HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
Environmental Consultants
P.O. Box 60295
Lafayette, LA 70596-0295

91 Apollo Road
Scott, LA 70583

Phone (337) 261-1963
FAX (337) 261-1953

September 28, 2018

Mr. Charles S. Weems III
Gold Weems Bruser Sues & Rundell
2001 MacArthur Drive
P. O. Box 6118
Alexandria, Louisiana 71307-6118

and

Mr. Scott C. Sinclair
Sinclair Law Firm, LLC
P. O. Box 1026
Shreveport, Louisiana 71163-1026

Re: Groundwater Laboratory Report
Indigo Minerals, LLC
Bethany-Longstreet Field
Township 13 North, Range 15 West
DeSoto Parish, Louisiana

Dear Mr. Weems / Mr. Sinclair :

At your request, Hydro-Environmental Technology, Inc. (HET) conducted environmental sampling activities for Indigo Minerals, LLC (Indigo) in the Bethany-Longstreet Field, located in Township 13 North, Range 15 West, in DeSoto Parish, Louisiana. The results of the September 04 - 11, 2018, sampling event have been received as of today, with copies of the laboratory report attached and also summarized in the attached Table 1. HET sampled the groundwater from six (6) rig supply wells and four (4) relief wells and also collected surface water samples from two (2) holding ponds in the area. Sample locations are shown in Figures 1 and 2.

Of the twelve (12) water samples collected, two (2) of the samples reported benzene above the regulatory standard. The Mason Relief Well and the Hanson Relief Well reported benzene concentrations as 0.106 mg/L and 0.0372 mg/L, respectively, which are above the USEPA's Federal Drinking Water Standard and the LDEQ RECAP Groundwater Screening Standard of 0.005 mg/L. We understand that you will take responsibility for reporting these results to the appropriate regulatory authorities as may be required by law.

However, consideration should be given to the fact that the groundwater samples analyzed may be anomalous and were collected from non-typical monitor wells under pressure, which were constructed as relief wells using typical oil and gas construction methods to handle the pressure of a methane gas charged aquifer. While groundwater sampling methods were conducted utilizing new nitrile gloves and new, laboratory supplied containers, the sampling points and sources were limited to what was available on the relief wells.

The relief wells were constructed with steel casing, tubing, flanges, valves, chokes, and other fittings which contained grease, lubricating oils, pipe dope, and other anti-seize lubricants, typically used in oil and gas well construction. The sampling points were located in tubing runs downstream of the well heads. At the Mason Relief Well, water, sediment, and methane gas were blowing out under pressure from the sampling port or pipe opening. At the Hanson Relief Well, the sampling point was at the frac tank which serves as the initial reservoir for the water. Pressures during times of sampling ranged from under 14 psi to 80 psi at the Mason and Hanson Relief Wells.

Therefore, the reported hydrocarbon (benzene) concentrations may have been introduced by well construction activities and may not be representative of actual aquifer conditions. It is suggested that these detections be reevaluated immediately to confirm or eliminate their occurrence and the relief well(s) re-sampled in an effort to obtain a representative sample from the aquifer.

Modifications to the Mason Relief Well are being designed by Indigo in an effort to minimize the contact that the groundwater has with piping, valves, etc. The insertion of a 1" poly tubing into the steel casing and steel tubing down to a considerable depth (250 feet or more, if possible) and extending through the surface connections to a new, un-greased sampling valve is being considered. However, since the aquifer is charged and pressured, well construction and sampling methods are somewhat restricted.

On behalf of Hydro-Environmental Technology, Inc., we appreciate the opportunity to provide you with this information. Should you have any questions or need any additional information, please feel free to call.

Sincerely,

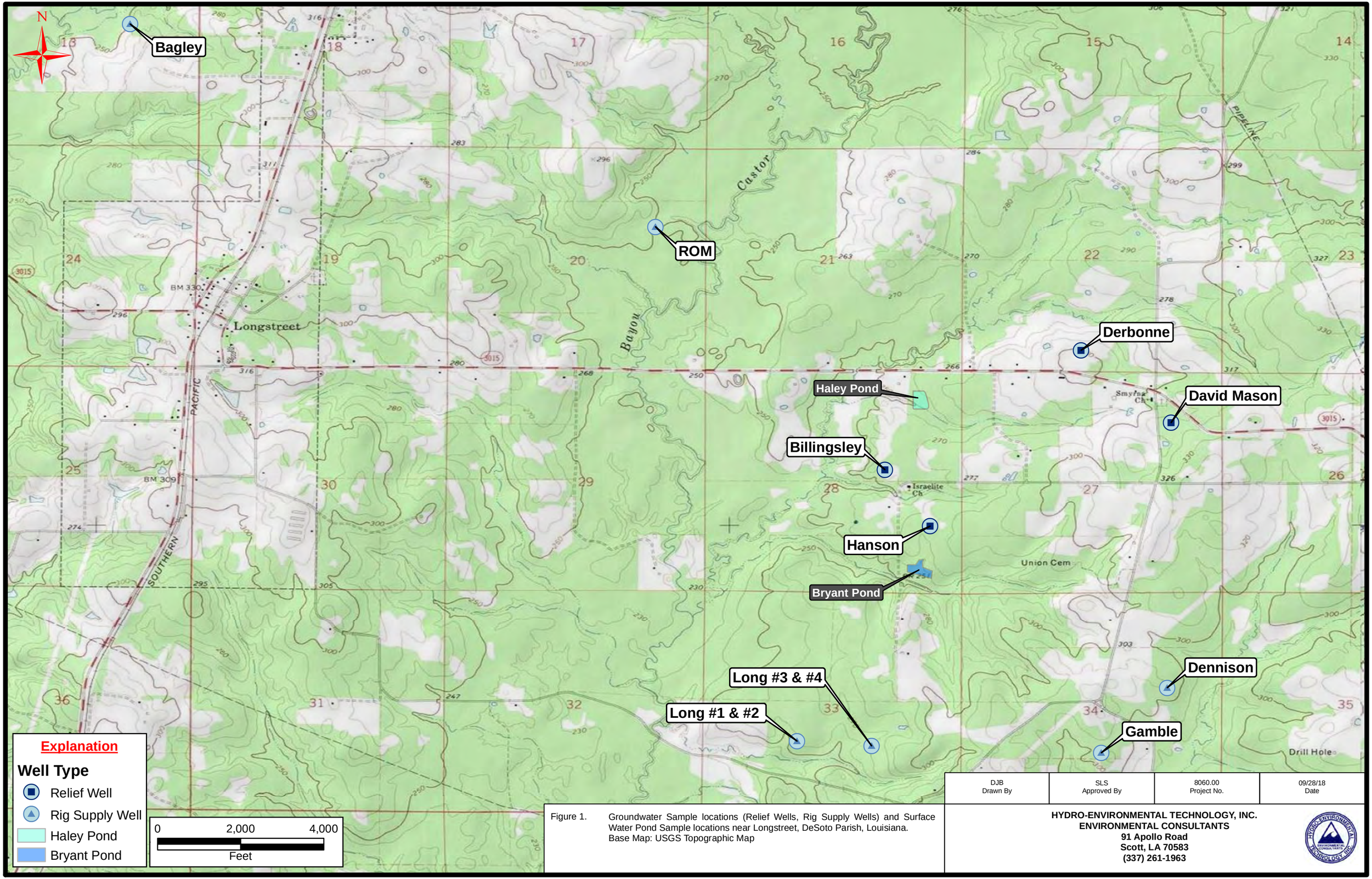
HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.

