20.0						0	0	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 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#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105452

Sample ID	mblk	SampType: MBLK	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	PBW	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2583224	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	< 0.250	0.250				
Sulfate	< 0.250	0.250				

Sample ID	lcs	SampType: LCS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	LCSW	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2583225	
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	80 120
Sulfate	10.2	0.250	10.00	0	102	80 120

Sample ID	lcsd	SampType: LCS D	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	LCSS02	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2583226	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.4	0.250	10.00	0	104	80 120 10.10 3.31 15
Sulfate	10.6	0.250	10.00	0	106	80 120 10.24 3.69 15

Sample ID	21121088-007bms	SampType: MS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	ZZZZZZ	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/28/2021	SeqNo: 2583249	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	327	12.5	250.0	66.61	104	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 sp



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QC SUMMARY REPORT

WO#: 21120919
 12-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: R105452

Sample ID	21121088-007bms	SampType:	MS	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	105452			
Client ID:	ZZZZZZ	Batch ID:	R105452	TestNo:	SW9056A			Analysis Date:	12/28/2021	SeqNo:	2583249			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		261		12.5	250.0	0		105	80	120				

Sample ID	21121088-007bmsd	SampType:	MSD	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	105452			
Client ID:	ZZZZZZ	Batch ID:	R105452	TestNo:	SW9056A			Analysis Date:	12/28/2021	SeqNo:	2583250			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		333		12.5	250.0	66.61		107	80	120	327.4	1.82	15	
Sulfate		265		12.5	250.0	0		106	80	120	261.3	1.41	15	

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#: 21120919
 12-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105529

Sample ID	MB-R105529	SampType:	MBLK	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105529		
Client ID:	PBW	Batch ID:	R105529	TestNo:	SM2320 B			Analysis Date:	12/30/2021	SeqNo:	2585399		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)		< 20.0		20.0									
Alkalinity, Carbonate (As CaCO3)		< 20.0		20.0									
Alkalinity, Total (As CaCO3)		< 20.0		20.0									

Sample ID	LCS-R105529	SampType:	LCS	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105529		
Client ID:	LCSW	Batch ID:	R105529	TestNo:	SM2320 B			Analysis Date:	12/30/2021	SeqNo:	2585400		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)		49.0		20.0	50.00	0	98.0	90	110				

Sample ID	21120919-004CDUP	SampType:	DUP	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105529		
Client ID:	MW-7	Batch ID:	R105529	TestNo:	SM2320 B			Analysis Date:	12/30/2021	SeqNo:	2585405		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)		338		20.0						350.0	3.64	20	
Alkalinity, Carbonate (As CaCO3)		< 20.0		20.0						0	0	20	
Alkalinity, Total (As CaCO3)		338		20.0						350.0	3.64	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 sp



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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **21120919**

RcptNo: **1**

Logged by:	Tammy Thibodeaux	12/17/2021 4:50:00 PM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	12/20/2021 9:12:28 AM	<i>Tammy Thibodeaux</i>
Reviewed By:	Cristina Thibeaux	12/20/2021 3:49:23 PM	<i>Cristina Thibeaux</i>

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Jason Sills"/>	Date	<input type="text" value="12/20/2021"/>
By Whom:	<input type="text" value="Cristina Thibeaux"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="For the dissolved metals, is Ca, Mg, K, and Na to be reported as dissolved?"/>		
Client Instructions:	<input type="text" value="dissolved list should be same as total metals list."/>		

18. Additional remarks:
 Improper error correction(s) made by client.
 Trip Blank added, as per samples received

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Not Present			



Chain of Custody

Laboratory Number: 212099A

Client Information:
 Company Name: Iron Env
 Contact Name: Sills
 Address: 2049 Commercial Dr
 City, State Zip: Port Allen La 70767
 Phone Number: 225 344 8490
 Fax Number: Ext:
 E-mail Address:

Billing Information:
 PO Number:
 Quote Number:
 Required QC Level:
 Bill Monthly: Yes No

Project Name/Number: Hewings II
9403-010-000
 Sampler's Signature: [Signature]
 Shipping Method: UPS / FedEx / NOW
DHL / Element / Hand / Mail

Matrix Code:
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/IRIS	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information		Rush turn times (Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Quantity Type G = Glass, V = Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ NaOH, Na ₂ O ₂ HCl, HNO ₃	Requested Tests						Comments	
			Date/Time					Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time		Date/Time
			Date	Time											
MW-11			12-15-21	800	G	P, V		X	X	X	X	X	X		
MW-1			↓	1345	↓	↓		X	X	X	X	X	X		
MW-8			↓	1630	↓	↓		X	X	X	X	X	X		
MW-7			12-16-21	750				X	X	X	X	X	X		
MW-9			↓	820				X	X	X	X	X	X		
MW-9a			↓	840				X	X	X	X	X	X		
MW-6			12-17-21	830				X	X	X	X	X	X		
MW-6 SW-B0-13'			12-16-21	1135				X	X	X	X	X	X		
SW-B0-2'			↓	1230				X	X	X	X	X	X		

Retiquished by: [Signature] **Date/Time:** 12/17/21

Received by: [Signature] **Date/Time:** 12.17.21 / 1500

Field Notes:
 Received at lab on ice? 3.8
 Yes No Temp: 4.8

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.

8800 North US 31
 Columbus, IN 47201 USA
 P 812-375-0531
 F 812-375-0731

328 Ley Road, Suite 100
 Fort Wayne, IN 46825 USA
 P 260-471-7000
 F 260-471-7777

909 Executive Dr
 Warsaw, IN 46580 USA
 P 574-267-3305
 F 574-269-6699

3371 Cleveland Road, Suite 100A
 South Bend, IN 46628 USA
 P 574-277-0707
 F 574-273-6699

2417 W. Pinhook Rd
 Lafayette, LA 70508 USA
 P 337-233-0483
 F 337-233-6540



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

January 12, 2022

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II/9403-010-0100

Order No.: 21121081

Dear Greg Miller:

Element Materials Technology Lafayette received 6 sample(s) on 12/21/2021 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 that reads '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#: 21121081
Date: 1/12/2022

CLIENT: ICON Environmental Services

Project: Henning II/9403-010-0100

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
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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 10:45:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21121081-001 **Matrix:** AQUEOUS
Client Sample ID MW-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015						
TPH DRO/ORO IN WATER BY SW8015						
TPH (Diesel Range)	< 0.129	0.129		mg/L	1	1/6/2022 5:34:00 AM
TPH (Oil Range)	< 0.119	0.119		mg/L	1	1/6/2022 5:34:00 AM
Surr: 4-Terphenyl-d14	96.4	51.4 - 146		%Rec	1	1/6/2022 5:34:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015						
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/28/2021 2:46:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	93.7	70 - 130		%Rec	1	12/28/2021 2:46:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015						
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/28/2021 2:46:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/28/2021 2:46:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/28/2021 2:46:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/28/2021 2:46:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/28/2021 2:46:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/28/2021 2:46:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	94.1	70 - 130		%Rec	1	12/28/2021 2:46:00 PM
MERCURY IN GROUND WATER, DISSOLVED						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 4:29:02 PM
INORGANIC ANIONS IN WATER BY IC						
Chloride	221	12.5		mg/L	50	12/27/2021 7:54:51 PM
Sulfate	850	12.5		mg/L	50	12/27/2021 7:54:51 PM
METALS IN WATER BY ICP, DISSOLVED						
Barium	0.0280	0.0100		mg/L	1	12/29/2021 3:36:07 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/29/2021 3:36:07 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#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 10:45:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21121081-001 **Matrix:** AQUEOUS
Client Sample ID MW-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, DISSOLVED			SW6010B		Analyst: STS	
Calcium	204	0.500		mg/L	1	12/29/2021 3:36:07 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/29/2021 3:36:07 PM
Iron	0.206	0.0100		mg/L	1	12/29/2021 3:36:07 PM
Lead	< 0.0100	0.0100		mg/L	1	12/29/2021 3:36:07 PM
Magnesium	92.3	0.500		mg/L	1	12/29/2021 3:36:07 PM
Manganese	1.71	0.0100		mg/L	1	12/29/2021 3:36:07 PM
Potassium	5.08	5.00		mg/L	1	12/29/2021 3:36:07 PM
Sodium	315	10.0		mg/L	1	12/29/2021 3:36:07 PM
Strontium	1.09	0.0100		mg/L	1	12/29/2021 3:36:07 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/29/2021 3:36:07 PM
METALS IN WATER BY ICP-MS, DISSOLVED			SW6020A		Analyst: MRB	
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 10:25:21 AM
ALKALINITY; TOTAL, CARB, BICARB			SM2320 B		Analyst: MAB	
Alkalinity, Bicarbonate (As CaCO3)	392	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Total (As CaCO3)	392	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
TOTAL DISSOLVED SOLIDS			SM2540C		Analyst: HXW	
Total Dissolved Solids (Residue, Filterable)	1,650	50.0		mg/L	5	12/22/2021 11:36:00 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#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 1:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21121081-002 **Matrix:** AQUEOUS
Client Sample ID MW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.131	0.131		mg/L	1	1/6/2022 6:04:00 AM
TPH (Oil Range)	< 0.141	0.141		mg/L	1	1/6/2022 6:04:00 AM
Surr: 4-Terphenyl-d14	116	51.4 - 146		%Rec	1	1/6/2022 6:04:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/28/2021 3:13:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	93.2	70 - 130		%Rec	1	12/28/2021 3:13:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/28/2021 3:13:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/28/2021 3:13:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/28/2021 3:13:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/28/2021 3:13:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/28/2021 3:13:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/28/2021 3:13:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	94.2	70 - 130		%Rec	1	12/28/2021 3:13:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 3:58:33 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	1,320	25.0		mg/L	100	12/27/2021 8:08:39 PM
Sulfate	740	25.0		mg/L	100	12/27/2021 8:08:39 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0285	0.0100		mg/L	1	12/29/2021 2:52:07 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/29/2021 2:52:07 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
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 1:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21121081-002 **Matrix:** AQUEOUS
Client Sample ID MW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	467	0.500		mg/L	1	12/29/2021 2:52:07 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/29/2021 2:52:07 PM
Iron	1.17	0.0100		mg/L	1	12/29/2021 2:52:07 PM
Lead	< 0.0100	0.0100		mg/L	1	12/29/2021 2:52:07 PM
Magnesium	197	0.500		mg/L	1	12/29/2021 2:52:07 PM
Manganese	1.69	0.0100		mg/L	1	12/29/2021 2:52:07 PM
Potassium	6.37	5.00		mg/L	1	12/29/2021 2:52:07 PM
Sodium	308	5.00		mg/L	1	12/29/2021 2:52:07 PM
Strontium	2.23	0.0100		mg/L	1	12/29/2021 2:52:07 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/29/2021 2:52:07 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/29/2021 10:37:30 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	225	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Total (As CaCO3)	225	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	2,500	100		mg/L	10	12/22/2021 11:36:00 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#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 3:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21121081-003 **Matrix:** AQUEOUS
Client Sample ID MW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.130	0.130		mg/L	1	1/6/2022 6:34:00 AM
TPH (Oil Range)	< 0.120	0.120		mg/L	1	1/6/2022 6:34:00 AM
Surr: 4-Terphenyl-d14	112	51.4 - 146		%Rec	1	1/6/2022 6:34:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/28/2021 3:40:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	93.4	70 - 130		%Rec	1	12/28/2021 3:40:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/28/2021 3:40:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/28/2021 3:40:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/28/2021 3:40:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/28/2021 3:40:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/28/2021 3:40:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/28/2021 3:40:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	94.6	70 - 130		%Rec	1	12/28/2021 3:40:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 4:00:51 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	1,090	25.0		mg/L	100	12/27/2021 8:22:27 PM
Sulfate	620	25.0		mg/L	100	12/27/2021 8:22:27 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0330	0.0100		mg/L	1	12/29/2021 3:03:41 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/29/2021 3:03:41 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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 3:05:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21121081-003 **Matrix:** AQUEOUS
Client Sample ID MW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	375	0.500		mg/L	1	12/29/2021 3:03:41 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/29/2021 3:03:41 PM
Iron	0.851	0.0100		mg/L	1	12/29/2021 3:03:41 PM
Lead	< 0.0100	0.0100		mg/L	1	12/29/2021 3:03:41 PM
Magnesium	189	0.500		mg/L	1	12/29/2021 3:03:41 PM
Manganese	4.12	0.0100		mg/L	1	12/29/2021 3:03:41 PM
Potassium	6.91	5.00		mg/L	1	12/29/2021 3:03:41 PM
Sodium	383	5.00		mg/L	1	12/29/2021 3:03:41 PM
Strontium	2.05	0.0100		mg/L	1	12/29/2021 3:03:41 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/29/2021 3:03:41 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/29/2021 10:59:56 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	320	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Total (As CaCO3)	320	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	2,510	100		mg/L	10	12/22/2021 11:36:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 4:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21121081-004 **Matrix:** AQUEOUS
Client Sample ID MW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.131	0.131		mg/L	1	1/6/2022 7:04:00 AM
TPH (Oil Range)	< 0.121	0.121		mg/L	1	1/6/2022 7:04:00 AM
Surr: 4-Terphenyl-d14	117	51.4 - 146		%Rec	1	1/6/2022 7:04:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/28/2021 4:07:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	96.6	70 - 130		%Rec	1	12/28/2021 4:07:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/28/2021 4:07:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/28/2021 4:07:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/28/2021 4:07:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/28/2021 4:07:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/28/2021 4:07:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/28/2021 4:07:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	95.2	70 - 130		%Rec	1	12/28/2021 4:07:00 PM
METALS IN GROUND WATER					SW7470A	Analyst: KML
MERCURY IN GROUND WATER, TOTAL						
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 4:08:25 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	156	12.5		mg/L	50	12/27/2021 8:36:16 PM
Sulfate	918	12.5		mg/L	50	12/27/2021 8:36:16 PM
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Barium	0.0129	0.0100		mg/L	1	12/29/2021 3:06:00 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/29/2021 3:06:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/20/2021 4:30:00 PM
Project: Henning II/9403-010-0100
Lab ID: 21121081-004 **Matrix:** AQUEOUS
Client Sample ID MW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN GROUND WATER					SW6010B	Analyst: STS
METALS IN WATER BY ICP, TOTALS						
Calcium	256	0.500		mg/L	1	12/29/2021 3:06:00 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/29/2021 3:06:00 PM
Iron	0.268	0.0100		mg/L	1	12/29/2021 3:06:00 PM
Lead	< 0.0100	0.0100		mg/L	1	12/29/2021 3:06:00 PM
Magnesium	102	0.500		mg/L	1	12/29/2021 3:06:00 PM
Manganese	3.16	0.0100		mg/L	1	12/29/2021 3:06:00 PM
Potassium	5.70	5.00		mg/L	1	12/29/2021 3:06:00 PM
Sodium	270	5.00		mg/L	1	12/29/2021 3:06:00 PM
Strontium	1.18	0.0100		mg/L	1	12/29/2021 3:06:00 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/29/2021 3:06:00 PM
METALS IN GROUND WATER					SW6020A	Analyst: MRB
METALS IN WATER BY ICP-MS, TOTAL						
Arsenic	< 0.00250	0.00250		mg/L	10	12/29/2021 11:02:45 AM
ALKALINITY; TOTAL, CARB, BICARB					SM2320 B	Analyst: MAB
Alkalinity, Bicarbonate (As CaCO3)	450	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Total (As CaCO3)	450	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
TOTAL DISSOLVED SOLIDS					SM2540C	Analyst: HXW
Total Dissolved Solids (Residue, Filterable)	1,640	50.0		mg/L	5	12/22/2021 11:36:00 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

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WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/21/2021 9:55:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21121081-005 **Matrix:** AQUEOUS
Client Sample ID MW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TPH-D/O IN WATER BY SW8015					SW8015B	Analyst: CRM
TPH DRO/ORO IN WATER BY SW8015					SW3511	
TPH (Diesel Range)	< 0.133	0.133		mg/L	1	1/6/2022 9:08:00 AM
TPH (Oil Range)	< 0.123	0.123		mg/L	1	1/6/2022 9:08:00 AM
Surr: 4-Terphenyl-d14	111	51.4 - 146		%Rec	1	1/6/2022 9:08:00 AM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8015B	Analyst: CRM
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/28/2021 4:34:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	96.4	70 - 130		%Rec	1	12/28/2021 4:34:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015					SW8021B	Analyst: CRM
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/28/2021 4:34:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/28/2021 4:34:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/28/2021 4:34:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/28/2021 4:34:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/28/2021 4:34:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/28/2021 4:34:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	94.4	70 - 130		%Rec	1	12/28/2021 4:34:00 PM
MERCURY IN GROUND WATER, DISSOLVED					SW7470A	Analyst: KML
Mercury	< 0.000200	0.000200		mg/L	1	1/3/2022 4:31:20 PM
INORGANIC ANIONS IN WATER BY IC					SW9056A	Analyst: SGP
Chloride	57.2	12.5		mg/L	50	12/28/2021 8:07:23 AM
Sulfate	411	12.5		mg/L	50	12/28/2021 8:07:23 AM
METALS IN WATER BY ICP, DISSOLVED					SW6010B	Analyst: STS
Barium	0.0232	0.0100		mg/L	1	12/29/2021 3:43:07 PM
Cadmium	< 0.00500	0.00500		mg/L	1	12/29/2021 3:43:07 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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/21/2021 9:55:00 AM
Project: Henning II/9403-010-0100
Lab ID: 21121081-005 **Matrix:** AQUEOUS
Client Sample ID MW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN WATER BY ICP, DISSOLVED			SW6010B		Analyst: STS	
Calcium	129	0.500		mg/L	1	12/29/2021 3:43:07 PM
Chromium	< 0.0100	0.0100		mg/L	1	12/29/2021 3:43:07 PM
Iron	1.46	0.0100		mg/L	1	12/29/2021 3:43:07 PM
Lead	< 0.0100	0.0100		mg/L	1	12/29/2021 3:43:07 PM
Magnesium	54.5	0.500		mg/L	1	12/29/2021 3:43:07 PM
Manganese	1.03	0.0100		mg/L	1	12/29/2021 3:43:07 PM
Potassium	< 5.00	5.00		mg/L	1	12/29/2021 3:43:07 PM
Sodium	175	10.0		mg/L	1	12/29/2021 3:43:07 PM
Strontium	0.648	0.0100		mg/L	1	12/29/2021 3:43:07 PM
Zinc	< 0.0100	0.0100		mg/L	1	12/29/2021 3:43:07 PM
METALS IN WATER BY ICP-MS, DISSOLVED			SW6020A		Analyst: MRB	
Arsenic	< 0.00250	0.00250		mg/L	10	12/28/2021 10:28:10 AM
ALKALINITY; TOTAL, CARB, BICARB			SM2320 B		Analyst: MAB	
Alkalinity, Bicarbonate (As CaCO3)	438	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
Alkalinity, Total (As CaCO3)	438	20.0		mgCaCO3/L	1	1/3/2022 11:02:00 AM
TOTAL DISSOLVED SOLIDS			SM2540C		Analyst: HXW	
Total Dissolved Solids (Residue, Filterable)	1,020	50.0		mg/L	5	12/22/2021 11:36:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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Analytical Report

