

The results set forth herein are provided by SGS North America Inc.

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Automated Report

Technical Report for

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

SGS Job Number: LA46057

Sampling Dates: 07/18/18 - 07/19/18

Report to:

**Hydro-Environmental Technology
P.O. BOX 60295
Lafayette, LA 70596
labdata@hetinc.us**

ATTN: Stewart L Stover, Jr.

Total number of pages in report: 40



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Ron Benjamin
Lab Director

Client Service contact: Ralph Frye 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-15-7), WV(257)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

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Sample Summary

Hydro-Environmental Technology, Inc.

Job No: LA46057

8060.00 Indigo-Desoto Parish, LA

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
LA46057-1	07/18/18	17:10	KC/WR07/23/18	AQ	Water	DENNISON RIG SUPPLY
LA46057-1F	07/18/18	17:10	KC/WR07/23/18	AQ	Water Filtered	DENNISON RIG SUPPLY
LA46057-2	07/19/18	11:45	KC/WR07/23/18	AQ	Water	GAMBLE RIG SUPPLY
LA46057-2F	07/19/18	11:45	KC/WR07/23/18	AQ	Water Filtered	GAMBLE RIG SUPPLY

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: DENNISON RIG SUPPLY	Date Sampled: 07/18/18
Lab Sample ID: LA46057-1	Date Received: 07/23/18
Matrix: AQ - Water	Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Arsenic	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Barium	0.0251	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Cadmium	< 0.0050	0.0050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Calcium	2.66	1.0	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ²	SW846 3010A ⁵
Chromium	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Iron	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Lead	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Magnesium	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Manganese	< 0.020	0.020	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ⁴	SW846 3010A ⁵
Mercury	< 0.00020	0.00020	mg/l	1	07/24/18	07/25/18 SA	SW846 7470A ³	SW846 7470A ⁶
Potassium	1.27	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Selenium	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Silver	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Sodium	428	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Strontium	0.104	0.020	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Zinc	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA12780
- (2) Instrument QC Batch: MA12785
- (3) Instrument QC Batch: MA12789
- (4) Instrument QC Batch: MA12799
- (5) Prep QC Batch: MP12182
- (6) Prep QC Batch: MP12200

RL = Reporting Limit

Report of Analysis

Client Sample ID: DENNISON RIG SUPPLY	Date Sampled: 07/18/18
Lab Sample ID: LA46057-1	Date Received: 07/23/18
Matrix: AQ - Water	Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate ^a	381	5.0	mg/l	1	07/30/18 12:20	ATX	SM18 2320B
Alkalinity, Carbonate ^a	13.9	5.0	mg/l	1	07/30/18 12:20	ATX	SM18 2320B
Alkalinity, Total as CaCO ₃ ^a	395	5.0	mg/l	1	07/30/18 12:20	ATX	SM 2320B-2011
Bromide ^a	0.52	0.50	mg/l	1	07/26/18 16:03	ATX	SW846 9056A
Chloride ^a	127	5.0	mg/l	5	08/02/18 10:06	ATX	SM21 4500-CL E-2011
Chloride ^a	111	5.0	mg/l	10	08/02/18 11:58	ATX	SW846 9056A
Silica, Dissolved ^a	11.6	0.50	mg/l	10	08/04/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved ^a	901	10	mg/l	1	07/25/18	ATX	SM 2540C-2011
Specific Conductivity ^b	1480	1.0	umhos/cm	1	07/25/18	ATX	EPA 120.1
Sulfate ^a	< 0.50	0.50	mg/l	1	07/26/18 16:03	ATX	SW846 9056A

(a) Analysis performed at SGS Houston, TX.

(b) Conductivity results corrected to 25 degrees Celsius. Analysis performed at SGS Houston, TX.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY	Date Sampled:	07/18/18
Lab Sample ID:	LA46057-1F	Date Received:	07/23/18
Matrix:	AQ - Water Filtered	Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Arsenic	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Barium	0.0228	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Cadmium	< 0.0050	0.0050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Calcium	1.50	1.0	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ²	SW846 3010A ⁵
Chromium	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Iron	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Lead	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Magnesium	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Manganese	< 0.020	0.020	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ⁴	SW846 3010A ⁵
Mercury	< 0.00020	0.00020	mg/l	1	07/24/18	07/25/18 SA	SW846 7470A ³	SW846 7470A ⁶
Potassium	1.15	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Selenium	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Silver	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Sodium	414	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Strontium	0.0904	0.020	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Zinc	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA12780
- (2) Instrument QC Batch: MA12785
- (3) Instrument QC Batch: MA12789
- (4) Instrument QC Batch: MA12799
- (5) Prep QC Batch: MP12182
- (6) Prep QC Batch: MP12200