Wade A. Pigott
Senior Hydrogeologist

Stewart L. Stovel, Jr.
Principal Hydrogeologist

WAP/SLS/eop

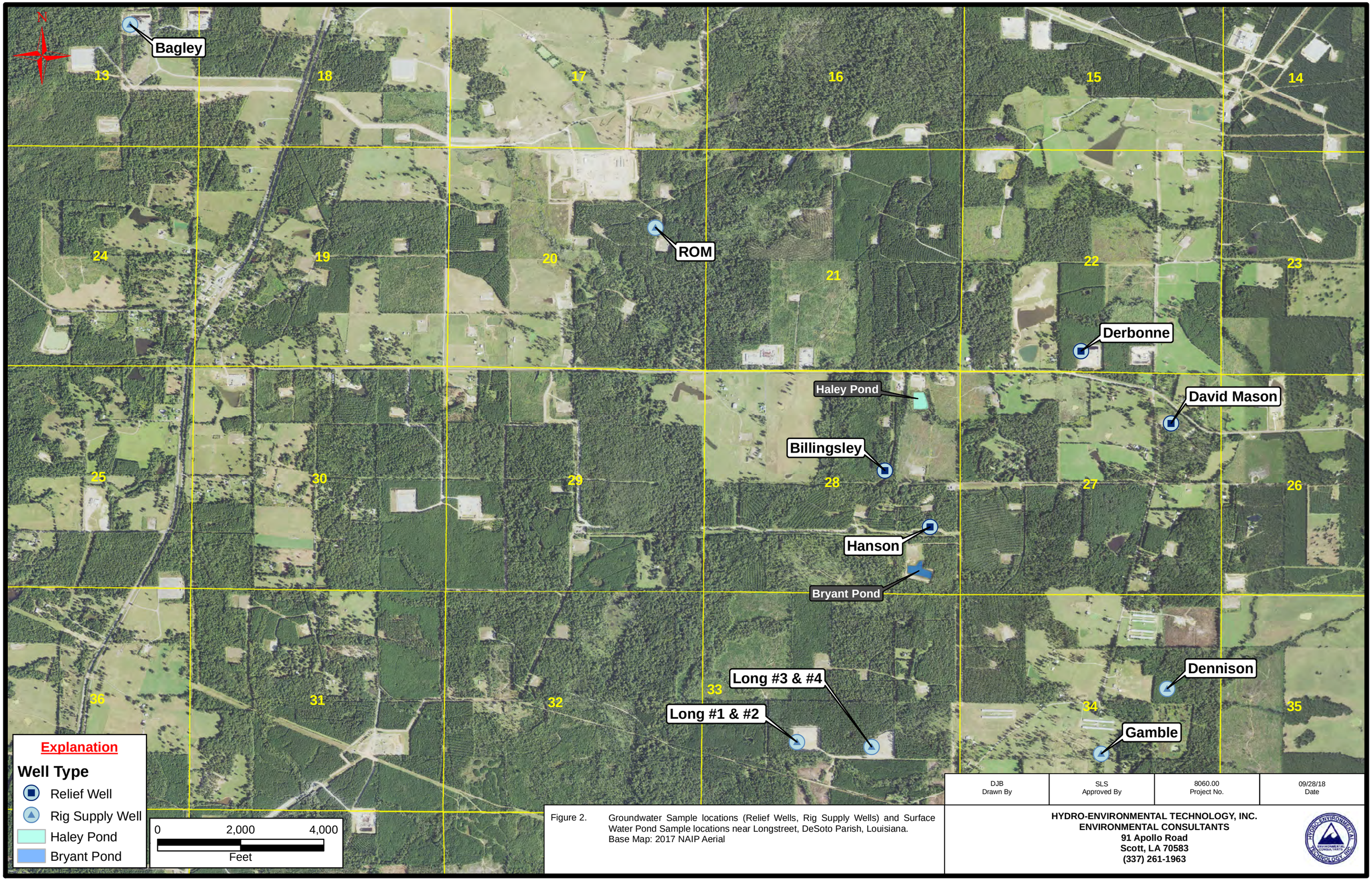
c: Mr. Bobby Hunt - Indigo Minerals, LLC



DJB	SLS	8060.00	09/28/18
Drawn By	Approved By	Project No.	Date

Figure 1. Groundwater Sample locations (Relief Wells, Rig Supply Wells) and Surface Water Pond Sample locations near Longstreet, DeSoto Parish, Louisiana.
Base Map: USGS Topographic Map

HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
ENVIRONMENTAL CONSULTANTS
91 Apollo Road
Scott, LA 70583
(337) 261-1963



DJB	SLS	8060.00	09/28/18
Drawn By	Approved By	Project No.	Date

Figure 2. Groundwater Sample locations (Relief Wells, Rig Supply Wells) and Surface Water Pond Sample locations near Longstreet, DeSoto Parish, Louisiana. Base Map: 2017 NAIP Aerial

HYDRO-ENVIRONMENTAL TECHNOLOGY, INC.
ENVIRONMENTAL CONSULTANTS
91 Apollo Road
Scott, LA 70583
(337) 261-1963

Groundwater and Surface Water Analytical Summary

Township 13 North, Range 15 West

Bethany-Longstreet Oil and Gas Field
Near Longstreet, DeSoto Parish, Louisiana
HET Project No. 8060.00