(consolidated)

WO#: 21121081

Date Reported: 1/12/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/21/2021
Project: Henning II/9403-010-0100
Lab ID: 21121081-006 **Matrix:** AQUEOUS
Client Sample ID Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
BTEX/TPH-G IN WATER BY SW8021/8015				SW8015B	Analyst: CRM	
TPH-GRO IN WATER BY SW8015B						
TPH (Gasoline Range)	< 0.150	0.150		mg/L	1	12/28/2021 5:01:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	96.0	70 - 130		%Rec	1	12/28/2021 5:01:00 PM
BTEX/TPH-G IN WATER BY SW8021/8015				SW8021B	Analyst: CRM	
BTEX IN WATER BY SW8021B						
Benzene	< 0.00500	0.00500		mg/L	1	12/28/2021 5:01:00 PM
Ethylbenzene	< 0.00500	0.00500		mg/L	1	12/28/2021 5:01:00 PM
m,p-Xylene	< 0.0100	0.0100		mg/L	1	12/28/2021 5:01:00 PM
o-Xylene	< 0.00500	0.00500		mg/L	1	12/28/2021 5:01:00 PM
Toluene	< 0.0100	0.0100		mg/L	1	12/28/2021 5:01:00 PM
Xylenes, Total	< 0.0500	0.0500		mg/L	1	12/28/2021 5:01:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	95.0	70 - 130		%Rec	1	12/28/2021 5:01:00 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
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42094

Sample ID	LCS-D-M42094	SampType:	LCS-D	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	LCS02	Batch ID:	42094	TestNo:	SW8015B	SW3511		Analysis Date:	1/6/2022	SeqNo:	2591533			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)		1.90		0.126	1.796	0		106	70	130	1.854	2.31	23.2	
Surr: 4-Terphenyl-d14		0.0665			0.05988			111	51.4	146		0	40	

Sample ID	LCS-M42094	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	LCSW	Batch ID:	42094	TestNo:	SW8015B	SW3511		Analysis Date:	1/6/2022	SeqNo:	2591534			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Oil Range)		1.85		0.125	1.779	0		104	70	130				
Surr: 4-Terphenyl-d14		0.0666			0.05929			112	51.4	146				

Sample ID	MB-42094	SampType:	MBLK	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	PBW	Batch ID:	42094	TestNo:	SW8015B	SW3511		Analysis Date:	1/6/2022	SeqNo:	2591557			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)		< 0.135		0.135										
TPH (Oil Range)		< 0.125		0.125										
Surr: 4-Terphenyl-d14		0.0635			0.05941			107	51.4	146				

Sample ID	LCS-D42094	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	LCSW	Batch ID:	42094	TestNo:	SW8015B	SW3511		Analysis Date:	1/6/2022	SeqNo:	2592337			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42094

Sample ID	LCS-D42094	SampType:	LCS	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	LCSW	Batch ID:	42094	TestNo:	SW8015B	SW3511		Analysis Date:	1/6/2022	SeqNo:	2592337			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)		1.71		0.135	1.785	0		95.7	70	130				
Surr: 4-Terphenyl-d14		0.0609			0.05950			102	51.4	146				

Sample ID	LCSD-D42094	SampType:	LCSD	TestCode:	8015_DO_W_	Units:	mg/L	Prep Date:	12/22/2021	RunNo:	105724			
Client ID:	LCSS02	Batch ID:	42094	TestNo:	SW8015B	SW3511		Analysis Date:	1/6/2022	SeqNo:	2592338			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Diesel Range)		1.94		0.136	1.789	0		108	70	130	1.708	12.7	14.1	
Surr: 4-Terphenyl-d14		0.0699			0.05963			117	51.4	146		0	40	

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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42119

Sample ID	MB-42119	SampType:	MBLK	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105506					
Client ID:	PBW	Batch ID:	42119	TestNo:	SW6010B			Analysis Date:	12/29/2021	SeqNo:	2584546					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		< 0.0100		0.0100												
Cadmium		< 0.00500		0.00500												
Calcium		< 0.500		0.500												
Chromium		< 0.0100		0.0100												
Iron		< 0.0100		0.0100												
Lead		< 0.0100		0.0100												
Magnesium		< 0.500		0.500												
Manganese		< 0.0100		0.0100												
Potassium		< 5.00		5.00												
Sodium		< 10.0		10.0												
Strontium		< 0.0100		0.0100												
Zinc		< 0.0100		0.0100												

Sample ID	LCS-42119	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105506					
Client ID:	LCSW	Batch ID:	42119	TestNo:	SW6010B			Analysis Date:	12/29/2021	SeqNo:	2584547					
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		0.487		0.0100		0.5000		0		97.4	80	120				
Cadmium		0.479		0.00500		0.5000		0		95.7	80	120				
Calcium		48.8		0.500		50.00		0		97.5	80	120				
Chromium		0.485		0.0100		0.5000		0		97.1	80	120				
Iron		0.492		0.0100		0.5000		0		98.4	80	120				
Lead		0.477		0.0100		0.5000		0		95.4	80	120				
Magnesium		48.6		0.500		50.00		0		97.1	80	120				
Manganese		0.486		0.0100		0.5000		0		97.1	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 sp



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42119

Sample ID	LCS-42119	SampType:	LCS	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105506											
Client ID:	LCSW	Batch ID:	42119	TestNo:	SW6010B			Analysis Date:	12/29/2021	SeqNo:	2584547											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Potassium		48.2		5.00		50.00		0		96.5		80		120								
Sodium		45.6		10.0		50.00		0		91.1		80		120								
Strontium		0.484		0.0100		0.5000		0		96.9		80		120								
Zinc		0.476		0.0100		0.5000		0		95.1		80		120								

Sample ID	LCSD-42119	SampType:	LCSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105506											
Client ID:	LCSS02	Batch ID:	42119	TestNo:	SW6010B			Analysis Date:	12/29/2021	SeqNo:	2584548											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Barium		0.489		0.0100		0.5000		0		97.9		80		120		0.4869		0.490		20		
Cadmium		0.480		0.00500		0.5000		0		96.0		80		120		0.4785		0.321		20		
Calcium		48.6		0.500		50.00		0		97.3		80		120		48.76		0.273		20		
Chromium		0.488		0.0100		0.5000		0		97.6		80		120		0.4855		0.512		20		
Iron		0.495		0.0100		0.5000		0		99.0		80		120		0.4920		0.557		20		
Lead		0.481		0.0100		0.5000		0		96.2		80		120		0.4772		0.839		20		
Magnesium		48.5		0.500		50.00		0		96.9		80		120		48.57		0.247		20		
Manganese		0.488		0.0100		0.5000		0		97.7		80		120		0.4856		0.573		20		
Potassium		48.1		5.00		50.00		0		96.2		80		120		48.23		0.247		20		
Sodium		46.6		10.0		50.00		0		93.2		80		120		45.56		2.28		20		
Strontium		0.485		0.0100		0.5000		0		97.0		80		120		0.4844		0.0825		20		
Zinc		0.477		0.0100		0.5000		0		95.4		80		120		0.4757		0.323		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 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#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42119

Sample ID	21121081-002DMS	SampType:	MS	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105506
Client ID:	MW-5	Batch ID:	42119	TestNo:	SW6010B			Analysis Date:	12/29/2021	SeqNo:	2584551
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.496	0.0100	0.5000	0.02850	93.6	75	125				
Cadmium	0.479	0.00500	0.5000	0.001630	95.4	75	125				
Calcium	507	0.500	50.00	467.3	80.0	75	125				
Chromium	0.461	0.0100	0.5000	0	92.1	75	125				
Iron	1.30	0.0100	0.5000	1.169	25.9	75	125				S
Lead	0.451	0.0100	0.5000	0	90.2	75	125				
Magnesium	244	0.500	50.00	197.5	93.7	75	125				
Manganese	2.12	0.0100	0.5000	1.692	85.7	75	125				
Potassium	57.2	5.00	50.00	6.371	102	75	125				
Sodium	351	10.0	50.00	308.1	86.8	75	125				
Strontium	2.64	0.0100	0.5000	2.226	83.1	75	125				
Zinc	0.471	0.0100	0.5000	0	94.2	75	125				

Sample ID	21121081-002DMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105506
Client ID:	MW-5	Batch ID:	42119	TestNo:	SW6010B			Analysis Date:	12/29/2021	SeqNo:	2584552
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.516	0.0100	0.5000	0.02850	97.5	75	125	0.4964	3.83	20	
Cadmium	0.497	0.00500	0.5000	0.001630	99.1	75	125	0.4786	3.84	20	
Calcium	510	0.500	50.00	467.3	85.4	75	125	507.3	0.536	20	
Chromium	0.480	0.0100	0.5000	0	95.9	75	125	0.4606	4.03	20	
Iron	1.31	0.0100	0.5000	1.169	29.3	75	125	1.298	1.29	20	S
Lead	0.471	0.0100	0.5000	0	94.2	75	125	0.4510	4.32	20	
Magnesium	246	0.500	50.00	197.5	98.0	75	125	244.3	0.883	20	
Manganese	2.14	0.0100	0.5000	1.692	90.0	75	125	2.120	1.01	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 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#: 21121081
 12-Jan-22

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 42119

Sample ID	21121081-002DMSD	SampType:	MSD	TestCode:	6010_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105506
Client ID:	MW-5	Batch ID:	42119	TestNo:	SW6010B	Analysis Date:	12/29/2021	SeqNo:	2584552		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	59.2	5.00	50.00	6.371	106	75	125	57.21	3.35	20	
Sodium	355	10.0	50.00	308.1	94.8	75	125	351.5	1.13	20	
Strontium	2.66	0.0100	0.5000	2.226	87.4	75	125	2.642	0.799	20	
Zinc	0.489	0.0100	0.5000	0	97.7	75	125	0.4708	3.71	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



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42120

Sample ID	MB-42120	SampType:	MBLK	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105491			
Client ID:	PBW	Batch ID:	42120	TestNo:	SW6020A			Analysis Date:	12/29/2021	SeqNo:	2584237			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		< 0.000250		0.000250										

Sample ID	LCS-42120	SampType:	LCS	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105491			
Client ID:	LCSW	Batch ID:	42120	TestNo:	SW6020A			Analysis Date:	12/29/2021	SeqNo:	2584238			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.495		0.00500	0.500	0		99.1	80	120				

Sample ID	LCSD-42120	SampType:	LCSD	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105491			
Client ID:	LCSS02	Batch ID:	42120	TestNo:	SW6020A			Analysis Date:	12/29/2021	SeqNo:	2584239			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.499		0.00500	0.500	0		99.8	80	120	0.495	0.738	20	

Sample ID	21121081-002DMS	SampType:	MS	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105491			
Client ID:	MW-5	Batch ID:	42120	TestNo:	SW6020A			Analysis Date:	12/29/2021	SeqNo:	2584242			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.473		0.00500	0.500	0.00103		94.3	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42120

Sample ID	21121081-002DMSD	SampType:	MSD	TestCode:	6020A_W	Units:	mg/L	Prep Date:	12/28/2021	RunNo:	105491											
Client ID:	MW-5	Batch ID:	42120	TestNo:	SW6020A			Analysis Date:	12/29/2021	SeqNo:	2584243											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Arsenic		0.514		0.00500		0.500		0.00103		103		75		125		0.473		8.45		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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42167

Sample ID	MB-42167	SampType:	MBLK	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	PBW	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586614			
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-42167	SampType:	LCS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	LCSW	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586615			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00897		0.000200	0.01000	0		89.7	80	120				

Sample ID	LCSD-42167	SampType:	LCSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	LCSS02	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586616			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00932		0.000200	0.01000	0		93.2	80	120	0.008972	3.76	20	

Sample ID	21120919-001DMS	SampType:	MS	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581			
Client ID:	ZZZZZZ	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586619			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00807		0.000200	0.01000	0		80.7	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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42167

Sample ID	21120919-001DMSD	SampType:	MSD	TestCode:	HG_W_7470	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105581											
Client ID:	ZZZZZZ	Batch ID:	42167	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586620											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Mercury		0.00820		0.000200		0.01000		0		82.0		75		125		0.008069		1.64		20		

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 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#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42168

Sample ID	MB-42168	SampType:	MBLK	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	PBW	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586723			
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-42168	SampType:	LCS	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	LCSW	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586724			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00976		0.000200	0.01000	0		97.6	80	120				

Sample ID	LCSD-42168	SampType:	LCSD	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	LCSS02	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586725			
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	80	120	0.009762	3.13	20	

Sample ID	21120919-007DMS	SampType:	MS	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582			
Client ID:	ZZZZZZ	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586728			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.00824		0.000200	0.01000	0		82.4	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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: 42168

Sample ID	21120919-007DMSD	SampType:	MSD	TestCode:	HG_D_7470A	Units:	mg/L	Prep Date:	1/3/2022	RunNo:	105582											
Client ID:	ZZZZZZ	Batch ID:	42168	TestNo:	SW7470A			Analysis Date:	1/3/2022	SeqNo:	2586729											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Mercury		0.00859		0.000200		0.01000		0		85.9		75		125		0.008236		4.18		20		

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 sp |



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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105344

Sample ID	MB-R105344	SampType:	MBLK	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	PBW	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581451			
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-R105344	SampType:	LCS	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	LCSW	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581452			
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-R105344	SampType:	LCSD	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	LCSS02	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581453			
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 0 101 85 115 1,004 0.0996 10

Sample ID	21120955-001CDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	ZZZZZZ	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581468			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 1,860 50.0 1,890 1.60 10

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 sp



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105344

Sample ID	21120955-001CDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	ZZZZZZ	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581468			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	21120919-008CDUP	SampType:	DUP	TestCode:	TDS_2540C	Units:	mg/L	Prep Date:		RunNo:	105344			
Client ID:	ZZZZZZ	Batch ID:	R105344	TestNo:	SM2540C			Analysis Date:	12/22/2021	SeqNo:	2581469			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filterable)		135		50.0							130.0	3.77	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#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105443

Sample ID MB	SampType: MBLK	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105443
Client ID: PBW	Batch ID: R105443	TestNo: SW6020A		Analysis Date: 12/28/2021	SeqNo: 2582874
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	< 0.000250	0.000250			

Sample ID LCS	SampType: LCS	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105443
Client ID: LCSW	Batch ID: R105443	TestNo: SW6020A		Analysis Date: 12/28/2021	SeqNo: 2582875
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	0.0203	0.000250	0.0200	0	102 80 120

Sample ID LCSD	SampType: LCSD	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105443
Client ID: LCSS02	Batch ID: R105443	TestNo: SW6020A		Analysis Date: 12/28/2021	SeqNo: 2582879
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	0.0198	0.000250	0.0200	0	99.0 80 120 0.0203 2.68 20

Sample ID 21121081-005DMS	SampType: MS	TestCode: 6020A_D	Units: mg/L	Prep Date:	RunNo: 105443
Client ID: MW-2	Batch ID: R105443	TestNo: SW6020A		Analysis Date: 12/28/2021	SeqNo: 2582881
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	0.209	0.00250	0.200	0.000779	104 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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105443

Sample ID	21121081-005DMSD	SampType:	MSD	TestCode:	6020A_D	Units:	mg/L	Prep Date:		RunNo:	105443	
Client ID:	MW-2	Batch ID:	R105443	TestNo:	SW6020A			Analysis Date:	12/28/2021	SeqNo:	2582882	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.210	0.00250	0.200	0.000779	104	75	125	0.209	0.210	20	

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 sp |



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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105452

Sample ID	mblk	SampType: MBLK	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	PBW	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2583224	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	< 0.250	0.250				
Sulfate	< 0.250	0.250				

Sample ID	lcs	SampType: LCS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	LCSW	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2583225	
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	80 120
Sulfate	10.2	0.250	10.00	0	102	80 120

Sample ID	lcsd	SampType: LCS D	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	LCSS02	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/27/2021	SeqNo: 2583226	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	10.4	0.250	10.00	0	104	80 120 10.10 3.31 15
Sulfate	10.6	0.250	10.00	0	106	80 120 10.24 3.69 15

Sample ID	21121088-007bms	SampType: MS	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 105452
Client ID:	ZZZZZZ	Batch ID: R105452	TestNo: SW9056A	Analysis Date: 12/28/2021	SeqNo: 2583249	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	327	12.5	250.0	66.61	104	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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105452

Sample ID	21121088-007bms	SampType:	MS	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	105452			
Client ID:	ZZZZZZ	Batch ID:	R105452	TestNo:	SW9056A			Analysis Date:	12/28/2021	SeqNo:	2583249			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		261		12.5	250.0	0		105	80	120				

Sample ID	21121088-007bmsd	SampType:	MSD	TestCode:	9056_W	Units:	mg/L	Prep Date:		RunNo:	105452			
Client ID:	ZZZZZZ	Batch ID:	R105452	TestNo:	SW9056A			Analysis Date:	12/28/2021	SeqNo:	2583250			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		333		12.5	250.0	66.61		107	80	120	327.4	1.82	15	
Sulfate		265		12.5	250.0	0		106	80	120	261.3	1.41	15	

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#: 21121081
 12-Jan-22

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: R105454

Sample ID	BTEX LCS	SampType:	LCS	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:	RunNo:	105454	
Client ID:	LCSW	Batch ID:	R105454	TestNo:	SW8021B	Analysis Date:	12/28/2021	SeqNo:	2583426		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0464	0.00500	0.05000	0	92.8	72	120				
Ethylbenzene	0.0466	0.00500	0.05000	0	93.2	76	129				
m,p-Xylene	0.0932	0.0100	0.1000	0	93.2	75	125				
o-Xylene	0.0465	0.00500	0.05000	0	93.0	75	125				
Toluene	0.0461	0.0100	0.05000	0	92.2	78	120				
Xylenes, Total	0.140	0.0500	0.1500	0	93.1	75	125				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.100		0.1000		100	70	130				

Sample ID	BTEX LCSD	SampType:	LCSD	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:	RunNo:	105454	
Client ID:	LCSS02	Batch ID:	R105454	TestNo:	SW8021B	Analysis Date:	12/28/2021	SeqNo:	2583427		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.0467	0.00500	0.05000	0	93.4	72	120	0.04640	0.644	20	
Ethylbenzene	0.0473	0.00500	0.05000	0	94.6	76	129	0.04660	1.49	20	
m,p-Xylene	0.0943	0.0100	0.1000	0	94.3	75	125	0.09320	1.17	20	
o-Xylene	0.0467	0.00500	0.05000	0	93.4	75	125	0.04650	0.429	20	
Toluene	0.0466	0.0100	0.05000	0	93.2	78	120	0.04610	1.08	20	
Xylenes, Total	0.141	0.0500	0.1500	0	94.1	75	125	0.1397	0.997	20	
Surr: alpha, alpha, alpha-Trifluorotoluene	0.192		0.2000		96.0	70	130		0	20	