RL = Reporting Limit

Report of Analysis

Client Sample ID: GAMBLE RIG SUPPLY	Date Sampled: 07/19/18
Lab Sample ID: LA46057-2	Date Received: 07/23/18
Matrix: AQ - Water	Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Arsenic	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Barium	0.0298	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Cadmium	< 0.0050	0.0050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Calcium	2.64	1.0	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ²	SW846 3010A ⁵
Chromium	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Iron	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Lead	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Magnesium	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Manganese	< 0.020	0.020	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ⁴	SW846 3010A ⁵
Mercury	< 0.00020	0.00020	mg/l	1	07/24/18	07/25/18 SA	SW846 7470A ³	SW846 7470A ⁶
Potassium	1.36	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Selenium	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Silver	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Sodium	422	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Strontium	0.107	0.020	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Zinc	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA12780
- (2) Instrument QC Batch: MA12785
- (3) Instrument QC Batch: MA12789
- (4) Instrument QC Batch: MA12799
- (5) Prep QC Batch: MP12182
- (6) Prep QC Batch: MP12200

RL = Reporting Limit

Report of Analysis

Client Sample ID: GAMBLE RIG SUPPLY	Date Sampled: 07/19/18
Lab Sample ID: LA46057-2	Date Received: 07/23/18
Matrix: AQ - Water	Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate ^a	396	5.0	mg/l	1	07/30/18 12:20	ATX	SM18 2320B
Alkalinity, Carbonate ^a	14.1	5.0	mg/l	1	07/30/18 12:20	ATX	SM18 2320B
Alkalinity, Total as CaCO ₃ ^a	410	5.0	mg/l	1	07/30/18 12:20	ATX	SM 2320B-2011
Bromide ^a	< 0.50	0.50	mg/l	1	07/26/18 16:53	ATX	SW846 9056A
Chloride ^a	114	5.0	mg/l	5	08/02/18 10:06	ATX	SM21 4500-CL E-2011
Chloride ^a	105	5.0	mg/l	10	08/02/18 13:22	ATX	SW846 9056A
Silica, Dissolved ^a	12.2	0.50	mg/l	10	08/04/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved ^a	876	10	mg/l	1	07/25/18	ATX	SM 2540C-2011
Specific Conductivity ^b	1440	1.0	umhos/cm	1	07/25/18	ATX	EPA 120.1
Sulfate ^a	< 0.50	0.50	mg/l	1	07/26/18 16:53	ATX	SW846 9056A

(a) Analysis performed at SGS Houston, TX.

(b) Conductivity results corrected to 25 degrees Celsius. Analysis performed at SGS Houston, TX.

RL = Reporting Limit

Report of Analysis

Client Sample ID: GAMBLE RIG SUPPLY	Date Sampled: 07/19/18
Lab Sample ID: LA46057-2F	Date Received: 07/23/18
Matrix: AQ - Water Filtered	Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA	

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Arsenic	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Barium	0.0276	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Cadmium	< 0.0050	0.0050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Calcium	1.68	1.0	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ²	SW846 3010A ⁵
Chromium	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Iron	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Lead	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Magnesium	< 1.0	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Manganese	< 0.020	0.020	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ⁴	SW846 3010A ⁵
Mercury	< 0.00020	0.00020	mg/l	1	07/24/18	07/25/18 SA	SW846 7470A ³	SW846 7470A ⁶
Potassium	1.33	1.0	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Selenium	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Silver	< 0.010	0.010	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Sodium	402	1.0	mg/l	10	07/23/18	07/25/18 BB	SW846 6020A ²	SW846 3010A ⁵
Strontium	0.105	0.020	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵
Zinc	< 0.050	0.050	mg/l	10	07/23/18	07/24/18 BB	SW846 6020A ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA12780
- (2) Instrument QC Batch: MA12785
- (3) Instrument QC Batch: MA12789
- (4) Instrument QC Batch: MA12799
- (5) Prep QC Batch: MP12182
- (6) Prep QC Batch: MP12200