Table 1

Well Number (Screen Interval)	State ID	Screen Interval	Date	Sampler	Salinity								VOCs [4]				Metals																		Alkalinity	
					Chloride	Chloride	Bromide	Cl/Br Ratio	EC	TDS	Sulfate	Silica	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Aluminum	Arsenic	Barium	Cadmium	Calcium	Chromium	Iron	Lead	Magnesium	Manganese	Mercury	Potassium	Selenium	Silver	Sodium	Strontium	Zinc	Alkalinity, Bicarbonate	Alkalinity, Carbonate
					4500	9056A	9056A	N/A	120.1	2540C	9056A	4500	8260B	8260B	8260B	8260B	6020A	6020A	6020A	6020A	6020A	6020A	6020A	6020A	6020A	6020A	7470A	6020A	6020A	6020A	6020A	6020A	6020A	2320B	2320B
					mg/L	mg/L	mg/L	N/A	umhos/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LDEQ RECAP SS [1]	N/A	N/A	10/20/03	N/A	250 [2]	250 [2]	N/A	N/A	N/A	500 [2]	250 [2]	N/A	0.005	1	0.7	10	N/A	0.01	2	0.005	N/A	0.1	0.3 [2]	0.015	N/A	0.05 [2]	0.002	N/A	0.05	0.018	N/A	N/A	1.1	N/A	N/A
HET Investigation - Surface Water Pond																																			
Bryant Pond 2'	N/A	N/A	09/05/18	HET	—	26.9	< 0.5	N/A	470	327	10.2	—	< 0.005	< 1	< 0.7	< 10	3.04	< 0.01	< 2	< 0.005	7.84	< 0.1	**2.46**	< 0.015	2.64	0.0201	< 0.0002	2.19	< 0.05	< 0.018	111	0.33	< 1.1	148	< 5
Bryant Pond 2' (Dissolved)	N/A	N/A	09/05/18	HET	—	—	—	—	—	—	—	5.3	—	—	—	—	3.08	< 0.01	< 2	< 0.005	7.08	< 0.1	**2.05**	< 0.015	2.44	< 0.02	< 0.0002	2.01	< 0.05	< 0.018	107	0.302	< 1.1	—	—
Bryant Pond 7'	N/A	N/A	09/05/18	HET	—	28	< 0.5	N/A	488	268	1.3	—	< 0.005	< 1	< 0.7	< 10	< 1	**0.0112**	< 2	< 0.005	10.9	< 0.1	**1.35**	< 0.015	3.72	**0.547**	< 0.0002	1.93	< 0.05	< 0.018	123	0.562	< 1.1	185	< 5
Bryant Pond 7' (Dissolved)	N/A	N/A	09/05/18	HET	—	—	—	—	—	—	—	8	—	—	—	—	< 1	**0.0106**	< 2	< 0.005	9.62	< 0.1	< 1	< 0.015	3.29	**0.481**	< 0.0002	1.65	< 0.05	< 0.018	118	0.506	< 1.1	—	—
Bryant Pond 12'	N/A	N/A	09/05/18	HET	—	27.3	< 0.5	N/A	541	298	0.58	—	< 0.005	< 1	< 0.7	< 10	< 1	**0.0234**	< 2	< 0.005	14.6	< 0.1	**10.8**	< 0.015	4.17	**1.05**	< 0.0002	2.24	< 0.05	< 0.018	118	0.797	< 1.1	211	< 5
Bryant Pond 12' (Dissolved)	N/A	N/A	09/05/18	HET	—	—	—	—	—	—	—	10.1	—	—	—	—	< 1	**0.0227**	< 2	< 0.005	12.9	< 0.1	**9.98**	< 0.015	3.91	**0.954**	< 0.0002	1.95	< 0.05	< 0.018	112	0.741	< 1.1	—	—
Haley Pond 2'	N/A	N/A	09/06/18	HET	—	60.8	< 0.50	N/A	879	**512**	58.8	—	< 0.0050	< 1.0	< 0.70	< 10	< 1.0	< 0.010	0.329	< 0.0050	8.87	< 0.010	< 1.0	< 0.010	3.78	< 0.020	< 0.00020	3.64	< 0.050	< 0.010	210	0.495	< 0.050	229	20.1
Haley Pond 2' (Dissolved)	N/A	N/A	09/06/18	HET	—	—	—	—	—	—	—	1.7	—	—	—	—	< 1.0	< 0.010	0.307	< 0.0050	8.57	< 0.010	< 1.0	< 0.010	3.94	< 0.020	< 0.00020	3.6	< 0.050	< 0.010	199	0.476	< 0.050	—	—
Haley Pond 6'	N/A	N/A	09/06/18	HET	—	60.9	< 0.50	N/A	876	**507**	55.2	—	< 0.0050	< 1.0	< 0.70	< 10	< 1.0	< 0.010	0.345	< 0.0050	8.73	< 0.010	< 1.0	< 0.010	3.69	0.0296	< 0.00020	3.54	< 0.050	< 0.010	205	0.499	< 0.050	241	8.8
Haley Pond 6' (Dissolved)	N/A	N/A	09/06/18	HET	—	—	—	—	—	—	—	2.3	—	—	—	—	< 1.0	< 0.010	0.31	< 0.0050	9.14	< 0.010	< 1.0	< 0.010	3.64	< 0.020	< 0.00020	3.73	< 0.050	< 0.010	214	0.502	< 0.050	—	—
Mason Discharge	N/A	N/A	09/27/18	HET	—	—	—	—	—	—	—	—	<0.005	—	—	—	—	—	**—**	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hanson Discharge	N/A	N/A	09/27/18	HET	—	—	—	—	—	—	—	—	<0.005	—	—	—	—	—	**—**	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
HET Investigation - Relief Wells																																			
Billingsley Relief Well	unknown	unknown	09/04/18	HET	—	58.5	0.58	101	1020	**565**	< 0.5	—	< 0.005	< 1	< 0.7	< 10	3.18	< 0.01	< 2	< 0.005	1.25	< 0.1	**2.32**	< 0.015	1.02	0.0469	< 0.0002	1.43	< 0.05	< 0.018	275	0.0795	< 1.1	262	7.8
Billingsley Relief Well (Dissolved)	unknown	unknown	09/04/18	HET	—	—	—	—	—	—	—	14.4	—	—	—	—	< 1	< 0.01	< 2	< 0.005	< 1	< 0.1	< 1	< 0.015	< 1	< 0.02	< 0.0002	< 1	< 0.05	< 0.018	247	0.0607	< 1.1	—	—
Derbonne Relief Well	031-802	280-350' [3]	09/11/18	HET	—	30.8	< 0.50	N/A	895	**526**	0.87	—	< 0.0050	< 1.0	< 0.70	< 10	2.67	< 0.010	< 2.0	< 0.0050	< 1.0	< 0.10	< 1.0	< 0.015	< 1.0	< 0.020	< 0.0020	1	< 0.050	< 0.018	233	0.0547	< 1.1	326	14
Derbonne Relief Well (Dissolved)	031-802	280-350' [3]	09/11/18	HET	—	—	—	—	—	—	—	8.4	—	—	—	—	< 1.0	< 0.010	< 2.0	< 0.0050	< 1.0	< 0.10	< 1.0	< 0.015	< 1.0	< 0.020	< 0.0020	< 1.0	< 0.050	< 0.018	261	0.051	< 1.1	—	—
David Mason Relief Well	unknown	257-360' [3]	09/04/18	HET	—	80.1	0.64	125	1420	**1040**	6.4	—	**0.106**	< 1	< 0.7	< 10	223	**0.0474**	**4.44**	< 0.005	56.5	**0.33**	**226**	**0.151**	66.1	**4.01**	0.0008	34.7	< 0.05	< 0.018	354	2.64	< 1.1	436	< 5
David Mason Relief Well (Dissolved)	unknown	257-360' [3]	09/04/18	HET	—	—	—	—	—	—	—	12.1	—	—	—	—	25.2	< 0.01	< 2	< 0.005	7.24	< 0.1	**19**	< 0.015	6.27	**0.315**	< 0.0002	6.46	< 0.05	< 0.018	360	0.47	< 1.1	—	—
Hanson Relief Well	unknown	unknown	09/04/18	HET	—	71.9	0.62	116	1350	**844**	2.5	—	**0.0372**	< 1	< 0.7	< 10	60.2	**0.018**	**13.8**	< 0.005	27.4	**0.113**	**70.9**	**0.04**	20.9	**1.41**	< 0.0002	11.6	< 0.05	< 0.018	371	0.814	< 1.1	415	< 5
Hanson Relief Well (Dissolved)	unknown	unknown	09/04/18	HET	—	—	—	—	—	—	—	13.8	—	—	—	—	12.8	< 0.01	< 2	< 0.005	10	< 0.1	**12.8**	< 0.015	4.47	**0.3**	< 0.0002	4.89	< 0.05	< 0.018	412	0.368	< 1.1	—	—
HET Investigation - Rig Supply Wells																																			
Dennison Rig Supply	031-9810Z	280-400'	09/04/18	HET	—	127	0.78	163	1490	**860**	< 0.5	—	< 0.005	< 1	< 0.7	< 10	< 1	< 0.01	< 2	< 0.005	< 1	< 0.1	< 1	< 0.015	< 1	< 0.02	< 0.0002	< 1	< 0.05	< 0.018	377	0.0883	< 1.1	486	19
Dennison Rig Supply (Dissolved)	031-9810Z	280-400'	09/04/18	HET	—	—	—	—	—	—	—	12.1	—	—	—	—	< 1	< 0.01	< 2	< 0.005	1.12	< 0.1	< 1	< 0.015	< 1	< 0.02	< 0.0002	1.08	< 0.05	< 0.018	453	0.105	< 1.1	—	—
Field Duplicate	031-9810Z	280-400'	09/04/18	HET	—	130	0.77	169	1490	**833**	< 0.5	—	< 0.005	< 1	< 0.7	< 10	< 1	< 0.01	< 2	< 0.005	< 1	< 0.1	< 1	< 0.015	< 1	< 0.02	< 0.0002	< 1	< 0.05	< 0.018	395	0.0889	< 1.1	485	19.9
Field Duplicate (Dissolved)	031-9810Z	280-400'	09/04/18	HET	—	—	—	—	—	—	—	11.5	—	—	—	—	< 1	< 0.01	< 2	< 0.005	1.04	< 0.1	< 1	< 0.015	< 1	< 0.02	< 0.0002	1.13	< 0.05	< 0.018	444	0.0992	< 1.1	—	—
Gamble Rig Supply	031-9807Z	280-400'	09/04/18	HET	—	114	0.75	152	1460	**833**	0.59	—	< 0.005	< 1	< 0.7	< 10	< 1	< 0.01	< 2	< 0.005	< 1	< 0.1	< 1	< 0.015	< 1	< 0.02	< 0.0002	< 1	< 0.05	< 0.018	378	0.0919	< 1.1	429	15.4
Gamble Rig Supply (Dissolved)	031-9807Z	280-400'	09/04/18	HET	—	—	—	—	—	—	—	12.7	—	—	—	—	< 1	< 0.01	< 2	< 0.005	1.04	< 0.1	< 1	< 0.015	< 1	< 0.02	< 0.0002	1.06	< 0.05	< 0.018	407	0.101	< 1.1	—	—
Long 1 & 2 Rig Supply	031-9767Z	260-340'	09/06/18	HET	—	56.4	< 0.50	N/A	857	490	41.7	—	< 0.005	< 1	< 0.7	< 10	< 1.0	< 0.010	0.0286	< 0.0050	1.32	< 0.010	< 1.0	< 0.010	< 1.0	< 0.020	< 0.00020	1.17	< 0.050	< 0.010	217	0.106	< 0.050	247	8.2
Long 1 & 2 Rig Supply (Dissolved)	031-9767Z	260-340'	09/06/18	HET	—	—	—	—	—	—	—	9	—	—	—	—	< 1.0	< 0.010	0.0213	< 0.0050	1.23	< 0.010	< 1.0	< 0.010	< 1.0	< 0.020	< 0.00020	< 1.0	< 0.050	< 0.010	199	0.0975	< 0.050	—	—
Long 3 & 4 Rig Supply	031-9768Z	280-400'	09/06/18	HET	—	44.6	< 0.50	N/A	778	445	6.8	—	< 0.005	< 1	< 0.7	< 10	< 1.0	< 0.010	0.0518	< 0.0050	1.46	< 0.010	< 1.0	< 0.010	< 1.0	< 0.020	< 0.00020	1.01	< 0.050	< 0.010	185	0.122	< 0.050	264	10.4
Long 3 & 4 Rig Supply (Dissolved)	031-9768Z	280-400'	09/06/18	HET	—	—	—	—	—	—	—	10.9	—	—	—	—	< 1.0	< 0.010	0.027	< 0.0050	1.37	< 0.010	< 1.0	< 0.010	< 1.0	< 0.020	< 0.00020	< 1.0	< 0.050	< 0.010	184	0.108	< 0.050	—	—
Bagley Rig Supply	031-9732Z	220-300'	09/11/18	HET	—	15.1	< 0.50	N/A	572	338	1.4	—	< 0.005	< 1	< 0.7	< 10	1.43	< 0.010	< 2.0	< 0.0050	2.17	< 0.10	< 1.0	< 0.015	< 1.0	< 0.020	< 0.0020	1.19	< 0.050	< 0.018	138	0.151	< 1.1	75	< 5.0
Bagley Rig Supply (Dissolved)	031-9732Z	220-300'	09/11/18	HET	—	—	—	—	—	—	—	9.8	—	—	—	—	< 1.0	< 0.010	< 2.0	< 0.0050	8.54	< 0.10	< 1.0	< 0.015	< 1.0	< 0.020	< 0.0020	1.03	< 0.050	< 0.018	149	0.156	< 1.1	—	—
ROM Rig Supply	031-9793Z	340-420'	09/11/18	HET	—	41.5	0.54	77	844	486	< 0.50	—	< 0.005	< 1	< 0.7	< 10	< 1.0	< 0.010	< 2.0	< 0.0050	< 1.0	< 0.10	< 1.0	< 0.015	< 1.0	< 0.020	< 0.0020	< 1.0	< 0.050	< 0.018	210	0.0412	< 1.1	296	13.9
ROM Rig Supply (Dissolved)	031-9793Z	340-420'	09/11/18	HET	—	—	—	—	—	—	—	7.8	—	—	—	—	< 1.0	< 0.010	< 2.0	< 0.0050	< 1.0	< 0.10	< 1.0	< 0.015	< 1.0	< 0.020	< 0.0020	< 1.0	< 0.050	< 0.018	212	0.0402	< 1.1	—	—
Maximum	N/A	N/A	N/A	N/A	—	130	0.78	169	1490	**1040**	58.8	14.4	**0.106**	< 1	< 0.7	< 10	223	**0.0474**	**13.8**	< 0.005	56.5	**0.33**	**226**	**0.151**	66.1	**4.01**	0.0008	34.7	< 0.05	< 0.018	453	2.64	< 1.1	486	20.1
LDEQ RECAP SS [1]	N/A	N/A	10/20/03	N/A	250 [2]	250 [2]	N/A	N/A	N/A	500 [2]	250 [2]	N/A	0.005	1	0.7	10	N/A	0.01	2	0.005	N/A	0.1	0.3 [2]	0.015	N/A	0.05 [2]	0.002	N/A	0.05	0.018	N/A	N/A	1.1	N/A	N/A