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 sp |



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105454

Sample ID	MBLK	SampType:	MBLK	TestCode:	8021_BTEX_	Units:	mg/L	Prep Date:		RunNo:	105454			
Client ID:	PBW	Batch ID:	R105454	TestNo:	SW8021B			Analysis Date:	12/28/2021	SeqNo:	2583430			
Analyte		Result		PQL		SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		< 0.00500		0.00500										
Ethylbenzene		< 0.00500		0.00500										
m,p-Xylene		< 0.0100		0.0100										
o-Xylene		< 0.00500		0.00500										
Toluene		< 0.0100		0.0100										
Xylenes, Total		< 0.0500		0.0500										
Surr: alpha, alpha, alpha-Trifluorotoluene		0.190				0.2000		95.2	70	130				

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#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105459

Sample ID	GAS LCS	SampType: LCS	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 105459
Client ID:	LCSW	Batch ID: R105459	TestNo: SW8015B	Analysis Date: 12/28/2021	SeqNo: 2583441	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
TPH (Gasoline Range)	14.4	0.150	12.50	0	115	80 130

Sample ID	GAS LCSD	SampType: LCSD	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 105459
Client ID:	LCSS02	Batch ID: R105459	TestNo: SW8015B	Analysis Date: 12/28/2021	SeqNo: 2583442	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
TPH (Gasoline Range)	13.2	0.150	12.50	0	106	80 130 14.41 8.53 20

Sample ID	MBLK	SampType: MBLK	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 105459
Client ID:	PBW	Batch ID: R105459	TestNo: SW8015B	Analysis Date: 12/28/2021	SeqNo: 2583445	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
TPH (Gasoline Range)	< 0.150	0.150				
Surr: alpha, alpha, alpha-Trifluorotoluene	0.188		0.2000		94.1	70 130

Sample ID	21121148-001AMS	SampType: MS	TestCode: 8015_G_W	Units: mg/L	Prep Date:	RunNo: 105459
Client ID:	ZZZZZ	Batch ID: R105459	TestNo: SW8015B	Analysis Date: 12/28/2021	SeqNo: 2584102	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
TPH (Gasoline Range)	24.4	0.150	12.50	13.09	90.2	70 130
Surr: alpha, alpha, alpha-Trifluorotoluene	0.0473		0.05000		94.6	70 130

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 sp



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105459

Sample ID	21121148-001AMS	SampType:	MS	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	105459			
Client ID:	ZZZZZZ	Batch ID:	R105459	TestNo:	SW8015B			Analysis Date:	12/28/2021	SeqNo:	2584102			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	21121148-001AMSD	SampType:	MSD	TestCode:	8015_G_W	Units:	mg/L	Prep Date:		RunNo:	105459			
Client ID:	ZZZZZZ	Batch ID:	R105459	TestNo:	SW8015B			Analysis Date:	12/28/2021	SeqNo:	2584103			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH (Gasoline Range)		23.5		0.150	12.50	13.09		83.4	70	130	24.37	3.55	20	
Surr: alpha, alpha, alpha-Trifluorotoluene		0.0491			0.05000			98.2	70	130		0	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 sp



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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105506

Sample ID MB	SampType: MBLK	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105506						
Client ID: PBW	Batch ID: R105506	TestNo: SW6010B		Analysis Date: 12/29/2021	SeqNo: 2584564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	< 0.0100	0.0100									
Cadmium	< 0.00500	0.00500									
Calcium	< 0.500	0.500									
Chromium	< 0.0100	0.0100									
Iron	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Magnesium	< 0.500	0.500									
Manganese	< 0.0100	0.0100									
Potassium	< 5.00	5.00									
Sodium	< 10.0	10.0									
Strontium	< 0.0100	0.0100									
Zinc	< 0.0100	0.0100									

Sample ID LCS	SampType: LCS	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105506						
Client ID: LCSW	Batch ID: R105506	TestNo: SW6010B		Analysis Date: 12/29/2021	SeqNo: 2584567						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.507	0.0100	0.5000	0	101	80	120				
Cadmium	0.497	0.00500	0.5000	0	99.5	80	120				
Calcium	50.2	0.500	50.00	0	100	80	120				
Chromium	0.506	0.0100	0.5000	0	101	80	120				
Iron	0.506	0.0100	0.5000	0	101	80	120				
Lead	0.506	0.0100	0.5000	0	101	80	120				
Magnesium	49.7	0.500	50.00	0	99.5	80	120				
Manganese	0.506	0.0100	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 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#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105506

Sample ID	LCS	SampType: LCS	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105506					
Client ID:	LCSW	Batch ID: R105506	TestNo: SW6010B	Analysis Date: 12/29/2021	SeqNo: 2584567						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	49.2	5.00	50.00	0	98.3	80	120				
Sodium	48.2	10.0	50.00	0	96.4	80	120				
Strontium	0.501	0.0100	0.5000	0	100	80	120				
Zinc	0.495	0.0100	0.5000	0	99.1	80	120				

Sample ID	LCSD	SampType: LCSD	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105506					
Client ID:	LCSS02	Batch ID: R105506	TestNo: SW6010B	Analysis Date: 12/29/2021	SeqNo: 2584568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.507	0.0100	0.5000	0	101	80	120	0.5066	0.0197		20
Cadmium	0.499	0.00500	0.5000	0	99.8	80	120	0.4973	0.307		20
Calcium	50.4	0.500	50.00	0	101	80	120	50.21	0.368		20
Chromium	0.506	0.0100	0.5000	0	101	80	120	0.5056	0.0237		20
Iron	0.505	0.0100	0.5000	0	101	80	120	0.5059	0.228		20
Lead	0.510	0.0100	0.5000	0	102	80	120	0.5064	0.650		20
Magnesium	49.9	0.500	50.00	0	99.9	80	120	49.74	0.400		20
Manganese	0.507	0.0100	0.5000	0	101	80	120	0.5060	0.172		20
Potassium	49.4	5.00	50.00	0	98.8	80	120	49.17	0.480		20
Sodium	49.4	10.0	50.00	0	98.7	80	120	48.22	2.33		20
Strontium	0.501	0.0100	0.5000	0	100	80	120	0.5014	0.0818		20
Zinc	0.496	0.0100	0.5000	0	99.3	80	120	0.4953	0.224		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 sp



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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105506

Sample ID	21121081-001DMS	SampType: MS	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105506					
Client ID:	MW-10	Batch ID: R105506	TestNo: SW6010B	Analysis Date: 12/29/2021	SeqNo: 2584570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.580	0.0100	0.5000	0.02804	110	75	125				
Cadmium	0.571	0.00500	0.5000	0	114	75	125				
Calcium	283	0.500	50.00	204.0	157	75	125				S
Chromium	0.549	0.0100	0.5000	0	110	75	125				
Iron	0.776	0.0100	0.5000	0.2056	114	75	125				
Lead	0.547	0.0100	0.5000	0	109	75	125				
Magnesium	175	0.500	50.00	92.28	165	75	125				S
Manganese	2.22	0.0100	0.5000	1.714	102	75	125				
Potassium	91.4	5.00	50.00	5.081	173	75	125				S
Sodium	394	10.0	50.00	314.6	160	75	125				S
Strontium	1.62	0.0100	0.5000	1.094	105	75	125				
Zinc	0.583	0.0100	0.5000	0	117	75	125				

Sample ID	21121081-001DMSD	SampType: MSD	TestCode: 6010-D	Units: mg/L	Prep Date:	RunNo: 105506					
Client ID:	MW-10	Batch ID: R105506	TestNo: SW6010B	Analysis Date: 12/29/2021	SeqNo: 2584571						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.581	0.0100	0.5000	0.02804	111	75	125	0.5798	0.205	20	
Cadmium	0.573	0.00500	0.5000	0	115	75	125	0.5713	0.285	20	
Calcium	280	0.500	50.00	204.0	152	75	125	282.6	0.943	20	S
Chromium	0.549	0.0100	0.5000	0	110	75	125	0.5492	0.0237	20	
Iron	0.777	0.0100	0.5000	0.2056	114	75	125	0.7757	0.112	20	
Lead	0.550	0.0100	0.5000	0	110	75	125	0.5472	0.558	20	
Magnesium	172	0.500	50.00	92.28	160	75	125	174.9	1.55	20	S
Manganese	2.22	0.0100	0.5000	1.714	101	75	125	2.222	0.145	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 sp



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105506

Sample ID	21121081-001DMSD	SampType:	MSD	TestCode:	6010-D	Units:	mg/L	Prep Date:		RunNo:	105506	
Client ID:	MW-10	Batch ID:	R105506	TestNo:	SW6010B			Analysis Date:	12/29/2021	SeqNo:	2584571	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium		89.9	5.00	50.00	5.081	170	75	125	91.42	1.73	20	S
Sodium		387	10.0	50.00	314.6	144	75	125	394.4	1.99	20	S
Strontium		1.62	0.0100	0.5000	1.094	104	75	125	1.619	0.263	20	
Zinc		0.584	0.0100	0.5000	0	117	75	125	0.5830	0.200	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	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 sp



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QC SUMMARY REPORT

WO#: 21121081
 12-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105558

Sample ID	MB-R105558	SampType:	MBLK	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105558
Client ID:	PBW	Batch ID:	R105558	TestNo:	SM2320 B			Analysis Date:	1/3/2022	SeqNo:	2586166
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Bicarbonate (As CaCO3)	< 20.0	20.0
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0
Alkalinity, Total (As CaCO3)	< 20.0	20.0

Sample ID	LCS-R105558	SampType:	LCS	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105558
Client ID:	LCSW	Batch ID:	R105558	TestNo:	SM2320 B			Analysis Date:	1/3/2022	SeqNo:	2586166
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Total (As CaCO3)	50.5	20.0	50.00	0	101	90	110
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Sample ID	21121081-003CDUP	SampType:	DUP	TestCode:	ALK	Units:	mgCaCO3/L	Prep Date:		RunNo:	105558
Client ID:	MW-4	Batch ID:	R105558	TestNo:	SM2320 B			Analysis Date:	1/3/2022	SeqNo:	2586170
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Alkalinity, Bicarbonate (As CaCO3)	340	20.0								320.0	6.06	20
Alkalinity, Carbonate (As CaCO3)	< 20.0	20.0								0	0	20
Alkalinity, Total (As CaCO3)	340	20.0								320.0	6.06	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
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 Lafayette, LA 70508-3344
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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **21121081** RcptNo: **1**

Logged by:	Tammy Thibodeaux	12/21/2021 4:30:00 PM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	12/21/2021 6:47:23 PM	<i>Tammy Thibodeaux</i>
Reviewed By:	Caitlin Duplantis	12/27/2021 1:10:57 PM	<i>Caitlin Duplantis</i>

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:
 Added trip blank as per sample received.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Not Present			



Chain of Custody

Laboratory Number: 211210 81

Client Information: Icen Environmental
 Contact Name: Jason Gills
 Address: 2049 Commercial Drive
 City, State Zip: Fort Allen, LA 70767
 Phone Number: 225.344.8490 Ext:
 Fax Number: 225.344.6654
 E-mail Address: jgills@icenv.com

Billing Information: SAME

PO Number:

Quote Number:

Required QC Level:

Bill Monthly: Yes No

Shipping Method: UPS / FedEx / NOW
 DHL / Element (Hand / Mail)

Project Name/Number: Henning II
 9403-210-0100

Sampler's Signature: [Signature]

Matrix Code: DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 SOL = Solid
 O = Oil
 SO = Soil
 F = Food
 SW = Swab
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Sample ID/Description	Which Regulations Apply:		Turn Time Standard <input checked="" type="checkbox"/> Standard RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Collection Information		Matrix	Quantity	Container Type P=Plastic, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	TDS/Chlorides	Cations/Anions	TPH DPO	BTEX/TPH G	Total Metals (MS)	Dispersed Metals	Requested Tests	Comments	
	Turn Time				Date	Time													Grab / Composite
	Date	Time																	
MW-10	<input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH	12.20.21	1045	G	AG	8	P, V	HCl, HNO ₃ , H ₂ SO ₄	X	X	X	X	X	X	X	X	Metals As - Method 6020 Pb, Cd, Cr, Fe, Mn, Pb, Sr, Zn, Hg	
MW-5			12.20.21	1330	G	AG	8	P, V		X	X	X	X	X	X	X	X	Cations Na, Ca, Mg, K	
MW-4			12.20.21	1505	G	AG	8	P, V		X	X	X	X	X	X	X	X	Anions Sulfate Alk. Carbonate	
MW-3			12.20.21	1630	G	AG	8	P, V		X	X	X	X	X	X	X	X	Alk. Bicarb	
MW-2			12.21.21	0955	G	AG	8	P, V		X	X	X	X	X	X	X	X		
TRIP Blank			12/21/21	-	G	AG	4	V		HCl									

Relinquished by: [Signature] **Date/Time:** 12.21.21/1630

Received by: [Signature] **Date/Time:** 12/21/21/1630

Field Notes:

Received at lab on ice? Yes No Temp: 4.8

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.

6900 North US 31
 Columbus, IN 47201 USA
 P 812-375-0531
 F 812-375-0731

328 Ley Road, Suite 100
 Fort Wayne, IN 46825 USA
 P 260-471-7000
 F 260-471-7777

909 Executive Dr
 Warsaw, IN 46580 USA
 P 574-267-3305
 F 574-269-6569

3371 Cleveland Road, Suite 100A
 South Bend, IN 46628 USA
 P 574-277-0707
 F 574-273-5699

2417 W. Pinhook Rd
 Lafayette, LA 70508 USA
 P 337-235-0483
 F 337-233-6540



Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
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January 29, 2022

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Hennings II/9403-010-0100

Order No.: 21121085

Dear Greg Miller:

Element Materials Technology Lafayette received 48 sample(s) on 12/21/2021 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 that reads 'Cristina Thibeaux'.

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



Element Materials Technology Lafayette
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Lafayette, LA 70508-3344
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Case Narrative

WO#: 21121085
Date: 1/29/2022

CLIENT: ICON Environmental Services

Project: Hennings II/9403-010-0100

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.

Please review the Sample Log-in Check List regarding the discrepancies between the chain of custody and the samples received and the documentation of client resolution.

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
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Analytical Report

(consolidated)

WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021
Project: Hennings II/9403-010-0100
Lab ID: 21121085-001 **Matrix:** SOIL
Client Sample ID MW-11 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
					LDNR 29-B	Analyst: JMI
Electrical Conductivity	2.99	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE						
					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	11.0	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO						
					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	10.9	0.10			1	1/26/2022
Soluble Calcium	4.16	0.02		meq/L	1	1/26/2022
Soluble Magnesium	2.04	0.05		meq/L	1	1/26/2022
Soluble Sodium	19.2	0.25		meq/L	1	1/26/2022
METALS IN SOIL OR SLUDGE BY ICP						
					SW6010B	SW3050B Analyst: STS
Barium	108	0.925		mg/Kg-dry	1	1/19/2022 5:52:08 PM
PERCENT MOISTURE						
					LDNR 29-B	Analyst: BXB
Percent Moisture	16.9	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021 12:05:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-002 **Matrix:** SOIL
Client Sample ID MW-11 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.99	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	11.8	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	11.5	0.10			1	1/26/2022
Soluble Calcium	2.01	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.95	0.05		meq/L	1	1/26/2022
Soluble Sodium	14.0	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.9	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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 Lafayette, LA 70508-3344
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 Website: www.element.com

Analytical Report

(consolidated)

WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021 12:10:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-003 **Matrix:** SOIL
Client Sample ID MW-11 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.84	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	10.2	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	10.8	0.10			1	1/26/2022
Soluble Calcium	1.65	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.86	0.05		meq/L	1	1/26/2022
Soluble Sodium	12.1	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.4	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021 12:15:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-004 **Matrix:** SOIL
Client Sample ID MW-11 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	2.15	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.1	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021 12:20:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-005 **Matrix:** SOIL
Client Sample ID MW-11 20-22

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.99	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.3	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021 3:00:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-006 **Matrix:** SOIL
Client Sample ID H-17 SW 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.42	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	7.11	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	7.54	0.10			1	1/26/2022
Soluble Calcium	2.03	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.86	0.05		meq/L	1	1/26/2022
Soluble Sodium	9.06	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	20.4	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021 3:05:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-007 **Matrix:** SOIL
Client Sample ID H-17 SW 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	2.14	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	6.29	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	5.41	0.10			1	1/26/2022
Soluble Calcium	5.37	0.02		meq/L	1	1/26/2022
Soluble Magnesium	1.99	0.05		meq/L	1	1/26/2022
Soluble Sodium	10.4	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.7	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/7/2021 3:10:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-008 **Matrix:** SOIL
Client Sample ID H-17 SW 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	3.07	0.10		mmhos/cm	1	1/18/2022 10:45:00 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	24.2	1.00		wt%	1	1/4/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 2:00:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-009 **Matrix:** SOIL
Client Sample ID MW-4 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	25.4	0.100		meq/100g	1	1/24/2022
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.27	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	1.70	0.10		%	1	1/24/2022
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	2.37	0.10			1	1/26/2022
Soluble Calcium	0.63	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.32	0.05		meq/L	1	1/26/2022
Soluble Sodium	1.63	0.25		meq/L	1	1/26/2022
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Barium	830	0.916		mg/Kg-dry	1	1/19/2022 5:54:26 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	1,150	50.0		mg/Kg-dry	1	1/20/2022 8:01:44 PM
PERCENT MOISTURE						
Percent Moisture	14.0	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 2:05:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-010 **Matrix:** SOIL
Client Sample ID MW-4 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS						
CATION EXCHANGE CAPACITY						
Cation Exchange Capacity	39.3	0.100		meq/100g	1	1/24/2022
ELECTRICAL CONDUCTIVITY @ SATURATION						
Electrical Conductivity	0.67	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
29B SALTS						
EXCHANGEABLE SODIUM PERCENTAGE						
Exchangeable Sodium %	8.53	0.10		%	1	1/24/2022
29B SALTS						
SODIUM ADSORPTION RATIO						
Sodium Adsorption Ratio	5.98	0.10			1	1/26/2022
Soluble Calcium	0.78	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.39	0.05		meq/L	1	1/26/2022
Soluble Sodium	4.57	0.25		meq/L	1	1/26/2022
29B METALS						
METALS IN SOIL OR SLUDGE BY ICP						
Barium	261	0.942		mg/Kg-dry	1	1/19/2022 6:01:22 PM
29B METALS						
TRUE TOTAL BARIUM						
True Total Barium	378	49.2		mg/Kg-dry	1	1/20/2022 8:04:03 PM
PERCENT MOISTURE						
Percent Moisture	16.0	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 2:10:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-011 **Matrix:** SOIL
Client Sample ID MW-4 16-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	2.24	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.1	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 2:15:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-012 **Matrix:** SOIL
Client Sample ID MW-4 40-42