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
 Environmental Consultants
 P.O. Box 60295
 Lafayette, LA 70596-0295
 Phone (337) 261-1963 FAX (337) 261-1953

LA46057

SAMPLE CHAIN-OF-CUSTODY RECORD

Project Name: Indigo
 Project Number: 8060.00
 Project Location: DeSoto Parish, Louisiana
 Laboratory: SGS Lafayette
 Collected By: KC/WP
 Company: Hydro-Environmental Technology, Inc.
 Date: 7/18/2018

Sample I.D.	Type	Date/Time Sampled	Containers	Analysis Requested/Method	Comments
Dennison Rig Supply	AQ	7/18/2018 1710	(2) 250mL plastic HNO3. (1) Liter Plastic	Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals
Gamble Rig Supply	AQ	7/19/2018 1145	(2) 250mL plastic HNO3. (1) Liter Plastic	Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals
Metals*: arsenic, barium, chromium, lead, mercury, selenium, silver, strontium, zinc Cations: calcium, iron, magnesium, manganese, potassium, sodium Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity					
Relinquished By: <i>[Signature]</i>		Relinquished By: <i>[Signature]</i>			
Date/Time: 7-23-18 0830		Date/Time: 7-23-18 08:30			
Relinquished By: <i>[Signature]</i>		Relinquished By: <i>[Signature]</i>			
Date/Time: 7-23-18 0925		Date/Time: 7-23-18 0925			
Analysis Due: Verbal:		Written:			
Temp: 20 dx 439		3 WZ 7 pH 2			
NO/cs/oc		3 WZ P			
		c/d			
		OK			

SGS Sample Receipt Summary

Job Number: LA46057

Client: HYDRO-ENVIRONMENTAL

Project: INDIGO

Date / Time Received: 7/23/2018 9:25:00 AM

Delivery Method: Client

Airbill #'s: _____

Cooler Temps (Initial/Adjusted): #1: (2/2):

Cooler Security

- | | | | | | | | |
|---------------------------|--------------------------|-----------|-------------------------------------|----------------------|-------------------------------------|-----------|--------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> | | <u>Y</u> | <u>or</u> | <u>N</u> |
| 1. Custody Seals Present: | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | 4. Smp Dates/Time OK | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |

Cooler Temperature

- | | | | |
|----------------------------|-------------------------------------|-----------|--------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> |
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. Thermometer ID: | <u>DV439;</u> | | |
| 3. Cooler media: | <u>Ice (direct contact)</u> | | |
| 4. No. Coolers: | <u>1</u> | | |

Quality Control Preservation

- | | | | | |
|---------------------------------|-------------------------------------|-----------|--------------------------|-------------------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> | <u>N/A</u> |
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Sample Integrity - Documentation

- | | | | |
|--|-------------------------------------|-----------|--------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> |
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |

Sample Integrity - Condition

- | | | | |
|----------------------------------|-------------------------------------|-----------|--------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> |
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 3. Condition of sample: | <u>Intact</u> | | |

Sample Integrity - Instructions

- | | | | | |
|---|-------------------------------------|-----------|-------------------------------------|-------------------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> | <u>N/A</u> |
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

LA46057: Chain of Custody

Page 2 of 4

Job Change Order: LA46057

Requested Date: 7/30/2018 **Received Date:** 7/23/2018
Account Name: Hydro-Environmental Technology, **Due Date:** 8/2/2018
Project Description: 8060.00 Indigo-Desoto Parish, LA **Deliverable:** COMMB
CSR: ralphtf **TAT (Days):** 10

=====
Sample #: LA46057-1 **Change:**
 add ALMS, SIL
Dept:

TAT: 10

DENNISON RIG SUPPLY
 =====

=====
Sample #: LA46057-1f **Change:**
 add ALMS
Dept:

TAT: 10

DENNISON RIG SUPPLY
 =====

=====
Sample #: LA46057-2 **Change:**
 add ALMS, SIL
Dept:

TAT: 10

GAMBLE RIG SUPPLY
 =====

=====
Sample #: LA46057-2f **Change:**
 add ALMS
Dept:

TAT: 10

GAMBLE RIG SUPPLY
 =====

Above Changes Per: Wade Pigott **Date/Time:** 7/30/2018 3:34:57 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the a Client Service Representative.