1 - LDEQ RECAP Groundwater Screening Standards per Table 1 of LDEQ RECAP document dated October 20, 2003 listed for reference purposes only
2 - EPA Secondary Drinking Water Standard
3 - Open Hole, Not Screened
4 - Additional VOCs below RECAP Groundwater Screening Standards (Detection Limits)
EC - Electrical Conductivity
TDS - Total Dissolved Solids
Filtered - Dissolved metal containers filtered and preserved at time of sample collection
mg/L - milligrams per liter equivalent to parts per million (ppm)
umhos/cm - micro mohs per centimeter
— Not Analyzed
N/A - Not Applicable

Groundwater and Surface Water Analytical Summary (Additional Parameters)

Township 13 North, Range 15 West

Bethany-Longstreet Oil and Gas Field
Near Longstreet, DeSoto Parish, Louisiana
HET Project No. 8060.00

Table 1A

Additional Parameters																												
Well Number (Screen Interval)	*State ID*	*Screen Interval*	*Date*	*Sampler*	*VPH*			*EPH*							*SVOCs* [2]													
					C6-C8 Aliphatics	*C8-C10 Aliphatics*	*C8-C10 Aromatics*	*C10-C12 Aliphatics*	*C10-C12 Aromatics*	*C12-C16 Aliphatics*	*C12-C16 Aromatics*	*C16-C21 Aromatics*	*C16-C35 Aliphatics*	*C21-C35 Aromatics*	*2-Methyl-naphthalene*	*Acenaphthene*	*Acenaphthylene*	*Anthracene*	*Benzo(a)-anthracene*	*Benzo(a) pyrene*	*Benzo(b) fluoranthene*	*Benzo(k) fluoranthene*	*Chrysene*	*Dibenz(a,h)anthracene*	*Fluoranthene*	*Fluorene*	*Indeno (1,2,3-cd) pyrene*	*Naphthalene*	*Phen-anthrene*	*Pyrene*
					MA	*MA*	*MA*	*MA*	*MA*	*MA*	*MA*	*MA*	*MA*	*MA*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*	*8270D*
					mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
HET Investigation - Surface Water Pond																												
Bryant Pond 2'	N/A	N/A	09/05/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.1	< 0.043	< 0.0078	< 0.0002	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.01	< 0.18	< 0.18
Haley Pond 2'	N/A	N/A	09/06/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.10	< 0.043	< 0.0078	< 0.00020	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.010	< 0.18	< 0.18
HET Investigation - Relief Wells																												
David Mason Relief Well	unknown	257-360' [3]	09/04/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.1	< 0.043	< 0.0078	< 0.0002	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.01	< 0.18	< 0.18
Derbonne Relief Well	031-802	280-350' [3]	09/11/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.10	< 0.043	< 0.0078	< 0.00020	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.010	< 0.18	< 0.18
Billingsley Relief Well	unknown	unknown	09/04/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.1	< 0.043	< 0.0078	< 0.0002	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.01	< 0.18	< 0.18
Hanson Relief Well	unknown	unknown	09/04/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.1	< 0.043	< 0.0078	< 0.0002	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.01	< 0.18	< 0.18
HET Investigation - Rig Supply Wells																												
Dennison Rig Supply	031-9810Z	280-400'	09/04/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.1	< 0.043	< 0.0078	< 0.0002	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.01	< 0.18	< 0.18
Field Duplicate	031-9810Z	280-400'	09/04/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.1	< 0.043	< 0.0078	< 0.0002	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.01	< 0.18	< 0.18
Gamble Rig Supply	031-9807Z	280-400'	09/04/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.1	< 0.043	< 0.0078	< 0.0002	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.01	< 0.18	< 0.18
Long 1 & 2 Rig Supply	031-9767Z	260-340'	09/06/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.10	< 0.043	< 0.0078	< 0.00020	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.010	< 0.18	< 0.18
Long 3 & 4 Rig Supply	031-9768Z	280-400'	09/06/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.10	< 0.043	< 0.0078	< 0.00020	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.010	< 0.18	< 0.18
Bagley Rig Supply	031-9732Z	220-300'	09/11/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.10	< 0.043	< 0.0078	< 0.00020	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.010	< 0.18	< 0.18
ROM Rig Supply	031-9793Z	340-420'	09/11/18	HET	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.10	< 0.043	< 0.0078	< 0.00020	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.010	< 0.18	< 0.18
Maximum	N/A	N/A	N/A	N/A	< 3.2	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 7.3	< 0.15	< 0.00062	< 0.037	< 0.10	< 0.043	< 0.0078	< 0.00020	< 0.0048	< 0.0025	< 0.0016	< 0.0025	< 0.15	< 0.024	< 0.0037	< 0.010	< 0.18	< 0.18
LDEQ RECAP SS [1]	N/A	N/A	10/20/03	N/A	3.2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	7.3	0.15	0.00062	0.037	0.1	0.043	0.0078	0.0002	0.0048	0.0025	0.0016	0.0025	0.15	0.024	0.0037	0.01	0.18	0.018

1 - LDEQ RECAP Groundwater Screening Standards per Table 1 of LDEQ RECAP document dated October 20, 2003 listed for reference purposes only
2 - Additional SVOCs below RECAP Groundwater Screening Standards (Detection Limits)
3 - Open Hole, Not Screened
VPH - Volatile Petroleum Hydrocarbons
EPH - Extractable Petroleum Hydrocarbons
mg/L - milligrams per liter equivalent to parts per million (ppm)
--- Not Analyzed
N/A - Not Applicable

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

e-Hardcopy 2.0
Automated Report

Technical Report for

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

SGS Job Number: LA47398

Sampling Dates: 09/04/18 - 09/05/18

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: 222

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
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.

SGS is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.
Review standard terms at: http://www.sgs.com/en/terms-and-conditions

Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Table of Contents

Table of Contents

SGS North America Inc.

Sample Summary

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

Job No: LA47398

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA47398-1	09/04/18	10:45	KC/LV	09/06/18	AQ	Water	HANSON RELIEF WELL
LA47398-1F	09/04/18	10:45	KC/LV	09/06/18	AQ	Water Filtered	HANSON RELIEF WELL
LA47398-1R	09/04/18	10:45	KC/LV	09/06/18	AQ	Water	HANSON RELIEF WELL
LA47398-2	09/04/18	11:40	KC/LV	09/06/18	AQ	Water	BILLINGSLEY RELIEF WELL
LA47398-2F	09/04/18	11:40	KC/LV	09/06/18	AQ	Water Filtered	BILLINGSLEY RELIEF WELL
LA47398-3	09/04/18	14:50	KC/LV	09/06/18	AQ	Water	DAVID MASON RELIEF WELL
LA47398-3F	09/04/18	14:50	KC/LV	09/06/18	AQ	Water Filtered	DAVID MASON RELIEF WELL
LA47398-3R	09/04/18	14:50	KC/LV	09/06/18	AQ	Water	DAVID MASON RELIEF WELL
LA47398-4	09/04/18	16:30	KC/LV	09/06/18	AQ	Water	DENNISON RIG SUPPLY WELL
LA47398-4F	09/04/18	16:30	KC/LV	09/06/18	AQ	Water Filtered	DENNISON RIG SUPPLY WELL
LA47398-5	09/04/18	16:45	KC/LV	09/06/18	AQ	Water	GAMBLE RIG SUPPLY WELL
LA47398-5F	09/04/18	16:45	KC/LV	09/06/18	AQ	Water Filtered	GAMBLE RIG SUPPLY WELL
LA47398-6	09/04/18	16:35	KC/LV	09/06/18	AQ	Water	FIELD DUPLICATE

Sample Summary
(continued)

Hydro-Environmental Technology, Inc.

Job No: LA47398

8060.00 Indigo-Desoto Parish, LA

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA47398-6F	09/04/18	16:35	KC/LV	09/06/18	AQ	Water Filtered	FIELD DUPLICATE
LA47398-7	09/05/18	11:45	KC/LV	09/06/18	AQ	Water	BRYANT POND 2'
LA47398-7F	09/05/18	11:45	KC/LV	09/06/18	AQ	Water Filtered	BRYANT POND 2'
LA47398-8	09/05/18	11:15	KC/LV	09/06/18	AQ	Water	BRYANT POND 7'
LA47398-8F	09/05/18	11:15	KC/LV	09/06/18	AQ	Water Filtered	BRYANT POND 7'
LA47398-9	09/05/18	10:45	KC/LV	09/06/18	AQ	Water	BRYANT POND 12'
LA47398-9F	09/05/18	10:45	KC/LV	09/06/18	AQ	Water Filtered	BRYANT POND 12'
LA47398-10	09/04/18	10:40	KC/LV	09/06/18	AQ	Equipment Blank	EQUIPMENT BLANK
LA47398-10F	09/04/18	10:40	KC/LV	09/06/18	AQ	Equip Blank Filtered	EQUIPMENT BLANK
LA47398-11	09/04/18	06:50	KC/LV	09/06/18	AQ	Trip Blank Water	TRIP BLANK
LA47398-12	09/04/18	06:50	KC/LV	09/06/18	AQ	Trip Blank Water	TRIP BLANK 2
LA47398-13	09/04/18	06:50	KC/LV	09/06/18	AQ	Trip Blank Water	TRIP BLANK 3
LA47398-14	09/04/18	06:50	KC/LV	09/06/18	AQ	Trip Blank Water	TRIP BLANK 4

Sample Summary
(continued)

Hydro-Environmental Technology, Inc.