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.76	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	182	7.66		mg/Kg-dry	20	1/18/2022 1:48:07 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.4	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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 Lafayette, LA 70508-3344
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WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 2:20:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-013 **Matrix:** SOIL
Client Sample ID MW-4 48-50

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.53	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.8	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 2:25:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-014 **Matrix:** SOIL
Client Sample ID MW-4 58-60

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.62	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	22.2	3.33		mg/Kg-dry	10	1/18/2022 2:01:55 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.0	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 3:05:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-015 **Matrix:** SOIL
Client Sample ID MW-3 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.46	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE						
					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	2.14	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO						
					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	3.50	0.10			1	1/26/2022
Soluble Calcium	1.19	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.35	0.05		meq/L	1	1/26/2022
Soluble Sodium	3.07	0.25		meq/L	1	1/26/2022
29B METALS METALS IN SOIL OR SLUDGE BY ICP						
					SW6010B	SW3050B Analyst: STS
Barium	2,220	0.939		mg/Kg-dry	1	1/19/2022 6:03:41 PM
29B METALS TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS
True Total Barium	3,430	46.3		mg/Kg-dry	1	1/20/2022 8:06:21 PM
PERCENT MOISTURE						
					LDNR 29-B	Analyst: BXB
Percent Moisture	16.6	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 3:10:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-016 **Matrix:** SOIL
Client Sample ID MW-3 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.60	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	18.9	0.10	*	%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	7.32	0.10			1	1/26/2022
Soluble Calcium	0.40	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.27	0.05		meq/L	1	1/26/2022
Soluble Sodium	4.23	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	20.5	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/8/2021 3:15:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-017 **Matrix:** SOIL
Client Sample ID MW-3 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.27	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	24.7	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/9/2021 12:45:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-018 **Matrix:** SOIL
Client Sample ID MW-3 30-32

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.62	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	27.2	3.13		mg/Kg-dry	10	1/18/2022 2:15:44 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.7	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/9/2021 12:50:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-019 **Matrix:** SOIL
Client Sample ID MW-3 48-50

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.88	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.4	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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Analytical Report

(consolidated)

WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/9/2021 12:55:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-020 **Matrix:** SOIL
Client Sample ID MW-3 58-60

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.40	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	29.0	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/9/2021 4:20:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-021 **Matrix:** SOIL
Client Sample ID MW-2 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.96	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE						
					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	3.23	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO						
					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	4.80	0.10			1	1/26/2022
Soluble Calcium	2.27	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.64	0.05		meq/L	1	1/26/2022
Soluble Sodium	5.79	0.25		meq/L	1	1/26/2022
29B METALS METALS IN SOIL OR SLUDGE BY ICP						
					SW6010B	SW3050B Analyst: STS
Barium	2,670	0.964		mg/Kg-dry	1	1/19/2022 6:06:00 PM
29B METALS TRUE TOTAL BARIUM						
					LDNR 29-B	Analyst: STS
True Total Barium	4,250	49.3		mg/Kg-dry	1	1/20/2022 8:13:16 PM
PERCENT MOISTURE						
					LDNR 29-B	Analyst: BXB
Percent Moisture	16.6	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/9/2021 4:25:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-022 **Matrix:** SOIL
Client Sample ID MW-2 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	3.32	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	7.79	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	10.2	0.10			1	1/26/2022
Soluble Calcium	8.43	0.02		meq/L	1	1/26/2022
Soluble Magnesium	1.51	0.05		meq/L	1	1/26/2022
Soluble Sodium	22.7	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.2	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/9/2021 4:30:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-023 **Matrix:** SOIL
Client Sample ID MW-2 12-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.86	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	26.9	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/9/2021 4:35:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-024 **Matrix:** SOIL
Client Sample ID MW-2 32-34

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.57	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.0	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/10/2021 9:05:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-025 **Matrix:** SOIL
Client Sample ID MW-2 42-44

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.30	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
SOLUBLE INORGANIC ANIONS IN SOIL BY IC					SW9056A	Analyst: SGP
Chloride	13.2	1.45		mg/Kg-dry	5	1/18/2022 2:29:31 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	16.8	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/10/2021 9:10:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-026 **Matrix:** SOIL
Client Sample ID MW-2 48-50

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.79	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.8	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/10/2021 9:15:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-027 **Matrix:** SOIL
Client Sample ID MW-2 58-60

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.84	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	32.2	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 1:30:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-028 **Matrix:** SOIL
Client Sample ID MW-10 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
						Analyst: JMI
Electrical Conductivity	0.67	0.10		mmhos/cm	1	1/18/2022 11:00:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE						
						Analyst: BXB
Exchangeable Sodium %	4.57	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO						
						Analyst: STS
Sodium Adsorption Ratio	4.84	0.10			1	1/26/2022
Soluble Calcium	1.75	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.97	0.05		meq/L	1	1/26/2022
Soluble Sodium	5.65	0.25		meq/L	1	1/26/2022
29B METALS METALS IN SOIL OR SLUDGE BY ICP						
						Analyst: STS
Barium	473	0.971		mg/Kg-dry	1	1/19/2022 6:08:19 PM
29B METALS TRUE TOTAL BARIUM						
						Analyst: STS
True Total Barium	661	46.5		mg/Kg-dry	1	1/20/2022 8:15:33 PM
PERCENT MOISTURE						
						Analyst: BXB
Percent Moisture	13.3	1.00		wt%	1	1/4/2022 2:45:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 1:35:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-029 **Matrix:** SOIL
Client Sample ID MW-10 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
						Analyst: JMI
Electrical Conductivity	0.72	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE						
						Analyst: BXB
Exchangeable Sodium %	9.45	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO						
						Analyst: STS
Sodium Adsorption Ratio	8.33	0.10			1	1/26/2022
Soluble Calcium	0.67	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.40	0.05		meq/L	1	1/26/2022
Soluble Sodium	6.09	0.25		meq/L	1	1/26/2022
29B METALS METALS IN SOIL OR SLUDGE BY ICP						
						Analyst: STS
Barium	805	0.983		mg/Kg-dry	1	1/19/2022 6:10:38 PM
29B METALS TRUE TOTAL BARIUM						
						Analyst: STS
True Total Barium	985	47.7		mg/Kg-dry	1	1/20/2022 8:17:52 PM
PERCENT MOISTURE						
						Analyst: BXB
Percent Moisture	16.8	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 1:40:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-030 **Matrix:** SOIL
Client Sample ID MW-10 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.44	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	8.63	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	6.91	0.10			1	1/26/2022
Soluble Calcium	2.48	0.02		meq/L	1	1/26/2022
Soluble Magnesium	1.32	0.05		meq/L	1	1/26/2022
Soluble Sodium	9.53	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	18.4	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 1:45:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-031 **Matrix:** SOIL
Client Sample ID MW-10 10-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.49	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.9	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 1:50:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-032 **Matrix:** SOIL
Client Sample ID MW-10 12-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.35	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	21.0	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 1:55:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-033 **Matrix:** SOIL
Client Sample ID MW-10 16-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.09	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	23.4	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 3:30:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-034 **Matrix:** SOIL
Client Sample ID H-1SE 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.52	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE						
					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	1.40	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO						
					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	2.84	0.10			1	1/26/2022
Soluble Calcium	1.63	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.67	0.05		meq/L	1	1/26/2022
Soluble Sodium	3.04	0.25		meq/L	1	1/26/2022
METALS IN SOIL OR SLUDGE BY ICP						
					SW6010B	SW3050B Analyst: STS
Barium	1,020	0.985		mg/Kg-dry	1	1/19/2022 6:19:52 PM
PERCENT MOISTURE						
					LDNR 29-B	Analyst: BXB
Percent Moisture	14.3	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 3:35:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-035 **Matrix:** SOIL
Client Sample ID H-1SE 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION						
					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.82	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE						
					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	8.86	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO						
					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	7.32	0.10			1	1/26/2022
Soluble Calcium	0.81	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.42	0.05		meq/L	1	1/26/2022
Soluble Sodium	5.73	0.25		meq/L	1	1/26/2022
METALS IN SOIL OR SLUDGE BY ICP						
					SW6010B	SW3050B Analyst: STS
Barium	191	0.911		mg/Kg-dry	1	1/19/2022 6:31:25 PM
PERCENT MOISTURE						
					LDNR 29-B	Analyst: BXB
Percent Moisture	18.2	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 3:40:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-036 **Matrix:** SOIL
Client Sample ID H-1SE 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.04	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.4	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 3:45:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-037 **Matrix:** SOIL
Client Sample ID H-1SE 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.05	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	22.2	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 4:20:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-038 **Matrix:** SOIL
Client Sample ID H-1R 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	2.07	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	1,940	0.921		mg/Kg-dry	1	1/19/2022 6:33:44 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	15.4	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/13/2021 4:25:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-039 **Matrix:** SOIL
Client Sample ID H-1E 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	399	0.931		mg/Kg-dry	1	1/19/2022 6:36:02 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.8	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 11:25:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-040 **Matrix:** SOIL
Client Sample ID MW-8 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
29B SALTS (EC, ESP, SAR) ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.45	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	6.20	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	5.20	0.10			1	1/26/2022
Soluble Calcium	0.60	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.22	0.05		meq/L	1	1/26/2022
Soluble Sodium	3.34	0.25		meq/L	1	1/26/2022
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	191	0.972		mg/Kg-dry	1	1/19/2022 6:38:21 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	15.4	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 11:30:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-041 **Matrix:** SOIL
Client Sample ID MW-8 4-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	0.82	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
29B SALTS (EC, ESP, SAR) EXCHANGEABLE SODIUM PERCENTAGE					LDNR 29-B	LDNR 29-B Analyst: BXB
Exchangeable Sodium %	9.18	0.10		%	1	1/24/2022
29B SALTS (EC, ESP, SAR) SODIUM ADSORPTION RATIO					LDNR 29-B	LDNR 29-B Analyst: STS
Sodium Adsorption Ratio	8.55	0.10			1	1/26/2022
Soluble Calcium	0.66	0.02		meq/L	1	1/26/2022
Soluble Magnesium	0.31	0.05		meq/L	1	1/26/2022
Soluble Sodium	5.97	0.25		meq/L	1	1/26/2022
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	17.9	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 11:35:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-042 **Matrix:** SOIL
Client Sample ID MW-8 8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.70	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	19.2	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 11:40:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-043 **Matrix:** SOIL
Client Sample ID MW-8 14-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	2.20	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	21.7	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 11:45:00 AM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-044 **Matrix:** SOIL
Client Sample ID MW-8 20-22

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.93	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	17.2	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 2:00:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-045 **Matrix:** SOIL
Client Sample ID H-19 NE 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	2.07	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	2,170	0.934		mg/Kg-dry	1	1/19/2022 6:40:41 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.5	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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 Lafayette, LA 70508-3344
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Analytical Report

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WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 2:05:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-046 **Matrix:** SOIL
Client Sample ID H-19R 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP				SW6010B	SW3050B	Analyst: STS
Barium	4,530	0.925		mg/Kg-dry	1	1/19/2022 6:42:59 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.6	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 2:10:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-047 **Matrix:** SOIL
Client Sample ID H-19SW 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.60	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	3,950	0.948		mg/Kg-dry	1	1/19/2022 6:45:17 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.8	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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#: 21121085

Date Reported: 1/29/2022

CLIENT: ICON Environmental Services **Collection Date:** 12/14/2021 2:15:00 PM
Project: Hennings II/9403-010-0100
Lab ID: 21121085-048 **Matrix:** SOIL
Client Sample ID H-18SW 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION					LDNR 29-B	Analyst: JMI
Electrical Conductivity	1.00	0.10		mmhos/cm	1	1/18/2022 11:30:00 AM
METALS IN SOIL OR SLUDGE BY ICP					SW6010B SW3050B	Analyst: STS
Barium	2,020	0.967		mg/Kg-dry	1	1/19/2022 6:47:36 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	15.9	1.00		wt%	1	1/5/2022 1:00:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range
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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42258

Sample ID	MB-42258	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	PBS	Batch ID:	42258	TestNo:	SW6010B	SW3050B		Analysis Date:	1/19/2022	SeqNo:	2602371			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		< 1.00		1.00										

Sample ID	LCS-42258	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	LCSS	Batch ID:	42258	TestNo:	SW6010B	SW3050B		Analysis Date:	1/19/2022	SeqNo:	2602372			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		49.9		1.00	50.00	0		99.8	80	120				

Sample ID	LCSD-42258	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	LCSS02	Batch ID:	42258	TestNo:	SW6010B	SW3050B		Analysis Date:	1/19/2022	SeqNo:	2602373			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		49.9		1.00	50.00	0		99.8	80	120	49.89	0.0180	20	

Sample ID	21120914-012AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	ZZZZZZ	Batch ID:	42258	TestNo:	SW6010B	SW3050B		Analysis Date:	1/19/2022	SeqNo:	2602375			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		223		0.937	46.85	175.7		100	75	125				

Qualifiers:

- | | | |
|---|--|--|
| * Value exceeds Maximum Contaminant Level. | E Value above quantitation range | 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#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42258

Sample ID	21120914-012AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068		
Client ID:	ZZZZZZ	Batch ID:	42258	TestNo:	SW6010B		SW3050B	Analysis Date:	1/19/2022	SeqNo:	2602376		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		219		0.929	46.46	175.7	94.0	75	125	222.6	1.47	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42259

Sample ID	MB-42259	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	PBS	Batch ID:	42259	TestNo:	SW6010B SW3050B			Analysis Date:	1/19/2022	SeqNo:	2602400			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		< 1.00		1.00										

Sample ID	LCS-42259	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	LCSS	Batch ID:	42259	TestNo:	SW6010B SW3050B			Analysis Date:	1/19/2022	SeqNo:	2602401			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		47.8		1.00	50.00	0		95.6	80	120				

Sample ID	LCSD-42259	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	LCSS02	Batch ID:	42259	TestNo:	SW6010B SW3050B			Analysis Date:	1/19/2022	SeqNo:	2602402			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		48.1		1.00	50.00	0		96.2	80	120	47.78	0.622	20	

Sample ID	21121085-034AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068			
Client ID:	H-1SE 0-2	Batch ID:	42259	TestNo:	SW6010B SW3050B			Analysis Date:	1/19/2022	SeqNo:	2602404			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		1,030		0.976	48.81	1,022		21.4	75	125				S

Qualifiers:

- | | | |
|---|--|--|
| * Value exceeds Maximum Contaminant Level. | E Value above quantitation range | 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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42259

Sample ID	21121085-034AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/10/2022	RunNo:	106068											
Client ID:	H-1SE 0-2	Batch ID:	42259	TestNo:	SW6010B		SW3050B	Analysis Date:	1/19/2022	SeqNo:	2602407											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Barium		1,010		0.921		46.04		1,022		-34.6		75		125		1,033		2.59		20		S

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42306

Sample ID	MB-42306	SampType:	MBLK	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	1/13/2022	RunNo:	106102			
Client ID:	PBS	Batch ID:	42306	TestNo:	LDNR 29-B			Analysis Date:	1/20/2022	SeqNo:	2603203			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		< 50.0		50.0										

Sample ID	LCS-42306	SampType:	LCS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	1/13/2022	RunNo:	106102			
Client ID:	LCSS	Batch ID:	42306	TestNo:	LDNR 29-B			Analysis Date:	1/20/2022	SeqNo:	2603204			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,680		50.0	5,000	0		93.6	75	125				

Sample ID	LCSD-42306	SampType:	LCSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	1/13/2022	RunNo:	106102			
Client ID:	LCSS02	Batch ID:	42306	TestNo:	LDNR 29-B			Analysis Date:	1/20/2022	SeqNo:	2603205			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		4,700		50.0	5,000	0		94.1	75	125	4,679	0.516	20	

Sample ID	21120914-015AMS	SampType:	MS	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	1/13/2022	RunNo:	106102			
Client ID:	ZZZZZZ	Batch ID:	42306	TestNo:	LDNR 29-B			Analysis Date:	1/20/2022	SeqNo:	2603207			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		19,000		45.9	4,587	14,350		101	75	125				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range	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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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42306

Sample ID	21120914-015AMSD	SampType:	MSD	TestCode:	TTBA	Units:	mg/Kg-dry	Prep Date:	1/13/2022	RunNo:	106102		
Client ID:	ZZZZZZ	Batch ID:	42306	TestNo:	LDNR 29-B			Analysis Date:	1/20/2022	SeqNo:	2603208		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
True Total Barium		18,000		50.0	4,995	14,350	73.1	75	125	18,960	5.18	20	S

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	E Value above quantitation range	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#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42320

Sample ID	21121085-021Adup	SampType:	DUP	TestCode:	ESP_S	Units:	%	Prep Date:	1/17/2022	RunNo:	106360		
Client ID:	MW-2 0-2	Batch ID:	42320	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/24/2022	SeqNo:	2610451		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Exchangeable Sodium %		3.02		0.10						3.23	6.72	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42321

Sample ID	21121085-021Adup	SampType:	DUP	TestCode:	CEC	Units:	meq/100g	Prep Date:	1/17/2022	RunNo:	106360
Client ID:	MW-2 0-2	Batch ID:	42321	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/24/2022	SeqNo:	2610363
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		29.7		0.100						28.82	3.01 20

Sample ID	lcs-42321	SampType:	LCS	TestCode:	CEC	Units:	meq/100g	Prep Date:	1/17/2022	RunNo:	106360
Client ID:	LCSS	Batch ID:	42321	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/24/2022	SeqNo:	2610372
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		21.0		0.100	25.00	0	84.0	76	124		

Sample ID	lcsd-42321	SampType:	LCSD	TestCode:	CEC	Units:	meq/100g	Prep Date:	1/17/2022	RunNo:	106360
Client ID:	LCSS02	Batch ID:	42321	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/24/2022	SeqNo:	2610373
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Cation Exchange Capacity		22.4		0.100	25.00	0	89.6	76	124	21.01	6.36 20

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode

- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit

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



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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: 42361

Sample ID	21121085-021Adup	SampType:	DUP	TestCode:	SAR_S	Units:		Prep Date:	1/19/2022	RunNo:	106365		
Client ID:	MW-2 0-2	Batch ID:	42361	TestNo:	LDNR 29-B	LDNR 29-B		Analysis Date:	1/26/2022	SeqNo:	2610641		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium Adsorption Ratio		5.05		0.10						4.80	5.03	20	
Soluble Calcium		2.43		0.02						2.27	6.94	20	
Soluble Magnesium		0.68		0.05						0.64	6.87	20	
Soluble Sodium		6.30		0.25						5.79	8.49	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105707

Sample ID	21120834-001Adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105707		
Client ID:	ZZZZZZ	Batch ID:	R105707	TestNo:	LDNR 29-B			Analysis Date:	12/22/2021	SeqNo:	2591018		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		13.3		1.00						12.90	3.05	20	

Sample ID	21120917-007Adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105707		
Client ID:	ZZZZZZ	Batch ID:	R105707	TestNo:	LDNR 29-B			Analysis Date:	1/4/2022	SeqNo:	2591166		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		22.6		1.00						23.00	1.75	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105759