Job Change Order: LA46057

Requested Date:	7/30/2018	Received Date:	7/23/2018
Account Name:	Hydro-Environmental Technology,	Due Date:	8/2/2018
Project Description:	8060.00 Indigo-Desoto Parish, LA	Deliverable:	COMMB
CSR:	ralphf	TAT (Days):	10

LA46057: Chain of Custody
Page 4 of 4

Above Changes Per: Wade Pigott **Date/Time:** 7/30/2018 3:34:57 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the a Client Service Representative.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- **Method Blank Summaries**
- **Matrix Spike and Duplicate Summaries**
- **Blank Spike and Lab Control Sample Summaries**
- **Serial Dilution Summaries**

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/23/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	6.9	9.3	10	<100
Antimony	1.0	.043	.34		
Arsenic	1.0	.062	.26	0.11	<1.0
Barium	1.0	.033	.46	0.026	<1.0
Beryllium	1.0	.0077	.28		
Boron	20	1.3	2.9		
Cadmium	0.50	.011	.12	0.044	<0.50
Calcium	100	5.7	20	43.4	<100
Cerium	1.0	.0041	.16		
Chromium	1.0	.11	.15	0.79	* (a)
Cobalt	1.0	.012	.14		
Copper	1.0	.91	.74		
Iron	100	48	16	-16	<100
Lanthanum	1.0	.0038	.41		
Lithium	2.0	.1	.61		
Lead	1.0	.0081	.13	-0.16	<1.0
Magnesium	100	1.6	11	5.8	<100
Manganese	2.0	.48	.53	2.5	* (b)
Molybdenum	1.0	.048	.89		
Nickel	1.0	.037	.2		
Potassium	100	3.4	7.6	-18	<100
Selenium	5.0	.38	3.1	0.19	<5.0
Silver	1.0	.0047	.13	-0.053	<1.0
Silicon	500	6.6	130		
Sodium	100	24	9.9	68.1	* (a)
Strontium	2.0	.12	.27	0.12	<2.0
Thallium	1.0	.021	.86		
Tin	2.0	.034	.19		
Titanium	1.0	.15	.77		
Uranium	1.0	.0048	.17		
Vanadium	1.0	.027	.1		
Zinc	5.0	1.5	1.1	1.9	<5.0

Associated samples MP12182: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/23/18

Metal	RL	IDL	MDL	MB raw	final
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Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All reported samples > 10 x blank absolute value or < RDL.
(b) All reported results < RL

4.1.1
4

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA46057
 Account: HETILAL - Hydro-Environmental Technology, Inc.
 Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 07/23/18

Metal	TD24420-5F Original MS		SpikeLot MPICPMS6	% Rec	QC Limits
Aluminum	391	5760	5100	105.3	75-125
Antimony					
Arsenic	1.8	115	100	113.2	75-125
Barium	1180	1250	100	70.0 (a)	75-125
Beryllium					
Boron					
Cadmium	0.67	109	100	108.3	75-125
Calcium	541000	534000	5000	-140.0(a)	75-125
Cerium					
Chromium	2.0	114	100	112.0	75-125
Cobalt					
Copper	anr				
Iron	12300	16900	5000	92.0	75-125
Lanthanum					
Lithium					
Lead	0.0	107	100	107.0	75-125
Magnesium	631000	590000	5000	-820.0(a)	75-125
Manganese	258	341	100	83.0	75-125
Molybdenum					
Nickel	anr				
Potassium	99600	101000	5000	28.0 (a)	75-125
Selenium	5.7	545	500	107.9	75-125
Silver	0.0	107	100	107.0	75-125
Silicon					
Sodium	6670000	6100000	5000	-11400.0a	75-125
Strontium	8820	8330	100	-490.0(a)	75-125
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	0.0	119	100	119.0	75-125

Associated samples MP12182: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/23/18

Metal	TD24420-5F Original MS	SpikeLot MPICPMS6 % Rec	QC Limits
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Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA46057
 Account: HETILAL - Hydro-Environmental Technology, Inc.
 Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 07/23/18