Job No: LA47398

8060.00 Indigo-Desoto Parish, LA

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA47398-15	09/04/18	10:30	KC/LV	09/06/18	AQ	Field Blank Water	FIELD BLANK
LA47398-16	09/05/18	06:45	KC/LV	09/06/18	AQ	Trip Blank Water	TRIP BLANK
LA47398-17	09/05/18	06:45	KC/LV	09/06/18	AQ	Trip Blank Water	TRIP BLANK 2
LA47398-18	09/05/18	08:00	KC/LV	09/06/18	AQ	Field Blank Water	FIELD BLANK

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038491.D	1	09/12/18 16:59	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	0.0372	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024623.D	1	09/15/18 13:31	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	35%		23-85%
4165-62-2	Phenol-d5	28%		10-69%
118-79-6	2,4,6-Tribromophenol	47% [c]		48-138%
4165-60-0	Nitrobenzene-d5	42% [c]		51-128%
321-60-8	2-Fluorobiphenyl	39% [c]		55-122%
1718-51-0	Terphenyl-d14	49%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.
(c) Outside control limits. Extraction log indicated that sample produced a very heavy emulsion. Unable to re-extract due to sample holding times.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335981.D	1	09/07/18 13:52	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	105%		70-130%
615-59-8	2,5-Dibromotoluene	90%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113134.D	1	09/11/18 05:35	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.1 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	109%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	118%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050690.D	1	09/10/18 19:32	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050690.D	1	09/10/18 19:33	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.9 ml	4.0 ml
Run #2	56.9 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		84%	40-140%
84-15-1	o-Terphenyl	97%		40-140%
321-60-8	2-Fluorobiphenyl	81%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: HANSON RELIEF WELL
Lab Sample ID: LA47398-1
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/04/18
Date Received: 09/06/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	60.2	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	0.0180	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	13.8	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	27.4	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	0.113	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	70.9	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	0.0400	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	20.9	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	1.41	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	11.6	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	371	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.814	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	415	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	420	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	0.62	0.50	mg/l	1	09/11/18 17:23	ATX	SW846 9056A
Chloride [a]	71.9	2.5	mg/l	5	09/11/18 16:44	ATX	SW846 9056A
Silica, Dissolved [a]	13.8	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	844	40	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	1350	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	2.5	0.50	mg/l	1	09/11/18 17:23	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

SGS North America Inc.

Report of Analysis

Client Sample ID: HANSON RELIEF WELL
Lab Sample ID: LA47398-1F
Matrix: AQ - Water Filtered
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/04/18
Date Received: 09/06/18
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12.8	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	10.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	12.8	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	4.47	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.300	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	4.89	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	412	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.368	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON RELIEF WELL		
Lab Sample ID:	LA47398-1R	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038360.D	1	09/11/18 08:33	NN	n/a	n/a	V2I1781
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.0350	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	93%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038493.D	1	09/12/18 17:27	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024624.D	1	09/15/18 13:55	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	54%		23-85%
4165-62-2	Phenol-d5	41%		10-69%
118-79-6	2,4,6-Tribromophenol	75%		48-138%
4165-60-0	Nitrobenzene-d5	71%		51-128%
321-60-8	2-Fluorobiphenyl	66%		55-122%
1718-51-0	Terphenyl-d14	75%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335982.D	1	09/07/18 14:25	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	104%		70-130%
615-59-8	2,5-Dibromotoluene	92%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113135.D	1	09/11/18 05:52	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	102%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	110%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050694.D	1	09/10/18 21:04	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050694.D	1	09/10/18 21:05	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.9 ml	4.0 ml
Run #2	56.9 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		88%	40-140%
84-15-1	o-Terphenyl	97%		40-140%
321-60-8	2-Fluorobiphenyl	81%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: BILLINGSLEY RELIEF WELL
Lab Sample ID: LA47398-2
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/04/18
Date Received: 09/06/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3.18	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	1.25	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	2.32	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	1.02	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.0469	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.43	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	275	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0795	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	262	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	7.8	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	270	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	0.58	0.50	mg/l	1	09/11/18 17:40	ATX	SW846 9056A
Chloride [a]	58.5	2.5	mg/l	5	09/11/18 17:01	ATX	SW846 9056A
Silica, Dissolved [a]	14.4	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	565	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	1020	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	< 0.50	0.50	mg/l	1	09/11/18 17:40	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	BILLINGSLEY RELIEF WELL		
Lab Sample ID:	LA47398-2F	**Date Sampled:**	09/04/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	247	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0607	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038495.D	1	09/12/18 17:55	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	0.106	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	94%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	100%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024625.D	1	09/15/18 14:19	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	7% [c]		23-85%
4165-62-2	Phenol-d5	6% [c]		10-69%
118-79-6	2,4,6-Tribromophenol	6% [c]		48-138%
4165-60-0	Nitrobenzene-d5	7% [c]		51-128%
321-60-8	2-Fluorobiphenyl	6% [c]		55-122%
1718-51-0	Terphenyl-d14	8% [c]		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.
(c) Outside control limits. Extraction log indicated that sample produced a very heavy emulsion. Unable to re-extract due to sample holding times.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335983.D	1	09/07/18 14:58	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	100%		70-130%
615-59-8	2,5-Dibromotoluene	90%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113136.D	1	09/11/18 06:09	DF	09/09/18 11:00	OP12214	GLK724
Run #2 [a]	LK113198.D	1	09/14/18 05:18	DF	09/13/18 15:00	OP12251	GLK726

	Initial Volume	Final Volume
Run #1	35.0 ml	2.0 ml
Run #2	35.0 ml	2.0 ml

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [b]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	20%	51%	55-149%