Sample ID	21121085-041Adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105759			
Client ID:	MW-8 4-6	Batch ID:	R105759	TestNo:	LDNR 29-B			Analysis Date:	1/5/2022	SeqNo:	2592600			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		19.2		1.00							17.90	7.01	20	

Sample ID	21121085-021Adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105759			
Client ID:	MW-2 0-2	Batch ID:	R105759	TestNo:	LDNR 29-B			Analysis Date:	1/4/2022	SeqNo:	2592621			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		14.9		1.00							16.60	10.8	20	

Sample ID	21120914-001Adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105759			
Client ID:	ZZZZZ	Batch ID:	R105759	TestNo:	LDNR 29-B			Analysis Date:	1/5/2022	SeqNo:	2592631			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		19.0		1.00							18.60	2.13	20	

Sample ID	21120935-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105759			
Client ID:	ZZZZZ	Batch ID:	R105759	TestNo:	LDNR 29-B			Analysis Date:	12/29/2021	SeqNo:	2592659			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		19.0		1.00							19.00	0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R105759

Sample ID	21121162-001Adup	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105759											
Client ID:	ZZZZZZ	Batch ID:	R105759	TestNo:	LDNR 29-B			Analysis Date:	1/5/2022	SeqNo:	2592675											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Percent Moisture		16.2		1.00												15.70		3.13		20		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: R105996

Sample ID	MB-R105994	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105996
Client ID:	PBS	Batch ID:	R105996	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600490
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity < 0.10 0.10

Sample ID	LCS1-R105994	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105996
Client ID:	ZZZZZ	Batch ID:	R105996	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600491
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 0.55 0.10 0.50 0 109 90 110

Sample ID	LCS2-R105994	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105996
Client ID:	ZZZZZ	Batch ID:	R105996	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600492
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 57.8 0.10 53.00 0 109 90 110

Sample ID	21121162-001ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	105996
Client ID:	ZZZZZ	Batch ID:	R105996	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600506
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 0.23 0.10 0.23 0.09 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range	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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 2417 W. Pinhook Road
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R106000

Sample ID	MB-R105996	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106000
Client ID:	PBS	Batch ID:	R106000	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600598
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R105996	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106000
Client ID:	ZZZZZ	Batch ID:	R106000	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600599
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.55		0.10	0.50	0	109	90	110		

Sample ID	LCS2-R105996	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106000
Client ID:	ZZZZZ	Batch ID:	R106000	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600600
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		57.4		0.10	53.00	0	108	90	110		

Sample ID	21121085-021ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106000
Client ID:	MW-2 0-2	Batch ID:	R106000	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600614
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.96		0.10						0.96	0.21 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range	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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services

Project: Hennings II/9403-010-0100

BatchID: R106002

Sample ID	MB-R106000	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106002
Client ID:	PBS	Batch ID:	R106002	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600653
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity < 0.10 0.10

Sample ID	LCS1-R106000	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106002
Client ID:	ZZZZZ	Batch ID:	R106002	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600654
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 0.54 0.10 0.50 0 106 90 110

Sample ID	LCS2-R106000	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106002
Client ID:	ZZZZZ	Batch ID:	R106002	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600655
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 57.6 0.10 53.00 0 109 90 110

Sample ID	21121085-041ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106002
Client ID:	MW-8 4-6	Batch ID:	R106002	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2600669
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual

Electrical Conductivity 0.82 0.10 0.82 0.12 20

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	E	Value above quantitation range	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#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R106034

Sample ID	mblk	SampType:	MBLK	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	106034			
Client ID:	PBS	Batch ID:	R106034	TestNo:	SW9056A			Analysis Date:	1/18/2022	SeqNo:	2601375			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		< 0.250		0.250										

Sample ID	lcs	SampType:	LCS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	106034			
Client ID:	LCSS	Batch ID:	R106034	TestNo:	SW9056A			Analysis Date:	1/18/2022	SeqNo:	2601376			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		10.5		0.250	10.00	0		105	80	120				

Sample ID	lcsd	SampType:	LCSD	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	106034			
Client ID:	LCSS02	Batch ID:	R106034	TestNo:	SW9056A			Analysis Date:	1/18/2022	SeqNo:	2601377			
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	80	120	10.47	1.30	15	

Sample ID	22010367-003ams	SampType:	MS	TestCode:	9056_S	Units:	mg/Kg-dry	Prep Date:		RunNo:	106034			
Client ID:	ZZZZZZ	Batch ID:	R106034	TestNo:	SW9056A			Analysis Date:	1/18/2022	SeqNo:	2601379			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		15,400		125	2,500	12,770		104	80	120				E

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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QC SUMMARY REPORT

WO#: 21121085
 29-Jan-22

Client: ICON Environmental Services
Project: Hennings II/9403-010-0100

BatchID: R106034

Sample ID	22010367-003amsd	SampType: MSD	TestCode: 9056_S	Units: mg/Kg-dry	Prep Date:	RunNo: 106034					
Client ID: ZZZZZZ	Batch ID: R106034	TestNo: SW9056A	Analysis Date: 1/18/2022	SeqNo: 2601380							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	15,500	125	2,500	12,770	108	80	120	15,380	0.665	15	E

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- M Matrix Interference
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- SDL Sample detection limit
- H Holding times for preparation or analysis exceeded
- RL Reporting Limit
- U Analyte not detected



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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **21121085** RcptNo: **1**

Logged by:	Tammy Thibodeaux	12/21/2021 3:15:00 PM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	12/22/2021 6:40:41 AM	<i>Tammy Thibodeaux</i>
Reviewed By:	Caitlin Duplantis	1/3/2022 10:29:55 AM	<i>Caitlin Duplantis</i>

Chain of Custody

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

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° 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text" value="Jason Sills"/>	Date	<input type="text" value="12/22/2021"/>
By Whom:	<input type="text" value="Cristina Thibeaux"/>	Via:	<input checked="" type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="MW-3 0-2, 4-6, 14-16 times different. See below"/>		
Client Instructions:	<input type="text" value="The bags are wrong. The COC are correct for those samples."/>		

18. Additional remarks:
 Improper error correction(s) made by client.
 MW-3 0-2 COC says 15:05 bag has 17:05,
 MW-3 4-6 COC 15:10 bag has 17:15,
 MW-3 14-16 COC 15:15 bag has 17:20

Cooler Information



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Sample Log-In Check List

Client Name: **ICON_ENV**

Work Order Number: **21121085**

RcptNo: 1

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Not Present			



Chain of Custody

Laboratory Number: **2121088**

Client Information:
 Company Name: **Iron Env**
 Contact Name: **Jana Silb**
 Address: **2019 Commercial Dr**
 City, State Zip: **Port Allen La 70767**
 Phone Number: **225 344 8140**
 Fax Number:
 E-mail Address:

Billing Information:
 PO Number:
 Quote Number:
 Required QC Level:
 Bill Monthly: Yes No
 Ext:

Project Name/Number: **Henning's II**
Matrix Code:
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Shipping Method:
 UPS / FedEx / NOW
 DHL / Element / Hand / Mail

Page **1** of **6**

Sample ID/Description	Which Regulations Apply:		Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Collection Information		Container Type Quantity	Pres. HCl, HNO ₃ , H ₂ SO ₄ NaOH, Na ₂ SO ₄	Requested Tests	Comments
	Date				Matrix					
	Date	Time								
MW-11	0-2'	12-7-21	1200	G	40L	P				
MW-11	4-6'	12-7-21	1205							
MW-11	8-10'	12-7-21	1210							
MW-11	10-12'	12-7-21	1215							
MW-11	20-22'	12-7-21	1220							
H-17 SW	4-6'	12-7-21	1500							
H-17 SW	8-10'	12-7-21	1505							
H-17 SW	10-12'	12-7-21	1510							
MW-4	0-2'	12-8-21	1400							

Relinquished by	Date/Time	Received by	Date/Time	Field Notes
<i>[Signature]</i>	12-21-21 1250	<i>[Signature]</i>	12-21-21 1250	Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 21.5
<i>[Signature]</i>	12-21-21 1515	<i>[Signature]</i>	12-21-21 1515	

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element™

Chain of Custody

Laboratory Number: 21121085

Client Information: Iron Env **Billing Information:** same

Company Name: Iron Env **PO Number:** /

Contact Name: same **Quote Number:** /

Address: same **Required QC Level:** /

City, State, Zip: same **Ext:** /

Phone Number: same **Ext:** /

Fax Number: same **Ext:** /

E-mail Address: same

Project Name/Number: Heming II **Page 2 of 6**

Sampler's Signature: [Signature] **Matrix Code:** DW = Drinking Water
WW = Waste Water
GW = Ground Water
AQ = Aqueous
OT = Other
SL = Sludge
O = Oil
F = Food
NG = Natural Gas
NGL = Natural Gas Liquid
PW = Produced Water
CF = Completion Fluid

Shipping Method: UPS / FedEx / NOW
DHL / Element / Hand / Mail

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RI/SC	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information		Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type P=Plastic, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests	Comments									
			Date	Time														
			Matrix															
MW-4	4-6'	12-8-21	1405	G	SOL	1		X	Soluble Chlorides									
MW-4	16-18'		1410															
MW-4	40-42'		1415															
MW-4	48-50'		1420															
MW-4	58-60'		1425															
MW-3	0-2'		1505															
MW-3	4-6'		1510															
MW-3	14-16'		1515															
MW-3	30-32'		12-9-21	1205														

Relinquished by: [Signature] **Date/Time:** 12-21-21 12:30

Received by: [Signature] **Date/Time:** 12-21-21 12:50

Field Notes: Received at lab on ice? [X] Yes [] No Temp: []

Relinquished by: [Signature] **Date/Time:** 12-21-21 1515

Received by: [Signature] **Date/Time:** 12-21-21 1515

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Chain of Custody

Laboratory Number: **2221055**
1121055

Client Information: **Iron Env** PO Number: **Henning II** Page 3 of 6
 Billing Information: **SMILE** Quote Number: **Matrix Code**
 Turn Time: Standard RUSH 1 Day 2 Day Other **QC Level**
 Rush turn times will incur a surcharge and must be pre-approved by lab. **Required QC Level**
 Ext: **Ext: Bill Monthly**
 Yes No **Shipping Method:**
 UPS / FedEx / NOW **DHL / Element / Hand / Mail**

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> Drinking Water <input type="checkbox"/> POTW <input type="checkbox"/> Distribution <input type="checkbox"/> NPDES <input type="checkbox"/> Special <input type="checkbox"/> USDA/FDA <input type="checkbox"/> State <input type="checkbox"/> RECAP/RI/SC <input type="checkbox"/> Other	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information		Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type Quantity	Pres. HCl, HNO ₃ , H ₂ SO ₄ NaOH, Na ₂ S ₂ O ₃	Requested Tests	Comments
			Date	Time					
MW-3	48-50'	12-9-21	1250	G	SOL	P		TOX/Time Resym Misture Soluble Chemb	
MW-3	58-60'		1255						
MW-2	0-2'		1620						
MW-2	4-6'		1625						
MW-2	12-14'		1630						
MW-2	32-34'		1635						
MW-2	42-44'	12-10-21	1605						
MW-2	48-50'		910						
MW-2	58-60'		915						

Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
<i>[Signature]</i>	12-21-21 1250	<i>[Signature]</i>	12-21-21 1250	
<i>[Signature]</i>	12-21-21 1515	<i>[Signature]</i>	12-21-21 1515	Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 48-50

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Chain of Custody

Laboratory Number: 100-2121085
17271085

Client Information: Iron Env
Billing Information: PO Number: [blank]
 Quote Number: [blank]
 Required QC Level: [blank]
 Bill Monthly: Yes No
 Ext: [blank]

Project Name/Number: Hendrix II
Matrix Code: DW = Drinking Water, WW = Waste Water, GW = Ground Water, AQ = Aqueous, OT = Other, SL = Sludge, SO = Soil, O = Oil, F = Food, SW = Swab, NG = Natural Gas, NGL = Natural Gas Liquid, PW = Produced Water, CF = Completion Fluid

Sampler's Signature: [Signature]
Shipping Method: UPS FedEx / NOW, DHL / Element / Hand / Mail

City, State Zip: [blank]
Phone Number: [blank]
Fax Number: [blank]
E-mail Address: [blank]

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> Drinking Water <input type="checkbox"/> POTW <input type="checkbox"/> Distribution <input type="checkbox"/> NPDES <input type="checkbox"/> Special <input type="checkbox"/> USDA/FDA <input type="checkbox"/> State <input type="checkbox"/> RECA/P/RISC <input type="checkbox"/> Other	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information			Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container Type G=Glass, V=Vial P=Plastic	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests			Comments		
			Date/Time		Matrix				Quantity	SAR/ESP	Barium		Total Time Barium	Impurities
			Date	Time										
MW-10	0-2'	12-13-21	1330	G	SOL	1		X	X	X				
MW-10	4-6'	1335						X	X	X				
MW-10	8-10'	1340						X	X	X				
MW-10	10-12'	1345						X	X	X				
MW-10	12-14'	1350						X	X	X				
MW-10	16-18'	1355						X	X	X				
H-15E	0-2'	1530						X	X	X				
H-15E	4-6'	1535						X	X	X				
H-15E	8-10'	1540						X	X	X				

Relinquished by	Date/Time	Received by	Date/Time	Field Notes
[Signature]	12-21-21 1250	[Signature]	12-21-21 1250	Received at lab on ice? <input type="checkbox"/> Yes <input type="checkbox"/> No Temp: 2.7 °C
[Signature]	12-21-21 1515	[Signature]	12-21-21 1515	

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Chain of Custody

Laboratory Number: 2101085

Client Information: Juan Env **Project Name/Number:** Heming II **Page** 5 **of** 6

Billing Information: Juan Env **PO Number:** [Blank] **Quote Number:** [Blank]

Address: [Blank] **City, State Zip:** [Blank] **Phone Number:** [Blank] **Ext:** [Blank]

Matrix Code:
 DW = Drinking Water
 WW = Waste Water
 GW = Ground Water
 AQ = Aqueous
 OT = Other
 SL = Sludge
 O = Oil
 F = Food
 NG = Natural Gas
 NGL = Natural Gas Liquid
 PW = Produced Water
 CF = Completion Fluid

Sampler's Signature: [Signature] **Shipping Method:** UPS FedEx / NOW

Required QC Level: [Blank] **Bill Monthly:** Yes No

DHL Element / Hand / Mail: [Blank]

Sample ID/Description	Which Regulations Apply: <input type="checkbox"/> RCRA <input type="checkbox"/> POTW <input type="checkbox"/> NPDES <input type="checkbox"/> USDA/FDA <input type="checkbox"/> RECAP/RISC	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	Collection Information			Rush turn times will incur a surcharge and must be pre-approved by lab.	Container Type P = Plastic, V = Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₈	Requested Tests			Comments			
			Date		Time				Quantity	SMA/ESP	Barium		Total In Brine	Soluble Chloride	% Moisture
			Date	Time	Matrix										
H-1 SE			12-13-21	1545	G	SOL		X							
H-1 R			0-2'	1620	G			X							
H-1 E			0-2'	1625	G			X							
MW-8			0-2'	1125				X							
MW-8			4-6'	1130				X							
MW-8			8-10'	1135				X							
MW-8			14-16'	1140				X							
MW-8			20-22'	1145				X							
A-19 NE			0-2'	1400				X							

Relinquished by	Date/Time	Received by	Date/Time	Field Notes
<u>[Signature]</u>	12-21-21 1250	<u>Robert B...</u>	12-21-21 12:50	Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: <u>21.7</u>
<u>[Signature]</u>	12-21-21 1515	<u>[Signature]</u>	12-21-21 1615	

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Chain of Custody

Laboratory Number: 2112-1085

Client Information: Company Name: Juan Fnu PO Number: Project Name/Number: Hennings II Page 6 of 6
 Contact Name: Juan Fnu Quote Number: Matrix Code:
 Address: Required QC Level:
 City, State Zip: Ext: Bill Monthly: Yes No
 Phone Number: Ext: Shipping Method:
 Fax Number: UPS / FedEx / NOW
 E-mail Address: DHL / Element / Hand / Mail

Sample ID/Description	Turn Time <input type="checkbox"/> Standard <input type="checkbox"/> RUSH <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> Other	(Rush turn times will incur a surcharge and must be pre-approved by lab.)	Collection Information		Container Type P=Plastic, V=Vial	Pres. HCl, HNO ₃ , H ₂ SO ₄ , NaOH, Na ₂ S ₂ O ₃	Requested Tests	Comments
			Date	Time				
			Matrix					
H-19R	0-2	12-14-21	1405	G	EC			
H-19 SW	0-2	↓	1410	↓				
H-19 SW	0-2	↓	1415	↓				

Relinquished by	Date/Time	Received by	Date/Time	Field Notes:
<u>Juan Fnu</u>	12-21-21 1250	<u> </u>	12-21-21 1250	
<u> </u>	12-21-21 1515	<u> </u>	12-21-21 1515	Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: <u> </u>

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F 812-375-0731

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Fort Wayne, IN
46825 USA
P 260-471-7000
F 260-471-7777

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Warsaw, IN
46580 USA
P 574-287-3305
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46628 USA
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70508 USA
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Element Materials Technology Lafayette
2417 W. Pinhook Road
Lafayette, LA 70508-3344
TEL: (337) 235-0483 FAX: (337) 233-6540
Website: www.element.com

January 31, 2022

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning II/9403-010-0100

Order No.: 22010422

Dear Greg Miller:

Element Materials Technology Lafayette received 1 sample(s) on 1/11/2022 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 that reads '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#: 22010422
Date: 1/31/2022

CLIENT: ICON Environmental Services

Project: Henning II/9403-010-0100

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#: 22010422

Date Reported: 1/31/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 11:40:00 AM
Project: Henning II/9403-010-0100
Lab ID: 22010422-001 **Matrix:** SOIL
Client Sample ID HH-5B 0-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
METALS IN SOIL OR SLUDGE BY ICP					SW6010B	SW3050B Analyst: STS
Barium	9,000	9.29		mg/Kg-dry	10	1/29/2022 9:05:54 PM
PERCENT MOISTURE					LDNR 29-B	Analyst: BXB
Percent Moisture	21.0	1.00		wt%	1	1/13/2022 10:45:00 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#: 22010422
 31-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42458

Sample ID	MB-42458	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/27/2022	RunNo:	106370
Client ID:	PBS	Batch ID:	42458	TestNo:	SW6010B	SW3050B		Analysis Date:	1/28/2022	SeqNo:	2610898
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		< 1.00		1.00							

Sample ID	22010283-027AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/27/2022	RunNo:	106370
Client ID:	ZZZZZ	Batch ID:	42458	TestNo:	SW6010B	SW3050B		Analysis Date:	1/28/2022	SeqNo:	2610900
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		317		0.935	46.77	336.7	-43.1	75	125		