Metal	TD24420-5F Original MSD		SpikeLot MPICPMS6	% Rec	MSD RPD	QC Limit
Aluminum	391	6310	5100	116.1	9.1	20
Antimony						
Arsenic	1.8	126	100	124.2	9.1	20
Barium	1180	1410	100	230.0(a)	12.0	20
Beryllium						
Boron						
Cadmium	0.67	114	100	113.3	4.5	20
Calcium	541000	592000	5000	1020.0(a)	10.3	20
Cerium						
Chromium	2.0	119	100	117.0	4.3	20
Cobalt						
Copper	anr					
Iron	12300	18100	5000	116.0	6.9	20
Lanthanum						
Lithium						
Lead	0.0	118	100	118.0	9.8	20
Magnesium	631000	646000	5000	300.0(a)	9.1	20
Manganese	258	349	100	91.0	2.3	20
Molybdenum						
Nickel	anr					
Potassium	99600	114000	5000	288.0(a)	12.1	20
Selenium	5.7	581	500	115.1	6.4	20
Silver	0.0	114	100	114.0	6.3	20
Silicon						
Sodium	6670000	6690000	5000	400.0(a)	9.2	20
Strontium	8820	9190	100	370.0(a)	9.8	20
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	0.0	121	100	121.0	1.7	20

Associated samples MP12182: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA46057
 Account: HETILAL - Hydro-Environmental Technology, Inc.
 Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 07/23/18

Metal	TD24420-5F Original MSD	SpikeLot MPICPMS6 % Rec	MSD RPD	QC Limit
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Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

4.1.2
4

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA46057
 Account: HETILAL - Hydro-Environmental Technology, Inc.
 Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 07/23/18

Metal	BSP Result	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	4810	5100	94.3	80-120
Antimony				
Arsenic	96.0	100	96.0	80-120
Barium	99.4	100	99.4	80-120
Beryllium				
Boron				
Cadmium	98.6	100	98.6	80-120
Calcium	5050	5000	101.0	80-120
Cerium				
Chromium	103	100	103.0	80-120
Cobalt				
Copper	anr			
Iron	5050	5000	101.0	80-120
Lanthanum				
Lithium				
Lead	101	100	101.0	80-120
Magnesium	4770	5000	95.4	80-120
Manganese	94.2	100	94.2	80-120
Molybdenum				
Nickel	anr			
Potassium	5040	5000	100.8	80-120
Selenium	468	500	93.6	80-120
Silver	101	100	101.0	80-120
Silicon				
Sodium	5250	5000	105.0	80-120
Strontium	99.7	100	99.7	80-120
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	97.3	100	97.3	80-120

Associated samples MP12182: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/23/18

Metal	BSP Result	Spikelot MPICPMS6 % Rec	QC Limits
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Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA46057
 Account: HETILAL - Hydro-Environmental Technology, Inc.
 Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
 Matrix Type: AQUEOUS

Methods: SW846 6020A
 Units: ug/l

Prep Date: 07/23/18

Metal	TD24420-5F Original SDL 10:50%DIF		QC Limits
Aluminum	391	2110	438.6 (a) 0-10
Antimony			
Arsenic	1.83	0.00	100.0 (a) 0-10
Barium	1180	1040	12.1* (b) 0-10
Beryllium			
Boron			
Cadmium	0.671	2.94	338.5 (a) 0-10
Calcium	541000	498000	7.9 0-10
Cerium			
Chromium	1.98	0.00	100.0 (a) 0-10
Cobalt			
Copper	anr		
Iron	12300	9710	21.2 (a) 0-10
Lanthanum			
Lithium			
Lead	0.00	0.00	NC 0-10
Magnesium	631000	554000	12.2* (b) 0-10
Manganese	258	270	4.7 0-10
Molybdenum			
Nickel	anr		
Potassium	99600	88800	10.9* (b) 0-10
Selenium	5.68	0.00	100.0 (a) 0-10
Silver	0.00	0.00	NC 0-10
Silicon			
Sodium	6670000	5580000	16.4* (b) 0-10
Strontium	8820	7280	17.4* (b) 0-10
Thallium			
Tin			
Titanium			
Uranium			
Vanadium			
Zinc	0.00	100	NC 0-10

Associated samples MP12182: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12182
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 07/23/18

Metal	TD24420-5F Original SDL 10:50%DIF	QC Limits
-------	--------------------------------------	--------------

Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (anr) Analyte not requested
- (a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- (b) Serial dilution indicates possible matrix interference.