(a) Confirmation run for surrogate recoveries.
(b) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050695.D	1	09/10/18 21:26	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050695.D	1	09/10/18 21:27	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.5 ml	4.0 ml
Run #2	56.5 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		79%	40-140%
84-15-1	o-Terphenyl	93%		40-140%
321-60-8	2-Fluorobiphenyl	84%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		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	223	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	0.0474	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	4.44	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	56.5	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	0.330	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	226	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	0.151	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	66.1	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	4.01	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	0.00080	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	34.7	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	354	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	2.64	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	436	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	440	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	0.64	0.50	mg/l	1	09/11/18 17:57	ATX	SW846 9056A
Chloride [a]	80.1	5.0	mg/l	10	09/11/18 17:18	ATX	SW846 9056A
Silica, Dissolved [a]	12.1	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	1040	200	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	1420	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	6.4	0.50	mg/l	1	09/11/18 17:57	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3F	**Date Sampled:**	09/04/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	25.2	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	7.24	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	19.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	6.27	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.315	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	6.46	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	360	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.470	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	DAVID MASON RELIEF WELL		
Lab Sample ID:	LA47398-3R	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038362.D	1	09/11/18 09:01	NN	n/a	n/a	V2I1781
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.102	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	91%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038497.D	1	09/12/18 18:23	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024626.D	1	09/15/18 14:43	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%		23-85%
4165-62-2	Phenol-d5	49%		10-69%
118-79-6	2,4,6-Tribromophenol	95%		48-138%
4165-60-0	Nitrobenzene-d5	85%		51-128%
321-60-8	2-Fluorobiphenyl	80%		55-122%
1718-51-0	Terphenyl-d14	91%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335984.D	1	09/07/18 15:31	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	103%		70-130%
615-59-8	2,5-Dibromotoluene	91%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113137.D	1	09/11/18 06:27	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.0 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	98%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	107%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050696.D	1	09/10/18 21:49	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050696.D	1	09/10/18 21:50	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.9 ml	4.0 ml
Run #2	56.9 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		78%	40-140%
84-15-1	o-Terphenyl	93%		40-140%
321-60-8	2-Fluorobiphenyl	86%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	377	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0883	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	486	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	19.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	505	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	0.78	0.50	mg/l	1	09/11/18 18:14	ATX	SW846 9056A
Chloride [a]	127	5.0	mg/l	10	09/11/18 17:35	ATX	SW846 9056A
Silica, Dissolved [a]	12.1	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	860	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	1490	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	< 0.50	0.50	mg/l	1	09/11/18 18:14	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	DENNISON RIG SUPPLY WELL		
Lab Sample ID:	LA47398-4F	**Date Sampled:**	09/04/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	1.12	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.08	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	453	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.105	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038499.D	1	09/12/18 18:51	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024627.D	1	09/15/18 15:07	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	64%		23-85%
4165-62-2	Phenol-d5	49%		10-69%
118-79-6	2,4,6-Tribromophenol	90%		48-138%
4165-60-0	Nitrobenzene-d5	83%		51-128%
321-60-8	2-Fluorobiphenyl	79%		55-122%
1718-51-0	Terphenyl-d14	89%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335985.D	1	09/07/18 16:03	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	103%		70-130%
615-59-8	2,5-Dibromotoluene	91%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113138.D	1	09/11/18 06:44	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.4 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	101%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	108%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050697.D	1	09/10/18 22:11	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050697.D	1	09/10/18 22:12	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.6 ml	4.0 ml
Run #2	56.6 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		80%	40-140%
84-15-1	o-Terphenyl	70%		40-140%
321-60-8	2-Fluorobiphenyl	61%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	378	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0919	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	429	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	15.4	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	445	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	0.75	0.50	mg/l	1	09/11/18 19:05	ATX	SW846 9056A
Chloride [a]	114	5.0	mg/l	10	09/11/18 18:26	ATX	SW846 9056A
Silica, Dissolved [a]	12.7	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	833	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	1460	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	0.59	0.50	mg/l	1	09/11/18 19:05	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	GAMBLE RIG SUPPLY WELL		
Lab Sample ID:	LA47398-5F	**Date Sampled:**	09/04/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	1.04	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.06	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	407	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.101	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038501.D	1	09/12/18 19:19	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024628.D	1	09/15/18 15:31	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		23-85%
4165-62-2	Phenol-d5	47%		10-69%
118-79-6	2,4,6-Tribromophenol	87%		48-138%
4165-60-0	Nitrobenzene-d5	80%		51-128%
321-60-8	2-Fluorobiphenyl	77%		55-122%
1718-51-0	Terphenyl-d14	89%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335991.D	1	09/07/18 19:23	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	109%		70-130%
615-59-8	2,5-Dibromotoluene	98%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113139.D	1	09/11/18 07:01	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	99%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	107%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050698.D	1	09/10/18 22:34	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050698.D	1	09/10/18 22:35	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.9 ml	4.0 ml
Run #2	56.9 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		79%	40-140%
84-15-1	o-Terphenyl	79%		40-140%
321-60-8	2-Fluorobiphenyl	68%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: FIELD DUPLICATE
Lab Sample ID: LA47398-6
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/04/18
Date Received: 09/06/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	395	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0889	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6	**Date Sampled:**	09/04/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	485	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	19.9	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	505	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	0.77	0.50	mg/l	1	09/11/18 19:22	ATX	SW846 9056A
Chloride [a]	130	5.0	mg/l	10	09/11/18 18:59	ATX	SW846 9056A
Silica, Dissolved [a]	11.5	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	833	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	1490	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	< 0.50	0.50	mg/l	1	09/11/18 19:22	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD DUPLICATE		
Lab Sample ID:	LA47398-6F	**Date Sampled:**	09/04/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	1.04	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.13	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	444	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0992	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038509.D	1	09/12/18 21:13	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024629.D	1	09/15/18 15:55	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		23-85%
4165-62-2	Phenol-d5	46%		10-69%
118-79-6	2,4,6-Tribromophenol	84%		48-138%
4165-60-0	Nitrobenzene-d5	78%		51-128%
321-60-8	2-Fluorobiphenyl	71%		55-122%
1718-51-0	Terphenyl-d14	84%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335992.D	1	09/07/18 19:57	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	113%		70-130%
615-59-8	2,5-Dibromotoluene	100%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113140.D	1	09/11/18 07:18	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.4 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	104%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	114%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050699.D	1	09/10/18 22:56	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050699.D	1	09/10/18 22:57	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.5 ml	4.0 ml
Run #2	56.5 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		64%	40-140%
84-15-1	o-Terphenyl	92%		40-140%
321-60-8	2-Fluorobiphenyl	82%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		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	3.04	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	7.84	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	2.46	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	2.64	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.0201	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	2.19	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	111	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.330	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	148	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	151	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/11/18 20:12	ATX	SW846 9056A
Chloride [a]	26.9	1.0	mg/l	2	09/11/18 19:16	ATX	SW846 9056A
Silica, Dissolved [a]	5.3	0.14	mg/l	2	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	327	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	470	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	10.2	0.50	mg/l	1	09/11/18 20:12	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 2'		
Lab Sample ID:	LA47398-7F	**Date Sampled:**	09/05/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	3.08	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	7.08	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	2.05	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	2.44	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	2.01	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	107	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.302	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038511.D	1	09/12/18 21:39	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	92%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024630.D	1	09/15/18 16:20	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	12% [c]		23-85%
4165-62-2	Phenol-d5	13%		10-69%
118-79-6	2,4,6-Tribromophenol	16% [c]		48-138%
4165-60-0	Nitrobenzene-d5	6% [c]		51-128%
321-60-8	2-Fluorobiphenyl	3% [c]		55-122%
1718-51-0	Terphenyl-d14	34% [c]		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.
(c) Outside control limits. Extraction log indicated that sample produced a very heavy emulsion. Unable to re-extract due to sample holding times.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335993.D	1	09/07/18 20:30	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	111%		70-130%
615-59-8	2,5-Dibromotoluene	98%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113142.D	1	09/11/18 07:53	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.6 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	103%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	112%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050700.D	1	09/10/18 23:19	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050700.D	1	09/10/18 23:20	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	57.1 ml	4.0 ml
Run #2	57.1 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		72%	40-140%
84-15-1	o-Terphenyl	75%		40-140%
321-60-8	2-Fluorobiphenyl	70%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	0.0112	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	10.9	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	1.35	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	3.72	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.547	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.93	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	123	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.562	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	185	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	185	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/11/18 20:29	ATX	SW846 9056A
Chloride [a]	28.0	0.50	mg/l	1	09/11/18 20:24	ATX	SW846 9056A
Silica, Dissolved [a]	8.0	0.14	mg/l	2	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	268	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	488	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	1.3	0.50	mg/l	1	09/11/18 20:29	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 7'		
Lab Sample ID:	LA47398-8F	**Date Sampled:**	09/05/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	0.0106	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	9.62	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	3.29	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.481	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.65	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	118	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.506	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038513.D	1	09/12/18 22:07	NN	n/a	n/a	V1I1787
Run #2 [a]	2I038352.D	1	09/11/18 06:41	NN	n/a	n/a	V2I1781

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [b]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [b]	ND	0.10	mg/l	
75-25-2	Bromoform [b]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [b]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [b]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [b]	ND	0.10	mg/l	
75-00-3	Chloroethane [b]	ND	0.010	mg/l	
67-66-3	Chloroform [b]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [b]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [b]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [b]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [b]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [b]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [b]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [b]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [b]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [b]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [b]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [b]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [b]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [b]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [b]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [b]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [b]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [b]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [b]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [b]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [b]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [b]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [b]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [b]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [b]	ND	0.020	mg/l	
100-42-5	Styrene [b]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [b]	ND	0.0050	mg/l	
108-88-3	Toluene [b]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [b]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [b]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [b]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [b]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [b]	ND	0.0020	mg/l	
	m,p-Xylene [b]	ND	10	mg/l	
95-47-6	o-Xylene [b]	ND	10	mg/l	
1330-20-7	Xylene (total) [b]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	93%	93%	84-124%
2037-26-5	Toluene-D8	98%	97%	83-115%
460-00-4	4-Bromofluorobenzene	98%	96%	89-111%

(a) Sample used for QC purposes only.
(b) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024631.D	1	09/15/18 16:44	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	111 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%		23-85%
4165-62-2	Phenol-d5	47%		10-69%
118-79-6	2,4,6-Tribromophenol	89%		48-138%
4165-60-0	Nitrobenzene-d5	78%		51-128%
321-60-8	2-Fluorobiphenyl	75%		55-122%
1718-51-0	Terphenyl-d14	83%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE335994.D	1	09/07/18 21:04	SV	n/a	n/a	GLE1483
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	111%		70-130%
615-59-8	2,5-Dibromotoluene	100%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113143.D	1	09/11/18 08:10	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.5 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	106%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	117%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050701.D	1	09/10/18 23:42	JT	09/08/18 10:00	OP12205	GLB1598
Run #2	Y0050701.D	1	09/10/18 23:43	JT	09/08/18 10:00	OP12205	GLB1599

	Initial Volume	Final Volume
Run #1	56.7 ml	4.0 ml
Run #2	56.7 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		68%	40-140%
84-15-1	o-Terphenyl	85%		40-140%
321-60-8	2-Fluorobiphenyl	69%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: BRYANT POND 12'
Lab Sample ID: LA47398-9
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/05/18
Date Received: 09/06/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	0.0234	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	14.6	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	10.8	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	4.17	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	1.05	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	2.24	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	118	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.797	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9	**Date Sampled:**	09/05/18
Matrix:	AQ - Water	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	211	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	211	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/11/18 20:46	ATX	SW846 9056A
Chloride [a]	27.3	1.0	mg/l	2	09/11/18 20:41	ATX	SW846 9056A
Silica, Dissolved [a]	10.1	0.35	mg/l	5	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	298	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	541	1.0	umhos/cm	1	09/10/18 18:20	ATX	EPA 120.1
Sulfate [a]	0.58	0.50	mg/l	1	09/11/18 20:46	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	BRYANT POND 12'		
Lab Sample ID:	LA47398-9F	**Date Sampled:**	09/05/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/06/18
		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	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	0.0227	0.010	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	12.9	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	9.98	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	3.91	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.954	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.95	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	112	1.0	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.741	0.020	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13316
(3) Prep QC Batch: MP12641
(4) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10	**Date Sampled:**	09/04/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038284.D	1	09/10/18 14:49	NN	n/a	n/a	V2I1779
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10	**Date Sampled:**	09/04/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	92%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10	**Date Sampled:**	09/04/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024632.D	1	09/15/18 17:08	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	110 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10	**Date Sampled:**	09/04/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	47%		23-85%
4165-62-2	Phenol-d5	36%		10-69%
118-79-6	2,4,6-Tribromophenol	74%		48-138%
4165-60-0	Nitrobenzene-d5	61%		51-128%
321-60-8	2-Fluorobiphenyl	59%		55-122%
1718-51-0	Terphenyl-d14	72%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10	**Date Sampled:**	09/04/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379893.D	1	09/07/18 22:05	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	98%		70-130%
615-59-8	2,5-Dibromotoluene	98%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10	**Date Sampled:**	09/04/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113144.D	1	09/11/18 08:27	DF	09/09/18 11:00	OP12214	GLK724
Run #2							