Sample ID	22010283-027AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/27/2022	RunNo:	106370
Client ID:	ZZZZZ	Batch ID:	42458	TestNo:	SW6010B	SW3050B		Analysis Date:	1/28/2022	SeqNo:	2610901
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		340		0.995	49.73	336.7	5.54	75	125	316.6	6.98 20 S

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

Sample ID	LCS-42458	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/27/2022	RunNo:	106370
Client ID:	LCSS	Batch ID:	42458	TestNo:	SW6010B	SW3050B		Analysis Date:	1/28/2022	SeqNo:	2610903
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		49.1		1.00	50.00	0	98.2	80	120		

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 sp



Element Materials Technology Lafayette
 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 22010422
 31-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: 42458

Sample ID	LCSD-42458	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/27/2022	RunNo:	106370		
Client ID:	LCSS02	Batch ID:	42458	TestNo:	SW6010B		SW3050B	Analysis Date:	1/28/2022	SeqNo:	2610904		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		49.0		1.00	50.00	0	98.0	80	120	49.11	0.220	20	

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 sp |



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QC SUMMARY REPORT

WO#: 22010422
 31-Jan-22

Client: ICON Environmental Services
Project: Henning II/9403-010-0100

BatchID: R105987

Sample ID	22010360-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105987
Client ID:	ZZZZZZ	Batch ID: R105987	TestNo: LDNR 29-B	Analysis Date: 1/13/2022	SeqNo: 2600191	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	15.8	1.00				16.90 6.73 20

Sample ID	22010415-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105987
Client ID:	ZZZZZZ	Batch ID: R105987	TestNo: LDNR 29-B	Analysis Date: 1/13/2022	SeqNo: 2600209	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	23.5	1.00				24.30 3.35 20

Sample ID	22010415-021ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105987
Client ID:	ZZZZZZ	Batch ID: R105987	TestNo: LDNR 29-B	Analysis Date: 1/13/2022	SeqNo: 2600230	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	11.9	1.00				12.00 0.84 20

Sample ID	22010480-001ADUP	SampType: DUP	TestCode: PMOIST_29B	Units: wt%	Prep Date:	RunNo: 105987
Client ID:	ZZZZZZ	Batch ID: R105987	TestNo: LDNR 29-B	Analysis Date: 1/13/2022	SeqNo: 2600261	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	20.5	1.00				20.80 1.45 20

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 sp



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QC SUMMARY REPORT

WO#: 22010422
 31-Jan-22

Client: ICON Environmental Services

Project: Henning II/9403-010-0100

BatchID: R105987

Sample ID	22010489-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	105987		
Client ID:	ZZZZZZ	Batch ID:	R105987	TestNo:	LDNR 29-B			Analysis Date:	1/13/2022	SeqNo:	2600263		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		18.1		1.00						18.20	0.55	20	

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 sp |



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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **22010422** RcptNo: **1**

Logged by:	Tammy Thibodeaux	1/11/2022 1:52:00 PM	<i>Tammy Thibodeaux</i>
Completed By:	Tammy Thibodeaux	1/11/2022 1:58:26 PM	<i>Tammy Thibodeaux</i>
Reviewed By:	Cristina Thibeaux	1/11/2022 2:41:46 PM	<i>Cristina Thibeaux</i>

Chain of Custody

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

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	15.2	Good	Not Present			



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Lafayette, LA 70508-3344
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February 08, 2022

Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767
TEL: (225) 344-8490
FAX (225) 344-6654

RE: Henning 9077-202-0100

Order No.: 22010608

Dear Greg Miller:

Element Materials Technology Lafayette received 10 sample(s) on 1/14/2022 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 that reads 'Cristina Thibeaux'.

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



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Lafayette, LA 70508-3344
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Case Narrative

WO#: 22010608
Date: 2/8/2022

CLIENT: ICON Environmental Services

Project: Henning 9077-202-0100

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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/10/2022 2:15:00 PM
Project: Henning 9077-202-0100
Lab ID: 22010608-001 **Matrix:** SOIL
Client Sample ID H-4E2 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.69	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	7,290	9.57		mg/Kg-dry	10	2/4/2022 3:46:38 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	22.1	1.00		wt%	1	1/18/2022 6:30:00 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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/10/2022 2:50:00 PM
Project: Henning 9077-202-0100
Lab ID: 22010608-002 **Matrix:** SOIL
Client Sample ID H-4N2 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.35	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B		SW3050B Analyst: STS
Barium	4,020	0.928		mg/Kg-dry	1	2/4/2022 12:53:01 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.9	1.00		wt%	1	1/18/2022 6:30:00 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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 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/10/2022 3:20:00 PM
Project: Henning 9077-202-0100
Lab ID: 22010608-003 **Matrix:** SOIL
Client Sample ID H-4W2 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.62	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B		SW3050B Analyst: STS
Barium	4,270	0.985		mg/Kg-dry	1	2/4/2022 12:55:20 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.5	1.00		wt%	1	1/18/2022 6:30:00 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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 2417 W. Pinhook Road
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Analytical Report

(consolidated)

WO#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 10:05:00 AM
Project: Henning 9077-202-0100
Lab ID: 22010608-004 **Matrix:** SOIL
Client Sample ID H-8N2 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.10	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	3,000	0.925		mg/Kg-dry	1	2/4/2022 12:57:40 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.6	1.00		wt%	1	1/18/2022 6:30:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
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Analytical Report

(consolidated)

WO#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 10:10:00 AM
Project: Henning 9077-202-0100
Lab ID: 22010608-005 **Matrix:** SOIL
Client Sample ID H-8S2 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	1.83	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	838	0.981		mg/Kg-dry	1	2/4/2022 1:09:17 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	16.9	1.00		wt%	1	1/18/2022 6:30:00 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#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 10:15:00 AM
Project: Henning 9077-202-0100
Lab ID: 22010608-006 **Matrix:** SOIL
Client Sample ID H-22S2 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.68	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	351	0.913		mg/Kg-dry	1	2/4/2022 1:15:30 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	14.7	1.00		wt%	1	1/18/2022 6:30:00 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#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 11:05:00 AM
Project: Henning 9077-202-0100
Lab ID: 22010608-007 **Matrix:** SOIL
Client Sample ID H-24NW 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.52	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	3,940	0.923		mg/Kg-dry	1	2/4/2022 1:17:51 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.7	1.00		wt%	1	1/18/2022 6:30:00 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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
 Website: www.element.com

Analytical Report

(consolidated)

WO#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 11:25:00 AM
Project: Henning 9077-202-0100
Lab ID: 22010608-008 **Matrix:** SOIL
Client Sample ID H-24NE 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.46	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B		SW3050B Analyst: STS
Barium	7,410	9.28		mg/Kg-dry	10	2/4/2022 4:55:35 PM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	18.6	1.00		wt%	1	1/18/2022 6:30:00 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#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 12:20:00 PM
Project: Henning 9077-202-0100
Lab ID: 22010608-009 **Matrix:** SOIL
Client Sample ID H-28SE 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.57	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B SW3050B		Analyst: STS
Barium	1,760	0.963		mg/Kg-dry	1	2/4/2022 1:34:05 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	20.1	1.00		wt%	1	1/18/2022 6:30:00 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#: 22010608

Date Reported: 2/8/2022

CLIENT: ICON Environmental Services **Collection Date:** 1/11/2022 12:25:00 PM
Project: Henning 9077-202-0100
Lab ID: 22010608-010 **Matrix:** SOIL
Client Sample ID H-24SW 0-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ELECTRICAL CONDUCTIVITY @ SATURATION				LDNR 29-B		Analyst: JMI
Electrical Conductivity	0.31	0.10		mmhos/cm	1	1/27/2022 1:00:00 PM
METALS IN SOIL OR SLUDGE BY ICP				SW6010B		SW3050B Analyst: STS
Barium	839	0.915		mg/Kg-dry	1	2/4/2022 1:41:00 AM
PERCENT MOISTURE				LDNR 29-B		Analyst: BXB
Percent Moisture	27.7	1.00		wt%	1	1/18/2022 6:30:00 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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 22010608
 08-Feb-22

Client: ICON Environmental Services
Project: Henning 9077-202-0100

BatchID: 42487

Sample ID	MB-42487	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575			
Client ID:	PBS	Batch ID:	42487	TestNo:	SW6010B	SW3050B		Analysis Date:	2/3/2022	SeqNo:	2617141			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		< 1.00		1.00										

Sample ID	LCS-42487	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575			
Client ID:	LCSS	Batch ID:	42487	TestNo:	SW6010B	SW3050B		Analysis Date:	2/3/2022	SeqNo:	2617142			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		52.0		1.00	50.00	0		104	80	120				

Sample ID	LCSD-42487	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575			
Client ID:	LCSS02	Batch ID:	42487	TestNo:	SW6010B	SW3050B		Analysis Date:	2/4/2022	SeqNo:	2617306			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		51.9		1.00	50.00	0		104	80	120	51.99	0.198	20	

Sample ID	22010550-010AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575			
Client ID:	ZZZZZZ	Batch ID:	42487	TestNo:	SW6010B	SW3050B		Analysis Date:	2/4/2022	SeqNo:	2617308			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium		550		0.947	47.36	546.0		8.05	75	125				S

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

QC SUMMARY REPORT

WO#: 22010608
 08-Feb-22

Client: ICON Environmental Services
Project: Henning 9077-202-0100

BatchID: 42487

Sample ID	22010550-010AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575											
Client ID:	ZZZZZZ	Batch ID:	42487	TestNo:	SW6010B		SW3050B	Analysis Date:	2/4/2022	SeqNo:	2617309											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Barium		556		0.973		48.67		546.0		20.1		75		125		549.8		1.08		20		S

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	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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 2417 W. Pinhook Road
 Lafayette, LA 70508-3344
 TEL: (337) 235-0483 FAX: (337) 233-6540
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QC SUMMARY REPORT

WO#: 22010608
 08-Feb-22

Client: ICON Environmental Services
Project: Henning 9077-202-0100

BatchID: 42488

Sample ID	22010608-008AMS	SampType:	MS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106627
Client ID:	H-24NE 0-2	Batch ID:	42488	TestNo:	SW6010B	SW3050B		Analysis Date:	2/4/2022	SeqNo:	2618750
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		7,570		9.29	46.43	7,412	340	75	125		S

Sample ID	22010608-008AMSD	SampType:	MSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106627
Client ID:	H-24NE 0-2	Batch ID:	42488	TestNo:	SW6010B	SW3050B		Analysis Date:	2/4/2022	SeqNo:	2618751
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		7,870		9.69	48.44	7,412	952	75	125	7,570	3.93 20 S

NOTES:

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

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
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QC SUMMARY REPORT

WO#: 22010608
 08-Feb-22

Client: ICON Environmental Services
Project: Henning 9077-202-0100

BatchID: 42488

Sample ID	MB-42488	SampType:	MBLK	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575
Client ID:	PBS	Batch ID:	42488	TestNo:	SW6010B	SW3050B		Analysis Date:	2/4/2022	SeqNo:	2617285
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		< 1.00		1.00							

Sample ID	LCS-42488	SampType:	LCS	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575
Client ID:	LCSS	Batch ID:	42488	TestNo:	SW6010B	SW3050B		Analysis Date:	2/4/2022	SeqNo:	2617286
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		51.9		1.00	50.00	0	104	80	120		

Sample ID	LCSD-42488	SampType:	LCSD	TestCode:	6010_S_29B	Units:	mg/Kg-dry	Prep Date:	1/30/2022	RunNo:	106575
Client ID:	LCSS02	Batch ID:	42488	TestNo:	SW6010B	SW3050B		Analysis Date:	2/4/2022	SeqNo:	2617287
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Barium		51.8		1.00	50.00	0	104	80	120	51.86	0.129 20

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#: 22010608
 08-Feb-22

Client: ICON Environmental Services
Project: Henning 9077-202-0100

BatchID: R106308

Sample ID	MB-R106307	SampType:	MBLK	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106308
Client ID:	PBS	Batch ID:	R106308	TestNo:	LDNR 29-B			Analysis Date:	1/27/2022	SeqNo:	2608604
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		< 0.10		0.10							

Sample ID	LCS1-R106307	SampType:	LCS1	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106308
Client ID:	ZZZZZ	Batch ID:	R106308	TestNo:	LDNR 29-B			Analysis Date:	1/27/2022	SeqNo:	2608605
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.54		0.10	0.50	0	106	90	110		

Sample ID	LCS2-R106307	SampType:	LCS2	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106308
Client ID:	ZZZZZ	Batch ID:	R106308	TestNo:	LDNR 29-B			Analysis Date:	1/27/2022	SeqNo:	2608606
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		57.7		0.10	53.00	0	109	90	110		

Sample ID	22010608-001ADUP	SampType:	DUP	TestCode:	EC_S	Units:	mmhos/cm	Prep Date:		RunNo:	106308
Client ID:	H-4E2 0-2	Batch ID:	R106308	TestNo:	LDNR 29-B			Analysis Date:	1/27/2022	SeqNo:	2608612
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Electrical Conductivity		0.69		0.10						0.69	0.14 20

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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 Lafayette, LA 70508-3344
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QC SUMMARY REPORT

WO#: 22010608
 08-Feb-22

Client: ICON Environmental Services
Project: Henning 9077-202-0100

BatchID: R106569

Sample ID	22010608-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	106569		
Client ID:	H-4E2 0-2	Batch ID:	R106569	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2616879		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		20.3		1.00						22.10	8.49	20	

Sample ID	22010609-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	106569		
Client ID:	ZZZZZ	Batch ID:	R106569	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2616890		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		20.7		1.00						20.80	0.48	20	

Sample ID	22010550-001ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	106569		
Client ID:	ZZZZZ	Batch ID:	R106569	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2616900		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		32.1		1.00						32.80	2.16	20	

Sample ID	22010550-022ADUP	SampType:	DUP	TestCode:	PMOIST_29B	Units:	wt%	Prep Date:		RunNo:	106569		
Client ID:	ZZZZZ	Batch ID:	R106569	TestNo:	LDNR 29-B			Analysis Date:	1/18/2022	SeqNo:	2616922		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		46.7		1.00						45.10	3.49	20	

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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Sample Log-In Check List

Client Name: **ICON_ENV** Work Order Number: **22010608** RcptNo: **1**

Logged by:	Danielle Hollier	1/14/2022 10:35:00 AM	
Completed By:	Danielle Hollier	1/14/2022 1:52:06 PM	
Reviewed By:	Cristina Thibeaux	1/22/2022 2:28:07 PM	

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° C to 6.0°C Yes No NA
Not required
 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? Yes No
 (Note discrepancies on chain of custody)
 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? Yes No
 (If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
-----------	---------	-----------	-------------	---------	-----------	-----------



Chain of Custody

Laboratory Number: 22010608

Client Information: **ICCN** PO Number: **HENNING** Project Name/Number: **9077-202-0100** Page of **22010608**

Billing Information: **SAME** Quote Number: **9077-202-0100** Matrix Code: **DW = Drinking Water, WW = Waste Water, GW = Ground Water, AQ = Aqueous, OT = Other, SL = Sludge, SOL = Solid, O = Oil, SO = Soil, F = Food, SW = Swab, NG = Natural Gas, NGL = Natural Gas Liquid, PW = Produced Water, CF = Completion Fluid**

Company Name: **ICCN** Address: **9077-202-0100** Sampler's Signature: *[Signature]* Shipping Method: **UPS / FedEx / NOW**

Contact Name: **ICCN** Address: **9077-202-0100** City, State Zip: **9077-202-0100** Phone Number: **9077-202-0100** Fax Number: **9077-202-0100** E-mail Address: **9077-202-0100**

Turn Time: Standard, RUSH, 1 Day, 2 Day, Other

Which Regulations Apply: RCRA, POTW, NPDES, USDA/FDA, RECAP/IRIS

Container: **Quantity**, **Type** (F=Plastic, G=Glass, V=Vial), **Pres.** (HCl, HNO₃, H₂SO₄, NaOH, Na₂S₂O₈)

Sample ID/Description	Collection Information		Turn Time	Rush turn times will incur a surcharge and must be pre-approved by lab.)	Container	Pres.	Requested Tests	Comments
	Date	Time						
H-4E2 0-2	1.10.22	1415	G	SO	P	-	X	
H-4N2 0-2	1.10.22	1450	G	SO	P	-	X	
H-4W2 0-2	1.10.22	1520	G	SO	P	-	X	
H-8N2 0-2	1.11.22	1005	G	SO	P	-	X	
H-8S2 0-2	1.11.22	1010	G	SO	P	-	X	
H-22S2 0-2	1.11.22	1015	G	SO	P	-	X	
H-24NW 0-2	1.11.22	1105	G	SO	P	-	X	
H-24WE 0-2	1.11.22	1125	G	SO	P	-	X	
H-28SE 0-2	1.11.22	1220	G	SO	P	-	X	

Relinquished by: *[Signature]* Date/Time: **1/14/22 1035** Received by: *[Signature]* Date/Time: **1/14/22 1035**

Field Notes: **Received at lab on ice? Yes No Temp: Yes No**

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.