4.1.4
4

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12200
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/24/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.06	.081	-0.023	<0.20

Associated samples MP12200: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12200
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/24/18

Metal	LA46020-2 Original MS	Spikelot HGSPIKE1 % Rec	QC Limits
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Mercury 0.0 4.8 5 96.0 75-125

Associated samples MP12200: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

4.2.2
4

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA46057
 Account: HETILAL - Hydro-Environmental Technology, Inc.
 Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12200
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 07/24/18

Metal	LA46020-2 Original MSD	Spikelot HGSPIKE1	% Rec	MSD RPD	QC Limit
Mercury	0.0	4.8	5	96.0	0.0 20

Associated samples MP12200: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

4.2.2

4

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA46057
 Account: HETILAL - Hydro-Environmental Technology, Inc.
 Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12200
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 07/24/18

Metal	BSP Result	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	4.7	5	94.0	80-120

Associated samples MP12200: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

4.2.3
4

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA46057
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12200
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 07/24/18

Metal	LA46020-2	QC
	Original SDL 1:5	%DIF Limits

Mercury 0.00 0.00 NC 0-

Associated samples MP12200: LA46057-1, LA46057-2, LA46057-1F, LA46057-2F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

4.2.4

4

Misc. Forms

Custody Documents and Other Forms

(SGS Houston, TX)

Includes the following where applicable:

- Chain of Custody

Cooper 1

Date / Time: 7/23/2018 11:06:32 AM

CSR: ralphf

Job #: LA46057

Client Project: 8060.00 Indigo-Desoto Parish, LA

Deliverable: COMMB

TAT: Due 8/2/2018

Sub Lab: SGS North America Inc. - TX

Address: 10165 Harwin Drive

City: Houston

State: TX

Zip: 77036

Contact: Sample Management

Phone: (713) 692-9151

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
LA46057-1 ✓	DENNISON RIG SUPPLY	BROIC9056_CHL_SCON_SO4IC9056 .IDS_XCARBICALK	3 W2_3 W2F_OL	KCWP	7/18/2018	5:10:00 PM	
LA46057-2 ✓	GAMBLE RIG SUPPLY	BROIC9056_CHL_SCON_SO4IC9056 .IDS_XCARBICALK	3 W2_3 W2F_OL	KCWP	7/19/2018	11:45:00 AM	

Comments:

Sample Management Receipt:

Ji

Date: 7-23-18 2256

2-1000ml up

5.1
5

SGS Sample Receipt Summary

Job Number: LA46057 **Client:** SGS **Project:** 8060.00 INDIGO DESOTO
Date / Time Received: 7/23/2018 10:50:00 PM **Delivery Method:** _____ **Airbill #'s:** _____
No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;
Cooler Temps (Initial/Adjusted): #1: (4.9/4.9);

Cooler Security	<u>Y or N</u>		<u>Y or N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>

Cooler Temperature	<u>Y or N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Cooler temp verification:	_____
3. Cooler media:	Ice (Bag)

Quality Control Preservation	<u>Y or N</u>	<u>N/A</u>	<u>WTB</u>	<u>STB</u>
1. Trip Blank present / cooler:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>		
3. Samples preserved properly:	<input checked="" type="checkbox"/> <input type="checkbox"/>			
4. VOCs headspace free:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>		

Sample Integrity - Documentation	<u>Y or N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/> <input type="checkbox"/>

Sample Integrity - Condition	<u>Y or N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Condition of sample:	Intact

Sample Integrity - Instructions	<u>Y or N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/> <input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

5.1
5

Sample Receipt Log

Job #: LA46057

Date / Time Received: 7/23/2018 10:50:00 PM 10:5

Initials: ds

Client: SGS

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	LA46057-1	1000ml	1	M3D	N/P	Note #2 - Preservative check not applicable.	IR-5	4.9	0	4.9
1	LA46057-2	1000ml	1	M3D	N/P	Note #2 - Preservative check not applicable.	IR-5	4.9	0	4.9