8800 North US 31
Columbus, IN
47201 USA
P 812-375-0531
F 812-375-0731

328 Lay Road, Suite 100
Fort Wayne, IN
46825 USA
P 260-471-7000
F 260-471-7777

909 Executive Dr
Warsaw, IN
46580 USA
P 574-267-3305
F 574-269-6569

3371 Cleveland Road, Suite 100A
South Bend, IN
46628 USA
P 574-277-0707
F 574-273-5699

2417 W. Pinhook Rd
Lafayette, LA
70508 USA
P 337-235-0483
F 337-233-6540

April 03, 2020

Mr. Jason Sills
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767

RE: Project: Henning II/9403-010-0100
Pace Project No.: 30355059

Dear Mr. Sills:

Enclosed are the analytical results for sample(s) received by the laboratory on March 16, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

cc: Mr. Mike Mills, ICON Environmental Services



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: Henning II/9403-010-0100
Pace Project No.: 30355059

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Henning II/9403-010-0100
Pace Project No.: 30355059

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30355059001	H-12	Water	03/05/20 11:05	03/16/20 09:15
30355059002	H-9	Water	03/05/20 13:35	03/16/20 09:15
30355059003	H-10	Water	03/05/20 15:30	03/16/20 09:15
30355059004	H-2	Water	03/05/20 16:55	03/16/20 09:15
30355059005	H-16	Water	03/06/20 08:15	03/16/20 09:15
30355059006	H-18	Water	03/06/20 09:50	03/16/20 09:15
30355059007	H-1	Water	03/06/20 11:10	03/16/20 09:15
30355059008	H-3	Water	03/06/20 13:15	03/16/20 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Henning II/9403-010-0100
Pace Project No.: 30355059

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30355059001	H-12	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30355059002	H-9	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30355059003	H-10	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30355059004	H-2	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30355059005	H-16	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30355059006	H-18	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30355059007	H-1	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30355059008	H-3	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Henning II/9403-010-0100

Pace Project No.: 30355059

Method: EPA 903.1

Description: 903.1 Radium 226

Client: ICON Environmental Services

Date: April 03, 2020

General Information:

8 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Henning II/9403-010-0100

Pace Project No.: 30355059

Method: EPA 904.0

Description: 904.0 Radium 228

Client: ICON Environmental Services

Date: April 03, 2020

General Information:

8 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Henning II/9403-010-0100
Pace Project No.: 30355059

Sample: H-12 **Lab ID: 30355059001** Collected: 03/05/20 11:05 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	20.7 ± 3.11 (0.362) C:NA T:94%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	29.3 ± 5.40 (0.801) C:78% T:89%	pCi/L	04/02/20 18:18	15262-20-1	

Sample: H-9 **Lab ID: 30355059002** Collected: 03/05/20 13:35 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	5.20 ± 1.23 (0.644) C:NA T:85%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	11.8 ± 2.28 (0.847) C:76% T:88%	pCi/L	04/02/20 18:15	15262-20-1	

Sample: H-10 **Lab ID: 30355059003** Collected: 03/05/20 15:30 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.422 ± 0.331 (0.388) C:NA T:91%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.696 ± 0.414 (0.775) C:83% T:83%	pCi/L	04/02/20 18:12	15262-20-1	

Sample: H-2 **Lab ID: 30355059004** Collected: 03/05/20 16:55 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.340 ± 0.255 (0.131) C:NA T:93%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.517 ± 0.390 (0.762) C:75% T:87%	pCi/L	04/02/20 18:12	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Henning II/9403-010-0100

Pace Project No.: 30355059

Sample: H-16 **Lab ID: 30355059005** Collected: 03/06/20 08:15 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.837 ± 0.419 (0.342) C:NA T:96%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	4.55 ± 1.01 (0.718) C:72% T:87%	pCi/L	04/02/20 18:12	15262-20-1	

Sample: H-18 **Lab ID: 30355059006** Collected: 03/06/20 09:50 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	1.25 ± 0.513 (0.136) C:NA T:92%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.11 ± 0.605 (0.739) C:72% T:90%	pCi/L	04/02/20 18:12	15262-20-1	

Sample: H-1 **Lab ID: 30355059007** Collected: 03/06/20 11:10 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.606 ± 0.396 (0.406) C:NA T:85%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.47 ± 0.541 (0.817) C:72% T:81%	pCi/L	04/02/20 18:12	15262-20-1	

Sample: H-3 **Lab ID: 30355059008** Collected: 03/06/20 13:15 Received: 03/16/20 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.279 ± 0.330 (0.518) C:NA T:89%	pCi/L	04/03/20 15:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.287 ± 0.307 (0.627) C:76% T:96%	pCi/L	04/02/20 18:12	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Henning II/9403-010-0100
Pace Project No.: 30355059

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

WO#: 30355059

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: **ICON Environmental**
 Address: **2049 Commercial Drive**
 Report To: **Jason Bills**
 Copy To: **Jason Bills**

Billing Information:
 Email To: **jills@iconenv.com**
 Site Collection Info/Address: **SAME**

Customer Project Name/Number: **Henning II / 9403-010-0100**
 State: **LA** County/City: **Port Allen** Time Zone Collected: **DT**
 Phone: **225-844-8490** Site/Facility ID #: **1111111111**
 Email: **jills@iconenv.com**
 Collected By (print): **Katie Cummins**
 Quote #: **Standard**
 Turnaround Date Required: **Standard**
 Rush: Same Day Next Day
 12 Day 3 Day 4 Day 5 Day
 (Expedite Charges Apply)
 Sample Disposal: Dispose as appropriate Return
 Archive Hold

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End	Res Cl	# of Ctns
			Date	Time			
H-12	GW	G	3.5.20	1105			2
H-9	GW	G	3.5.20	1335			2
H-10	GW	G	3.5.20	1530			2
H-2	GW	G	3.5.20	1655			2
H-16	GW	G	3.4.20	0815			2
H-18	GW	G	3.6.20	0950			2
H-1	GW	G	3.6.20	1110			2
H-3	GW	G	3.6.20	1315			2

Customer Remarks / Special Conditions / Possible Hazards: Type of Ice Used: Wet Blue Dry None

Packing Material Used: **bubble wrap**
 Radchem sample(s) screened (<500 cpm): **Y** N NA

Relinquished by/Company: (Signature) **Katie Cummins / ICON** Date/Time: **3.10.20 / 1200**
 Relinquished by/Company: (Signature) **Michelle Rundo / Pace** Date/Time: **3/10/20 0915**
 Relinquished by/Company: (Signature) **Michelle Rundo / Pace** Date/Time: **3/10/20 0915**

LAB USE ON
 Container PI

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Container PI	Lab Profile/Line:
Radium 226		
Radium 228		

Lab Sample Receipt Checklist:
 Custody Seals Present/Intact: **Y** N NA
 Custody Signatures Present: **Y** N NA
 Collector Signatures Present: **Y** N NA
 Bottles Intact: **Y** N NA
 Correct Bottles: **Y** N NA
 Sufficient Volume: **Y** N NA
 Samples Received on Ice: **Y** N NA
 VOA - Headspace Acceptable: **Y** N NA
 USDA Regulated Soils: **Y** N NA
 Samples in Holding Time: **Y** N NA
 Residual Chlorine Present: **Y** N NA
 Cl Strips: **Y** N NA
 Sample pH Acceptable: **Y** N NA
 pH Strips: **1002191**
 Sulfide Present: **Y** N NA
 Lead Acetate Strips: **Y** N NA

LAB USE ONLY:
 Lab Sample # / Comments:
MMR 3/17/2020
001
002
003
004
005
006
007
008

Lab Sample Temperature Info:
 Temp Blank Received: **Y** N NA
 Therm ID#: **0C**
 Cooler 1 Temp Upon Receipt: **0C**
 Cooler 1 Therm Corr. Factor: **0C**
 Cooler 1 Corrected Temp: **0C**
 Comments: **MMR 3/17/2020**
 Trip Blank Received: **Y** N NA
 HCL MeOH TSP Other

SHORT HOLDS PRESENT (<72 hours): **Y** N N/A
 Lab Tracking #: **17980555502453787**
 Samples received via: **FEDEX** UPS Client Courier Pace Courier
 Date/Time: **3/10/20 0915**
 Date/Time: **3/10/20 0915**
 Date/Time: **3/10/20 0915**

May 26, 2021

Mr. Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767

RE: Project: Henning II/9403-010-0100
Pace Project No.: 30418740

Dear Mr. Miller:

Enclosed are the analytical results for sample(s) received by the laboratory on May 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
(724)850-5612
Project Manager

Enclosures

cc: Mr. Derek Pourciau, ICON Environmental Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Henning II/9403-010-0100
Pace Project No.: 30418740

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: Henning II/9403-010-0100

Pace Project No.: 30418740

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30418740001	H-20	Water	04/19/21 10:00	05/04/21 09:30
30418740002	H-22	Water	04/19/21 11:10	05/04/21 09:30
30418740003	H-23	Water	04/19/21 13:35	05/04/21 09:30
30418740004	H-24	Water	04/19/21 15:00	05/04/21 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Henning II/9403-010-0100
Pace Project No.: 30418740

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30418740001	H-20	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30418740002	H-22	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30418740003	H-23	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
30418740004	H-24	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Henning II/9403-010-0100

Pace Project No.: 30418740

Method: EPA 903.1

Description: 903.1 Radium 226

Client: ICON Environmental Services

Date: May 26, 2021

General Information:

4 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Henning II/9403-010-0100

Pace Project No.: 30418740

Method: EPA 904.0

Description: 904.0 Radium 228

Client: ICON Environmental Services

Date: May 26, 2021

General Information:

4 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Henning II/9403-010-0100
Pace Project No.: 30418740

Sample: H-20 **Lab ID: 30418740001** Collected: 04/19/21 10:00 Received: 05/04/21 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0621 ± 0.322 (0.669) C:NA T:92%	pCi/L	05/26/21 13:03	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.23 ± 0.568 (0.980) C:68% T:78%	pCi/L	05/25/21 12:14	15262-20-1	

Sample: H-22 **Lab ID: 30418740002** Collected: 04/19/21 11:10 Received: 05/04/21 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.304 ± 0.598 (1.07) C:NA T:86%	pCi/L	05/26/21 13:03	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.36 ± 0.522 (0.775) C:64% T:84%	pCi/L	05/25/21 12:14	15262-20-1	

Sample: H-23 **Lab ID: 30418740003** Collected: 04/19/21 13:35 Received: 05/04/21 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.283 (0.634) C:NA T:97%	pCi/L	05/26/21 13:03	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.02 ± 0.453 (0.739) C:68% T:84%	pCi/L	05/25/21 12:14	15262-20-1	

Sample: H-24 **Lab ID: 30418740004** Collected: 04/19/21 15:00 Received: 05/04/21 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.349 ± 0.364 (0.514) C:NA T:82%	pCi/L	05/26/21 13:03	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.596 ± 0.416 (0.802) C:66% T:84%	pCi/L	05/25/21 12:15	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Henning II/9403-010-0100

Pace Project No.: 30418740

QC Batch: 447303

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30418740001, 30418740002, 30418740003, 30418740004

METHOD BLANK: 2158576

Matrix: Water

Associated Lab Samples: 30418740001, 30418740002, 30418740003, 30418740004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.902 ± 0.415 (0.690) C:72% T:84%	pCi/L	05/25/21 12:17	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Henning II/9403-010-0100

Pace Project No.: 30418740

QC Batch: 447301

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30418740001, 30418740002, 30418740003, 30418740004

METHOD BLANK: 2158574

Matrix: Water

Associated Lab Samples: 30418740001, 30418740002, 30418740003, 30418740004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.257 ± 0.392 (0.675) C:NA T:89%	pCi/L	05/26/21 13:03	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Henning II/9403-010-0100

Pace Project No.: 30418740

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30418740



CHAIN-OF-CUSTODY FORM



Environmental Services, Inc.

2049 Commercial Drive
 Port Allen, LA 70767
 (225) 344-8490 fax (225) 344-6654

Project Name/Number: Hennings II / 9403-010-0100
 Sampler: Chase Joubert Transporter: FedEx
 Bottles: 8

ANALYTICAL REQUESTS

Sample Description	Matrix (See Code)	Date	Time (24:00)	Type (Comp., Grab)	Containers (Number)	Turnaround (See code)	Radium-226		Radium-228		Comments/ Field Results
							Date	Time	Date	Time	
H-20	WT	4-19-21	1000	Gr	2	STD	X	X			001
H-22	↓	↓	1110	↓	↓	↓	X	X			002
H-23	↓	↓	1335	↓	↓	↓	X	X			003
H-24	↓	↓	1500	↓	↓	↓	X	X			004
Relinquished by: <u>[Signature]</u>	Company: <u>Icon</u>	Received by: <u>FedEx</u>					Date:	Time:			
Relinquished by:	Company:	Received by: <u>[Signature]</u>					Date: <u>5-4-21</u>	Time: <u>0930</u>			
Relinquished by:	Company:	Received by:					Date:	Time:			

Please e-mail results to
 gream@iconenv.com
 dbourciau@iconenv.com

Matrix: W = water, S = sludge, SL = sludge, L = liquid, CT = charcoal tube, CN = canister, A = airbag
 Turnaround: 24 = 24 hr, 48 = 48 hr, 3D = 3 days, 1 wk = 1 week, 2 wk = 2 weeks, STD = standard



Client Name: _____

Project # _____

#-30418740

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7736 0030 7200

Label	<i>Rjm</i>
LIMS Login	<i>Rjm</i>

Custody Seal on Cooler/Box Present: yes no Seals Intact: yes no

Thermometer Used _____ Type of Ice: Wet Blue None

Cooler Temperature _____ Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C
 Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot#	Date and Initials of person examining contents:	
				1001101	<i>Rjm</i>	5-4-21
Chain of Custody Present:	/			1.		
Chain of Custody Filled Out:	/			2.		
Chain of Custody Relinquished:	/			3.		
Sampler Name & Signature on COC:	/			4.		
Sample Labels match COC:	/			5.		
-Includes date/time/ID Matrix: <i>WT</i>						
Samples Arrived within Hold Time:	/			6.		
Short Hold Time Analysis (<72hr remaining):		/		7.		
Rush Turn Around Time Requested:		/		8.		
Sufficient Volume:	/			9.		
Correct Containers Used:	/			10.		
-Pace Containers Used:		/				
Containers Intact:	/			11.		
Orthophosphate field filtered			/	12.		
Hex Cr Aqueous sample field filtered			/	13.		
Organic Samples checked for dechlorination:			/	14.		
Filtered volume received for Dissolved tests			/	15.		
All containers have been checked for preservation.	/			16.		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix					<i>PHL2</i>	
All containers meet method preservation requirements.	/			Initial when completed	<i>Rjm</i>	Date/time of preservation
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):			/	17.		
Trip Blank Present:			/	18.		
Trip Blank Custody Seals Present			/			
Rad Samples Screened < 0.5 mrem/hr	/			Initial when completed:	<i>Rjm</i>	Date: 5-4-21 Survey Meter SN: 1563

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

September 30, 2021

Mr. Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767

RE: Project: Radiologicals
Pace Project No.: 30440679

Dear Mr. Miller:

Enclosed are the analytical results for sample(s) received by the laboratory on September 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Karen L. Smetanka
karen.smetanka@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Mr. Derek Pourciau, ICON Environmental Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Radiologicals
Pace Project No.: 30440679

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Radiologicals

Pace Project No.: 30440679

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30440679001	H-32A	Water	08/23/21 12:00	09/13/21 10:00
30440679002	H-32B	Water	08/23/21 13:50	09/13/21 10:00
30440679003	H-33	Water	08/23/21 14:50	09/13/21 10:00
30440679004	H-34	Water	08/23/21 10:55	09/13/21 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Radiologicals
Pace Project No.: 30440679

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30440679001	H-32A	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30440679002	H-32B	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30440679003	H-33	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30440679004	H-34	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Radiologicals

Pace Project No.: 30440679

Method: EPA 903.1

Description: 903.1 Radium 226

Client: ICON Environmental Services

Date: September 30, 2021

General Information:

4 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Radiologicals

Pace Project No.: 30440679

Method: EPA 904.0

Description: 904.0 Radium 228

Client: ICON Environmental Services

Date: September 30, 2021

General Information:

4 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Radiologicals
Pace Project No.: 30440679

Sample: H-32A **Lab ID: 30440679001** Collected: 08/23/21 12:00 Received: 09/13/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0666 ± 0.392 (0.800) C:NA T:97%	pCi/L	09/29/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.0954 ± 0.349 (0.794) C:71% T:87%	pCi/L	09/28/21 15:42	15262-20-1	

Sample: H-32B **Lab ID: 30440679002** Collected: 08/23/21 13:50 Received: 09/13/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0701 ± 0.363 (0.754) C:NA T:95%	pCi/L	09/29/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.242 ± 0.385 (0.836) C:76% T:92%	pCi/L	09/28/21 15:43	15262-20-1	

Sample: H-33 **Lab ID: 30440679003** Collected: 08/23/21 14:50 Received: 09/13/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0698 ± 0.454 (0.915) C:NA T:95%	pCi/L	09/29/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.613 ± 0.490 (0.984) C:72% T:94%	pCi/L	09/28/21 15:40	15262-20-1	

Sample: H-34 **Lab ID: 30440679004** Collected: 08/23/21 10:55 Received: 09/13/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.125 ± 0.301 (0.582) C:NA T:95%	pCi/L	09/29/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.854 ± 0.494 (0.910) C:73% T:89%	pCi/L	09/28/21 15:40	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Radiologicals

Pace Project No.: 30440679

QC Batch: 464882

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30440679001, 30440679002, 30440679003, 30440679004

METHOD BLANK: 2244733

Matrix: Water

Associated Lab Samples: 30440679001, 30440679002, 30440679003, 30440679004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0537 ± 0.316 (0.645) C:NA T:92%	pCi/L	09/29/21 16:58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Radiologicals

Pace Project No.: 30440679

QC Batch: 464883

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30440679001, 30440679002, 30440679003, 30440679004

METHOD BLANK: 2244734

Matrix: Water

Associated Lab Samples: 30440679001, 30440679002, 30440679003, 30440679004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.167 ± 0.274 (0.595) C:66% T:95%	pCi/L	09/28/21 11:03	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Radiologicals
Pace Project No.: 30440679

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.paceabs.com/nubifs/pas-standard-terms.pdf>
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: IRON Environmental

Address: 2049 Commercial Dr.

Report To: [Signature]

Site Collection Info/Address: [Blank]

State: LA County/City: Port Arthur Time Zone Collected: [] JPT [] JMT [] JCT [] JET

Compliance Monitoring? [] Yes [] No

DW PWS ID #: [Blank]

DW Location Code: [Blank]

Immediately Packed on Ice: [] Yes [] No

Field Filtered (if applicable): [] Yes [] No

Analysis: [Blank]

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Matrix * GW

Comp / Grab 1

Collected (or Composite Start) Date 8.23.21 Time 1200

Res CI 2

Composite End Date - Time -

Container Type: Plastic (P) or Glass (G)

Matrix * GW

Comp / Grab 1

Collected (or Composite Start) Date 8.23.21 Time 1350

Res CI 2

Composite End Date - Time -

Matrix * GW

Comp / Grab 1

Collected (or Composite Start) Date 8.23.21 Time 1450

Res CI 2

Composite End Date - Time -

Matrix * GW

Comp / Grab 1

Collected (or Composite Start) Date 8.23.21 Time 1055

Res CI 2

Composite End Date - Time -

Packing Material Used: Bubble wrap

Radchem sample(s) screened (<500 cpm): [] Y [] N [] NA

Date/Time: 1200/8.3.21

Received by/Company: FEDEX

Date/Time: [Blank]

Received by/Company: [Signature]

Date/Time: [Blank]

Received by/Company: [Signature]

Date/Time: [Blank]

Received by/Company: [Signature]

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

WO#: 30440679



30440679

ALL BOLD OUT!