5.1
5

LA46057: Chain of Custody

Page 4 of 4

General Chemistry

QC Data Summaries

(SGS Houston, TX)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA46057
Account: ALLA - SGS Scott, LA
Project: HETILAL: 8060.00 Indigo-Desoto Parish, LA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate	GN91623	5.0	1.0	mg/l				
Alkalinity, Carbonate	GN91624	5.0	0.0	mg/l				
Alkalinity, Total as CaCO3	GN91622	5.0	0.0	mg/l	100	105	105.0	90-100%
Bromide	GP48760/GN91550	0.50	0.0	mg/l	10	9.74	97.4	90-110%
Chloride	GP48840/GN91702	1.0	0.85	mg/l	20	20.6	103.0	94-107%
Chloride	GP48864/GN91741	0.50	0.0	mg/l	10	9.72	97.2	90-110%
Silica, Dissolved	GN91770	0.050	0.0	mg/l	1.07	1.0	93.5	80-120%
Solids, Total Dissolved	GN91503	10	0.0	mg/l	500	498	99.6	88-110%
Specific Conductivity	GN91517	1.0	<1.0	umhos/cm				
Sulfate	GP48760/GN91550	0.50	0.0	mg/l	10	9.49	94.9	90-110%

Associated Samples:

Batch GN91503: LA46057-1, LA46057-2
 Batch GN91517: LA46057-1, LA46057-2
 Batch GN91622: LA46057-1, LA46057-2
 Batch GN91623: LA46057-1, LA46057-2
 Batch GN91624: LA46057-1, LA46057-2
 Batch GN91770: LA46057-1, LA46057-2
 Batch GP48760: LA46057-1, LA46057-2
 Batch GP48840: LA46057-1, LA46057-2
 Batch GP48864: LA46057-1, LA46057-2
 (*) Outside of QC limits

6.1
6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA46057
Account: ALLA - SGS Scott, LA
Project: HETILAL: 8060.00 Indigo-Desoto Parish, LA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Bicarbonate	GN91623	LA46057-1	mg/l	381	381	0.0	0-10%
Alkalinity, Carbonate	GN91624	LA46057-1	mg/l	13.9	13.6	0.0	0-20%
Alkalinity, Total as CaCO3	GN91622	LA46057-1	mg/l	395	395	0.0	0-10%
Bromide	GP48760/GN91550	LA46057-1	mg/l	0.52	0.55	5.6	0-19%
Chloride	GP48840/GN91702	LA46057-1	mg/l	127	118	7.3	0-10%
Chloride	GP48864/GN91741	LA46057-1	mg/l	111	115	3.5	0-13%
Silica, Dissolved	GN91770	LA46057-1	mg/l	11.6	12.2	5.0	0-20%
Solids, Total Dissolved	GN91503	LA46057-1	mg/l	901	909	0.9	0-5%
Specific Conductivity	GN91517	TD24655-1	umhos/cm	652	652	0.0	0-10%
Sulfate	GP48760/GN91550	LA46057-1	mg/l	0.0	0.0	0.0	0-20%

Associated Samples:

Batch GN91503: LA46057-1, LA46057-2
 Batch GN91517: LA46057-1, LA46057-2
 Batch GN91622: LA46057-1, LA46057-2
 Batch GN91623: LA46057-1, LA46057-2
 Batch GN91624: LA46057-1, LA46057-2
 Batch GN91770: LA46057-1, LA46057-2
 Batch GP48760: LA46057-1, LA46057-2
 Batch GP48840: LA46057-1, LA46057-2
 Batch GP48864: LA46057-1, LA46057-2
 (*) Outside of QC limits

6.2
6

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA46057
Account: ALLA - SGS Scott, LA
Project: HETILAL: 8060.00 Indigo-Desoto Parish, LA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN91622	LA46057-1	mg/l	395	25	420	100.0	75-117%
Bromide	GP48760/GN91550	LA46057-1	mg/l	0.52	10	9.2	86.8	80-120%
Chloride	GP48840/GN91702	LA46057-1	mg/l	127	100	221	94.0	85-115%
Chloride	GP48864/GN91741	LA46057-1	mg/l	111	100	234	123.0N	80-120%
Silica, Dissolved	GN91770	LA46057-1	mg/l	11.6	21.4	28.0	76.6	75-125%
Sulfate	GP48760/GN91550	LA46057-1	mg/l	0.0	10	9.9	99.0	80-120%

Associated Samples:

Batch GN91622: LA46057-1, LA46057-2

Batch GN91770: LA46057-1, LA46057-2

Batch GP48760: LA46057-1, LA46057-2

Batch GP48840: LA46057-1, LA46057-2

Batch GP48864: LA46057-1, LA46057-2

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

6.3
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