Container Preservative Type

Preservative Types: (1) nitric acid, (2) sulfur (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) sodium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Profile/Line:	Lab Sample Receipt Checklist:
Custody Seals Present/Intact	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Custody Signatures Present	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Collector Signature Present	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Bottles Intact	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Correct Bottles	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Sufficient Volume	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Samples Received on Ice	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
VOA - Headspace Acceptable	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
USDA Regulated Soils	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Samples in Holding Time	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Residual Chlorine Present	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Cl Strips:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Sample pH Acceptable	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
pH Strips: <u>LODDHU</u>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Sulfide Present	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Lead Acetate Strips:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
LAB USE ONLY:	
Lab Sample # / Comments:	<u>051</u>
	<u>002</u>
	<u>003</u>
	<u>004</u>

LAB Sample Temperature Info:
Temp Blank Received: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Therm ID#: <u>111</u>
Cooler 1 Temp Upon Receipt: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Cooler 1 Therm Corr. Factor: <u>0.0</u>
Cooler 1 Corrected Temp: <u>0.0</u>
Comments: <u>Op 9/15/21</u>
Trip Blank Received: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
HCL MeOH TSP Other
Non Conformance(s): <u>YES / NO</u>
Page: <u>1</u> of: <u>1</u>

Analyses	SHORT HOLDS PRESENT (<72 hours):	Y	N	NA
<u>051</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>002</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>003</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>004</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Lab Tracking #:	Client	Courier	Pace Courier
<u>7147</u>	<u>2507</u>	<u>4988</u>	
Samples received via: <u>FEDEX</u>	UPS	Client	Courier
Date/Time: <u>9.3.21/1200</u>	Table #:	MTJL LAB USE ONLY	
Date/Time: <u>9-13-21</u>	Acctnum: <u>1000</u>	Template:	
Date/Time: <u>[Blank]</u>	Prelogin:	PW:	
Date/Time: <u>[Blank]</u>	PE:		

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Res CI	# of Ctns
<u>H-32A</u>	<u>GW</u>	<u>1</u>	<u>8.23.21</u>	<u>1200</u>	<u>2</u>	<u>2</u>
<u>H-32B</u>	<u>GW</u>	<u>1</u>	<u>8.23.21</u>	<u>1350</u>	<u>2</u>	<u>2</u>
<u>H-33</u>	<u>GW</u>	<u>1</u>	<u>8.23.21</u>	<u>1450</u>	<u>2</u>	<u>2</u>
<u>H-3A</u>	<u>GW</u>	<u>1</u>	<u>8.23.21</u>	<u>1055</u>	<u>2</u>	<u>2</u>

Customer Remarks / Special Conditions / Possible Hazards:	Type of Ice Used:	Wet	Blue	Dry	None
	<u>Bubble wrap</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Radchem sample(s) screened (<500 cpm): <u>[] Y [] N [] NA</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relinquished by/Company: <u>IRON ENV.</u>	Date/Time: <u>1200/8.3.21</u>	Received by/Company: <u>FEDEX</u>	Date/Time: <u>[Blank]</u>	Received by/Company: <u>[Signature]</u>	Date/Time: <u>[Blank]</u>
Relinquished by/Company: <u>[Blank]</u>	Date/Time: <u>[Blank]</u>	Received by/Company: <u>[Signature]</u>	Date/Time: <u>[Blank]</u>	Received by/Company: <u>[Signature]</u>	Date/Time: <u>[Blank]</u>
Relinquished by/Company: <u>[Blank]</u>	Date/Time: <u>[Blank]</u>	Received by/Company: <u>[Signature]</u>	Date/Time: <u>[Blank]</u>	Received by/Company: <u>[Signature]</u>	Date/Time: <u>[Blank]</u>

January 24, 2022

Mr. Jason Sills
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767

RE: Project: Henning II/9403-010-0100
Pace Project No.: 30457563

Dear Mr. Sills:

Enclosed are the analytical results for sample(s) received by the laboratory on December 29, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Karen L. Smetanka
karen.smetanka@pacelabs.com
(724)850-5600
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Henning II/9403-010-0100
Pace Project No.: 30457563

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Henning II/9403-010-0100

Pace Project No.: 30457563

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30457563001	MW-10	Water	12/20/21 10:45	12/29/21 10:00
30457563002	MW-5	Water	12/20/21 13:30	12/29/21 10:00
30457563003	MW-4	Water	12/20/21 15:05	12/29/21 10:00
30457563004	MW-3	Water	12/20/21 16:30	12/29/21 10:00
30457563005	MW-2	Water	12/21/21 09:55	12/29/21 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Henning II/9403-010-0100
Pace Project No.: 30457563

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30457563001	MW-10	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30457563002	MW-5	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30457563003	MW-4	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30457563004	MW-3	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30457563005	MW-2	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Henning II/9403-010-0100

Pace Project No.: 30457563

Method: EPA 903.1

Description: 903.1 Radium 226

Client: ICON Environmental Services

Date: January 24, 2022

General Information:

5 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Henning II/9403-010-0100

Pace Project No.: 30457563

Method: EPA 904.0

Description: 904.0 Radium 228

Client: ICON Environmental Services

Date: January 24, 2022

General Information:

5 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Henning II/9403-010-0100
Pace Project No.: 30457563

Sample: MW-10 **Lab ID: 30457563001** Collected: 12/20/21 10:45 Received: 12/29/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.473 ± 0.810 (1.32) C:NA T:42%	pCi/L	01/20/22 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	-0.0747 ± 1.14 (2.67) C:70% T:82%	pCi/L	01/19/22 15:28	15262-20-1	

Sample: MW-5 **Lab ID: 30457563002** Collected: 12/20/21 13:30 Received: 12/29/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.188 ± 0.407 (0.751) C:NA T:97%	pCi/L	01/20/22 12:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	-0.151 ± 0.345 (0.847) C:72% T:84%	pCi/L	01/19/22 15:28	15262-20-1	

Sample: MW-4 **Lab ID: 30457563003** Collected: 12/20/21 15:05 Received: 12/29/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.352 ± 0.460 (0.759) C:NA T:86%	pCi/L	01/20/22 12:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.316 ± 0.353 (0.736) C:77% T:90%	pCi/L	01/19/22 15:28	15262-20-1	

Sample: MW-3 **Lab ID: 30457563004** Collected: 12/20/21 16:30 Received: 12/29/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.116 ± 0.395 (0.874) C:NA T:97%	pCi/L	01/20/22 12:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.551 ± 0.348 (0.653) C:100% T:84%	pCi/L	01/19/22 15:28	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Henning II/9403-010-0100

Pace Project No.: 30457563

Sample: MW-2 **Lab ID: 30457563005** Collected: 12/21/21 09:55 Received: 12/29/21 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.666 ± 0.616 (0.897) C:NA T:75%	pCi/L	01/20/22 12:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.358 ± 0.392 (0.818) C:69% T:94%	pCi/L	01/19/22 15:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Henning II/9403-010-0100

Pace Project No.: 30457563

QC Batch: 478445

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30457563001, 30457563002, 30457563003, 30457563004, 30457563005

METHOD BLANK: 2312125

Matrix: Water

Associated Lab Samples: 30457563001, 30457563002, 30457563003, 30457563004, 30457563005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.313 (0.662) C:NA T:94%	pCi/L	01/20/22 12:24	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Henning II/9403-010-0100

Pace Project No.: 30457563

QC Batch: 478446

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30457563001, 30457563002, 30457563003, 30457563004, 30457563005

METHOD BLANK: 2312126

Matrix: Water

Associated Lab Samples: 30457563001, 30457563002, 30457563003, 30457563004, 30457563005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.252 ± 0.288 (0.602) C:82% T:90%	pCi/L	01/19/22 11:30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Henning II/9403-010-0100

Pace Project No.: 30457563

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

Company: ICON Environmental
Address: 2049 Commercial Drive
Port Allen, LA 70661

Report To: Jason Sills

Billing Information:
SAME

Email To:

Site Collection Info/Address:

Customer Project Name/Number: Hennia II/9403-010-0100
 State: LA County/City: Port Allen Time Zone Collected: JPT | JMT | JCT | JET
 Phone: 225.244.8490 Site/Facility ID #: _____
 Email: jsills@iconenv.com
 Collected By (print): Kate Bell
 Quote #: _____
 Turnaround Date Required: STD
 Rush: (Expedite Charges Apply)
 Same Day Next Day
 2 Day 3 Day
 4 Day 5 Day
 Analysis: _____

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time			
MW-10	GW	G	12.20.21	1045		2	P
MW-5	GW	G	12.20.21	1330		2	P
MW-4	GW	G	12.20.21	1505		2	P
MW-3	GW	G	12.20.21	1630		2	P
MW-2	GW	G	12.21.21	0955		2	P

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: None Wet Blue Dry None
 Packing Material Used: None
 Radchem sample(s) screened (<500 cpm): Y N NA

Relinquished by/Company: (Signature) <u>Kate Bell/ICON</u>	Date/Time: <u>12.22.21/1400</u>	Received by/Company: (Signature) <u>[Signature]</u>
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or

WO#: 30457563



30457563

USE ONLY

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexanes, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Profile/Line:	Analyses
Lab Sample Receipt Checklist: Custody Seals Present/Intact <u>Y</u> N NA Custody Signatures Present <u>Y</u> N NA Collector Signatures Present <u>Y</u> N NA Bottles Intact <u>Y</u> N NA Correct Bottles <u>Y</u> N NA Sufficient Volume <u>Y</u> N NA Samples Received on Ice <u>Y</u> N NA VOA - Headspace Acceptable <u>Y</u> N NA USDA Regulated Soils <u>Y</u> N NA Samples in Holding Time <u>Y</u> N NA Residual Chlorine Present <u>Y</u> N NA CL Strips: _____ Sample pH Acceptable <u>Y</u> N NA pH Strips: <u>100981</u> Sulfide Present _____ Lead Acetate Strips: _____	<u>Radium 226</u> <u>Radium 228</u>
LAB USE ONLY: Lab Sample # / Comments: <u>BJM JBM</u>	<u>CO1</u>
	<u>CO3</u>
	<u>CO3</u>
	<u>CO4</u>
	<u>CO5</u>

SHORT HOLDS PRESENT (<72 hours): Y N N/A
 Lab Tracking #: 7785 8259 7707
 Samples received via: FEDEX UPS Client Courier Pace Courier
 Date/Time: 12/22/21 1400
 Date/Time: _____
 Date/Time: _____

LAB Sample Temperature Info:
 Temp Blank Received: Y N
 Therm ID#: N/A
 Cooler 1 Temp Upon Receipt: 20C
 Cooler 1 Therm Corr. Factor: 0C
 Cooler 1 Corrected Temp: 20C
 Comments: CO 12/20/21

Trip Blank Received: Y N NA
 HCL MeOH TSP Other

Non Conformance(s): YES / NO
 Page: 1 of: 1

February 04, 2022

Mr. Greg Miller
ICON Environmental Services
2049 Commercial Drive
Port Allen, LA 70767

RE: Project: Hemings II / 9403-010-0100
Pace Project No.: 30458869

Dear Mr. Miller:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Karen L. Smetanka
karen.smetanka@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Mr. Derek Pourciau, ICON Environmental Services



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Hemings II / 9403-010-0100
Pace Project No.: 30458869

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Florida: Cert E871149 SEKS WET
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Hemings II / 9403-010-0100
Pace Project No.: 30458869

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30458869001	MW-11	Water	12/15/21 08:00	01/10/22 09:40
30458869002	MW-1	Water	12/15/21 13:45	01/10/22 09:40
30458869003	MW-8	Water	12/15/21 16:30	01/10/22 09:40
30458869004	MW-7	Water	12/16/21 07:50	01/10/22 09:40
30458869005	MW-9d	Water	12/16/21 08:40	01/10/22 09:40
30458869006	SW-BO-13'	Water	12/16/21 11:35	01/10/22 09:40
30458869007	SW-BO-2'	Water	12/16/21 12:30	01/10/22 09:40
30458869008	MW-6	Water	12/17/21 08:30	01/10/22 09:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Hemings II / 9403-010-0100
Pace Project No.: 30458869

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30458869001	MW-11	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30458869002	MW-1	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30458869003	MW-8	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30458869004	MW-7	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30458869005	MW-9d	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30458869006	SW-BO-13'	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30458869007	SW-BO-2'	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
30458869008	MW-6	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Hemings II / 9403-010-0100
Pace Project No.: 30458869

Method: EPA 903.1
Description: 903.1 Radium 226
Client: ICON Environmental Services
Date: February 04, 2022

General Information:

8 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Hemings II / 9403-010-0100

Pace Project No.: 30458869

Method: EPA 904.0

Description: 904.0 Radium 228

Client: ICON Environmental Services

Date: February 04, 2022

General Information:

8 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hemings II / 9403-010-0100

Pace Project No.: 30458869

Sample: MW-11 **Lab ID: 30458869001** Collected: 12/15/21 08:00 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.826 ± 0.611 (0.827) C:NA T:92%	pCi/L	02/03/22 13:33	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.07 ± 0.832 (1.26) C:69% T:87%	pCi/L	01/31/22 19:33	15262-20-1	

Sample: MW-1 **Lab ID: 30458869002** Collected: 12/15/21 13:45 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.252 ± 0.429 (0.758) C:NA T:85%	pCi/L	02/03/22 13:33	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.390 ± 0.625 (1.36) C:64% T:91%	pCi/L	01/31/22 19:35	15262-20-1	

Sample: MW-8 **Lab ID: 30458869003** Collected: 12/15/21 16:30 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.0567 ± 0.509 (1.03) C:NA T:93%	pCi/L	02/03/22 13:33	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.792 ± 0.704 (1.42) C:66% T:88%	pCi/L	01/31/22 19:37	15262-20-1	

Sample: MW-7 **Lab ID: 30458869004** Collected: 12/16/21 07:50 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.204 ± 0.401 (0.733) C:NA T:90%	pCi/L	02/03/22 13:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.659 ± 0.635 (1.29) C:68% T:91%	pCi/L	01/31/22 19:38	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Hemings II / 9403-010-0100

Pace Project No.: 30458869

Sample: MW-9d **Lab ID: 30458869005** Collected: 12/16/21 08:40 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.252 ± 0.494 (0.887) C:NA T:91%	pCi/L	02/03/22 13:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.831 ± 0.723 (1.46) C:69% T:86%	pCi/L	01/31/22 19:41	15262-20-1	

Sample: SW-BO-13' **Lab ID: 30458869006** Collected: 12/16/21 11:35 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.117 ± 0.398 (0.768) C:NA T:89%	pCi/L	02/03/22 13:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.536 ± 0.728 (1.55) C:70% T:77%	pCi/L	01/31/22 19:44	15262-20-1	

Sample: SW-BO-2' **Lab ID: 30458869007** Collected: 12/16/21 12:30 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.171 ± 0.434 (0.805) C:NA T:95%	pCi/L	02/03/22 13:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.119 ± 0.771 (1.77) C:72% T:71%	pCi/L	01/31/22 19:45	15262-20-1	

Sample: MW-6 **Lab ID: 30458869008** Collected: 12/17/21 08:30 Received: 01/10/22 09:40 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample collection dates and times were not present on the sample containers.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.356 ± 0.437 (0.713) C:NA T:92%	pCi/L	02/03/22 13:49	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.27 ± 0.983 (1.59) C:63% T:83%	pCi/L	01/31/22 19:45	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hemings II / 9403-010-0100

Pace Project No.: 30458869

QC Batch: 479190

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30458869001, 30458869002, 30458869003, 30458869004, 30458869005, 30458869006, 30458869007, 30458869008

METHOD BLANK: 2315327

Matrix: Water

Associated Lab Samples: 30458869001, 30458869002, 30458869003, 30458869004, 30458869005, 30458869006, 30458869007, 30458869008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0439 ± 0.228 (0.472) C:NA T:92%	pCi/L	02/03/22 13:18	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Hemings II / 9403-010-0100

Pace Project No.: 30458869

QC Batch:	479192	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 30458869001, 30458869002, 30458869003, 30458869004, 30458869005, 30458869006, 30458869007, 30458869008

METHOD BLANK: 2315336 Matrix: Water

Associated Lab Samples: 30458869001, 30458869002, 30458869003, 30458869004, 30458869005, 30458869006, 30458869007, 30458869008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.221 ± 0.325 (0.701) C:76% T:90%	pCi/L	01/31/22 14:23	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Hemings II / 9403-010-0100
Pace Project No.: 30458869

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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LIMS Login VP

Tracking #: 7750 4593 1974

Courier: Fed Ex USPS Client Commercial Face Other

Thermometer Used _____
 Type of Ice: Wet Blue None
 Cooler Temperature _____ Observed Temp _____ °C
 Correction Factor: _____ °C
 Final Temp: _____ °C

Comments: Yes No N/A
 pH paper Lot# 1002811
 Date and Initials of person examining contents: DE Miller

1.	Chain of Custody Present:	<input checked="" type="checkbox"/>		
2.	Chain of Custody Filled Out:	<input checked="" type="checkbox"/>		<u>no reservation listed</u>
3.	Chain of Custody Relinquished:	<input checked="" type="checkbox"/>		<u>no date/time</u>
4.	Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>		
5.	Sample Labels match COC:	<input checked="" type="checkbox"/>		
6.	Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>		
7.	Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>		
8.	Rush Turn Around Time Requested:	<input checked="" type="checkbox"/>		
9.	Sufficient Volume:	<input checked="" type="checkbox"/>		
10.	Correct Containers Used:	<input checked="" type="checkbox"/>		
11.	-Face Containers Used:	<input checked="" type="checkbox"/>		
12.	Containers Intact:	<input checked="" type="checkbox"/>		
13.	Orthophosphate field filtered	<input checked="" type="checkbox"/>		
14.	Hex Cr Aqueous sample field filtered	<input checked="" type="checkbox"/>		
15.	Organic Samples checked for dechlorination:	<input checked="" type="checkbox"/>		
16.	Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/>		
17.	All containers have been checked for preservation.	<input checked="" type="checkbox"/>		
18.	exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	<input checked="" type="checkbox"/>		
19.	All containers meet method preservation requirements.	<input checked="" type="checkbox"/>		
20.	Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/>		
21.	Trip Blank Present:	<input checked="" type="checkbox"/>		
22.	Trip Blank Custody Seals Present	<input checked="" type="checkbox"/>		
23.	Rad Samples Screened < 0.5 mrem/hr	<input checked="" type="checkbox"/>		

Client Notification/ Resolution: _____
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____
 Contacted By: _____

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)
 *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS, The review is in the Status section of the Workorder Edit Screen.



Pace Greensburg Lab -Sample Container Count

Client _____ Profile Number 1900
 Site _____ Notes 2 BP1N for all

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

30458860

Container Codes

Glass		
GJN	1 Gallon Jug with HNO3	DG9S 40ml amber VOA vial H2SO4
AG5U	100ml amber glass unpreserved	VG9U 40ml clear VOA vial
AG5T	100ml amber glass Na Thiosulfate	VG9T 40ml clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H 40ml clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU 4oz amber wide jar
AG1H	1L amber glass HCl	WG9U 4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U 500ml clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U 500ml amber glass unpreserved
AG3S	250ml amber glass H2SO4	WGKU 8oz wide jar unpreserved
AG3U	250ml amber glass unpreserved	

Plastic / Misc.		
GCUB	1 Gallon Cubitainer	
12GN	1/2 Gallon Cubitainer	
SP5T	120ml Coliform Na Thiosulfate	
BP1N	1L plastic HNO3	
BP1U	1L plastic unpreserved	
BP3S	250ml plastic H2SO4	
BP3N	250ml plastic HNO3	
BP3U	250ml plastic unpreserved	
BP3C	250ml plastic NaOH	
BP2S	500ml plastic H2SO4	
BP2U	500ml plastic unpreserved	

EZI	5g Encore	
VOAK	Kit for Volatile Solid	
I	Wipe/Swab	
ZPLC	Ziploc Bag	
WT	Water	
SL	Solid	
OL	Non-aqueous liquid	
WP	Wipe	