	Initial Volume	Final Volume
Run #1	35.9 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	101%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	111%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: EQUIPMENT BLANK
Lab Sample ID: LA47398-10
Matrix: AQ - Equipment Blank
Method: MADEP EPH REV 1.1 SW846 3511
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/04/18
Date Received: 09/06/18
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050722.D	1	09/11/18 14:43	JT	09/10/18 15:00	OP12207	GLB1602
Run #2	Y0050722.D	1	09/11/18 14:44	JT	09/10/18 15:00	OP12207	GLB1603

	Initial Volume	Final Volume
Run #1	57.0 ml	4.0 ml
Run #2	57.0 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		77%	40-140%
84-15-1	o-Terphenyl	84%		40-140%
321-60-8	2-Fluorobiphenyl	81%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: EQUIPMENT BLANK
Lab Sample ID: LA47398-10
Matrix: AQ - Equipment Blank
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/04/18
Date Received: 09/06/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic [a]	< 0.010	0.010	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium [a]	< 0.0050	0.0050	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Manganese	< 0.0020	0.0020	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [3]	SW846 7470A [5]
Potassium	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium [a]	< 0.050	0.050	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	< 0.10	0.10	mg/l	1	09/06/18	09/10/18	RT	SW846 6020A [2]	SW846 3010A [4]
Strontium	< 0.0020	0.0020	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13312
(3) Instrument QC Batch: MA13316
(4) Prep QC Batch: MP12641
(5) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10	**Date Sampled:**	09/04/18
Matrix:	AQ - Equipment Blank	**Date Received:**	09/06/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	< 5.0	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/11/18 21:03	ATX	SW846 9056A
Chloride [a]	< 0.50	0.50	mg/l	1	09/11/18 20:58	ATX	SW846 9056A
Silica, Dissolved [a]	< 0.070	0.070	mg/l	1	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	< 10	10	mg/l	1	09/07/18 20:03	ATX	SM 2540C-2011
Specific Conductivity [b]	1.1	1.0	umhos/cm	1	09/10/18 15:55	ATX	EPA 120.1
Sulfate [a]	< 0.50	0.50	mg/l	1	09/11/18 21:03	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	EQUIPMENT BLANK		
Lab Sample ID:	LA47398-10F	**Date Sampled:**	09/04/18
Matrix:	AQ - Equip Blank Filtered	**Date Received:**	09/06/18
		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	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic [a]	< 0.010	0.010	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium [a]	< 0.0050	0.0050	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Manganese	< 0.0020	0.0020	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury	< 0.00020	0.00020	mg/l	1	09/07/18	09/10/18	SA	SW846 7470A [3]	SW846 7470A [5]
Potassium	< 0.10	0.10	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium [a]	< 0.050	0.050	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	< 0.10	0.10	mg/l	1	09/06/18	09/10/18	RT	SW846 6020A [2]	SW846 3010A [4]
Strontium	< 0.0020	0.0020	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	1	09/06/18	09/07/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13287
(2) Instrument QC Batch: MA13312
(3) Instrument QC Batch: MA13316
(4) Prep QC Batch: MP12641
(5) Prep QC Batch: MP12665

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47398-11	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0441998.D	1	09/11/18 01:29	NN	n/a	n/a	V1Q2136
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47398-11	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	95%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47398-11	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379894.D	1	09/07/18 22:47	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	97%		70-130%
615-59-8	2,5-Dibromotoluene	98%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47398-12	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038315.D	1	09/10/18 22:04	NN	n/a	n/a	V1I1779
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47398-12	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	91%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	94%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47398-12	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379885.D	1	09/07/18 16:32	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	84%		70-130%
615-59-8	2,5-Dibromotoluene	85%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 3		
Lab Sample ID:	LA47398-13	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038317.D	1	09/10/18 22:32	NN	n/a	n/a	V1I1779
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 3		
Lab Sample ID:	LA47398-13	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	94%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 3		
Lab Sample ID:	LA47398-13	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379886.D	1	09/07/18 17:12	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	87%		70-130%
615-59-8	2,5-Dibromotoluene	92%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 4		
Lab Sample ID:	LA47398-14	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038319.D	1	09/10/18 23:00	NN	n/a	n/a	V1I1779
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 4		
Lab Sample ID:	LA47398-14	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	91%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 4		
Lab Sample ID:	LA47398-14	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379887.D	1	09/07/18 17:53	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	92%		70-130%
615-59-8	2,5-Dibromotoluene	92%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47398-15	**Date Sampled:**	09/04/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038286.D	1	09/10/18 15:17	NN	n/a	n/a	V2I1779
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47398-15	**Date Sampled:**	09/04/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	91%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47398-15	**Date Sampled:**	09/04/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379888.D	1	09/07/18 18:35	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	95%		70-130%
615-59-8	2,5-Dibromotoluene	97%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47398-16	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0441999.D	1	09/11/18 01:54	NN	n/a	n/a	V1Q2136
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47398-16	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47398-16	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379889.D	1	09/07/18 19:17	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	99%		70-130%
615-59-8	2,5-Dibromotoluene	104%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47398-17	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2J0054613.D	1	09/11/18 16:55	NN	n/a	n/a	V2J1456
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47398-17	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	101%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47398-17	**Date Sampled:**	09/05/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379890.D	1	09/07/18 19:58	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	97%		70-130%
615-59-8	2,5-Dibromotoluene	103%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47398-18	**Date Sampled:**	09/05/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2J0054615.D	1	09/11/18 17:22	NN	n/a	n/a	V2J1456
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47398-18	**Date Sampled:**	09/05/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/06/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	97%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47398-18	**Date Sampled:**	09/05/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/06/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379895.D	1	09/07/18 23:30	MB	n/a	n/a	GLC1819
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	101%		70-130%
615-59-8	2,5-Dibromotoluene	106%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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

LA47398

SAMPLE CHAIN-OF-CUSTODY RECORD

Project Name:	Indigo	*Laboratory:*	SGS Lafayette
Project Number:	8060.00	*Collected By:*	KC/LV/EM/MJ
Project Location:	DeSoto Parish, Louisiana	*Company:*	Hydro-Environmental Technology, Inc.
		Date:	9/4/2018

	Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments	
1	Hanson Relief Well	AQ	9/4/2018	10:45	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
2	Billingsley Relief Well	AQ	9/4/2018	11:40	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
3	David Mason Relief Well	AQ	9/4/2018	14:50	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	15
4	Dennison Rig Supply Well	AQ	9/4/2018	16:30	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
5	Gamble Rig Supply Well	AQ	9/4/2018	16:45	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16

*Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, strontium, zinc
*Cations: aluminum, calcium, iron, magnesium, manganese, potassium, sodium
*Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity

Relinquished By: Eric Mot[illegible]	~~Relinquished~~ Received By: Johnny Hel[illegible]
Date/Time: 9/6/18 1200	Date/Time: 9-6-18 1210
Relinquished By: Johnny Hel[illegible]	Relinquished By: [illegible]
Date/Time: 12:20	Date/Time: 090618 12:20
Analysis Due: Verbal:	Written:

Page 1 of 4

PSO... (5.4/4.5/4.9 (DV439) RLX 464 (VW) RSM-9 (TB3), (A), (3W2) PLO, (3W2F) PLO, RW-3 (11BY)

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

LA47398

SAMPLE CHAIN-OF-CUSTODY RECORD

Laboratory:	SGS Lafayette		
Project Name:	Indigo	*Collected By:*	KC/LV/EM/MJ
Project Number:	8060.00	*Company:*	Hydro-Environmental Technology, Inc.
Project Location:	DeSoto Parish, Louisiana	*Date:*	9/4/2018

	Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments	
6	Field Duplicate	AQ	9/4/2018	16:35	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
7	Bryant Pond 2'	AQ	9/5/2018	11:45	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
8	Bryant Pond 7'	AQ	9/5/2018	11:15	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
9	Bryant Pond 12'	AQ	9/5/2018	10:45	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
10	Equipment Blank	AQ	9/4/2018	10:40	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16

*Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, strontium, zinc
*Cations: aluminum, calcium, iron, magnesium, manganese, potassium, sodium
*Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity

Relinquished By: Eric Master
Date/Time: 9/6/18 1200

Relinquished By: Johnny Heleire
Date/Time: 9-6-18 12:00

Relinquished By: Johnny Heleire
Date/Time: 12:20

Relinquished By:
Date/Time: 090618 1220

Analysis Due: Verbal:

Written:

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

LA47398

SAMPLE CHAIN-OF-CUSTODY RECORD

Laboratory:	SGS Lafayette		
Project Name:	Indigo	*Collected By:*	KC/LV/EM/MJ
Project Number:	8060.00	*Company:*	Hydro-Environmental Technology, Inc.
Project Location:	DeSoto Parish, Louisiana	*Date:*	9/4/2018

	Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments	
11	Trip Blank	AQ	9/4/2018	6:50	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C	6
12	Trip Blank 2	AQ	9/4/2018	6:50	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C	6
13	Trip Blank 3	AQ	9/4/2018	6:50	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C	6
14	Trip Blank 4	AQ	9/4/2018	6:50	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C	6
15	Field Blank	AQ	9/4/2018	10:30	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C	6

*Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, strontium, zinc
*Cations: aluminum, calcium, iron, magnesium, manganese, potassium, sodium
*Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity

Rec'd

Relinquished By: Eric Meats	Relinquished By: 9-6-18
Date/Time: 9/6/18 1200	Date/Time: Johnny K Harris 12:00
Relinquished By:	Relinquished By: 9-6-18
Date/Time: Johnny K Harris 12:20	Date/Time: 12:20
Analysis Due: Verbal:	Written:

LA47398: Chain of Custody
Page 3 of 5

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

LA47398

SAMPLE CHAIN-OF-CUSTODY RECORD

Laboratory:	SGS Lafayette		
Project Name:	Indigo	*Collected By:*	KC/LV/EM/MJ
Project Number:	8060.00	*Company:*	Hydro-Environmental Technology, Inc.
Project Location:	DeSoto Parish, Louisiana	*Date:*	9/4/2018

Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments
16 Trip Blank	AQ	9/5/2018	6:45	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C 6
17 Trip Blank 2	AQ	9/5/2018	6:45	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C 6
18 Field Blank	AQ	9/5/2018	8:00	(6) 40mL Glass HCl ✓	VOC 8260, VPH	4°C 6

*Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, strontium, zinc
*Cations: aluminum, calcium, iron, magnesium, manganese, potassium, sodium
*Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity

Received

Relinquished By: Eric Mott	Relinquished By: Johnny Hellen 9-6-18
Date/Time: 9/6/18 1200	Date/Time: 12:00
Relinquished By: Johnny Hellen	Relinquished By: Natalie 9-6-18
Date/Time: 12:20	Date/Time: 1200
Analysis Due: Verbal:	Written:

Page 4 of 4

LA47398: Chain of Custody
Page 4 of 5

SGS Sample Receipt Summary

Job Number: LA47398 **Client:** HYDRO **Project:** INDIGO

Date / Time Received: 9/6/2018 12:20:00 PM **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (5.4/5.4); #2: (4.5/4.5); #3: (4.9/4.9);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	DV439		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	3		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Received 7 40ml HCL vials for Sample I.d. Gamble Rig Supply Well, COC states 8.

MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1779-MB2	1I038279.D	1	09/10/18	NN	n/a	n/a	V1I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-12, LA47398-13, LA47398-14

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	0.35	1.0	ug/l	J
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide	ND	1.0	ug/l	
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1779-MB2	1I038279.D	1	09/10/18	NN	n/a	n/a	V1I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-12, LA47398-13, LA47398-14

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	90%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	96%	89-111%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1779-MB2	2I038280.D	1	09/10/18	NN	n/a	n/a	V2I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-10, LA47398-15

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	2.5	50	ug/l	J
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	0.33	1.0	ug/l	J
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide [a]	0.71	1.0	ug/l	J
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1779-MB2	2I038280.D	1	09/10/18	NN	n/a	n/a	V2I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-10, LA47398-15

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	92%	84-124%
2037-26-5	Toluene-D8	96%	83-115%
460-00-4	4-Bromofluorobenzene	98%	89-111%

(a) Compound not detected in samples at less than 10 times the hit in the blank.

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2136-MB2	1Q0441994.D	1	09/10/18	NN	n/a	n/a	V1Q2136

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-11, LA47398-16

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	2.5	50	ug/l	J
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	0.34	1.0	ug/l	J
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide	ND	1.0	ug/l	
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	1.2	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2136-MB2	1Q0441994.D	1	09/10/18	NN	n/a	n/a	V1Q2136

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-11, LA47398-16

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	99%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	97%	89-111%

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1781-MB2	2I038334.D	1	09/11/18	NN	n/a	n/a	V2I1781

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1R, LA47398-3R

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	93%	84-124%
2037-26-5	Toluene-D8	97%	83-115%
460-00-4	4-Bromofluorobenzene	93%	89-111%

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2J1456-MB2	2J0054611.D	1	09/11/18	NN	n/a	n/a	V2J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-17, LA47398-18

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/kg	
71-43-2	Benzene	ND	0.50	ug/kg	
75-27-4	Bromodichloromethane	ND	1.0	ug/kg	
75-25-2	Bromoform	ND	1.0	ug/kg	
75-15-0	Carbon Disulfide	ND	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	1.0	ug/kg	
75-00-3	Chloroethane	ND	1.0	ug/kg	
67-66-3	Chloroform	ND	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/kg	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/kg	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/kg	
540-59-0	1,2-Dichloroethene (total)	ND	2.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/kg	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	ug/kg	
67-72-1	Hexachloroethane	ND	5.0	ug/kg	
78-83-1	Isobutyl alcohol	ND	100	ug/kg	
74-83-9	Methyl Bromide	ND	10	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	ug/kg	
75-09-2	Methylene Chloride	ND	5.0	ug/kg	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/kg	
100-42-5	Styrene	ND	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg	

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2J1456-MB2	2J0054611.D	1	09/11/18	NN	n/a	n/a	V2J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-17, LA47398-18

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/kg	
75-01-4	Vinyl Chloride	ND	1.0	ug/kg	
	m,p-Xylene	ND	2.0	ug/kg	
95-47-6	o-Xylene	ND	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	ug/kg	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	96%	59-143%
2037-26-5	Toluene-D8	98%	52-159%
460-00-4	4-Bromofluorobenzene	102%	38-183%

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-MB2	1I038489.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	2.0	50	ug/l	J
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide	ND	1.0	ug/l	
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-MB2	1I038489.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	94%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	98%	89-111%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1779-BS1	1I038273.D	1	09/10/18	NN	n/a	n/a	V1I1779
V1I1779-BSD1	1I038275.D	1	09/10/18	NN	n/a	n/a	V1I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-12, LA47398-13, LA47398-14

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	51.9	104	51.2	102	1	38-178/30
71-43-2	Benzene	20	20.8	104	19.6	98	6	82-119/30
75-27-4	Bromodichloromethane	20	19.6	98	18.5	93	6	79-120/30
75-25-2	Bromoform	20	18.5	93	17.2	86	7	68-128/30
75-15-0	Carbon Disulfide	20	27.6	138* [a]	26.8	134* [a]	3	64-133/30
56-23-5	Carbon Tetrachloride	20	20.3	102	19.1	96	6	69-132/30
108-90-7	Chlorobenzene	20	21.3	107	20.1	101	6	85-120/30
75-00-3	Chloroethane	20	16.9	85	16.8	84	1	33-170/30
67-66-3	Chloroform	20	19.5	98	18.5	93	5	80-122/30
124-48-1	Dibromochloromethane	20	21.5	108	20.7	104	4	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	18.8	94	17.3	87	8	67-131/30
541-73-1	m-Dichlorobenzene	20	20.3	102	19.1	96	6	84-121/30
95-50-1	o-Dichlorobenzene	20	19.7	99	18.4	92	7	83-120/30
106-46-7	p-Dichlorobenzene	20	20.3	102	19.4	97	5	83-122/30
75-34-3	1,1-Dichloroethane	20	19.9	100	18.8	94	6	78-124/30
107-06-2	1,2-Dichloroethane	20	20.6	103	19.4	97	6	74-127/30
75-35-4	1,1-Dichloroethylene	20	24.5	123	23.7	119	3	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	20.8	104	19.6	98	6	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	22.0	110	21.4	107	3	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	42.8	107	41.0	103	4	78-123/30
78-87-5	1,2-Dichloropropane	20	20.2	101	19.2	96	5	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.5	103	19.1	96	7	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	20.0	100	18.7	94	7	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	40.5	101	37.9	95	7	50-150/30 [b]
100-41-4	Ethylbenzene	20	20.8	104	19.7	99	5	84-117/30
67-72-1	Hexachloroethane	20	19.2	96	18.1	91	6	53-141/30
78-83-1	Isobutyl Alcohol	200	176	88	158	79	11	20-175/30
74-83-9	Methyl Bromide	20	20.8	104	19.4	97	7	37-198/30
74-87-3	Methyl Chloride	20	17.0	85	15.7	79	8	50-136/30
75-09-2	Methylene Chloride	20	20.8	104	20.5	103	1	71-130/30
78-93-3	Methyl Ethyl Ketone	50	47.9	96	44.5	89	7	59-149/30
108-10-1	4-Methyl-2-pentanone	50	48.9	98	47.2	94	4	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	20.2	101	17.5	88	14	70-126/30
100-42-5	Styrene	20	21.1	106	19.9	100	6	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	22.2	111	20.7	104	7	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	20.7	104	20.2	101	2	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1779-BS1	1I038273.D	1	09/10/18	NN	n/a	n/a	V1I1779
V1I1779-BSD1	1I038275.D	1	09/10/18	NN	n/a	n/a	V1I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-12, LA47398-13, LA47398-14

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	21.4	107	20.3	102	5	75-133/30
108-88-3	Toluene	20	19.5	98	18.6	93	5	80-121/30
71-55-6	1,1,1-Trichloroethane	20	20.1	101	19.2	96	5	74-126/30
79-00-5	1,1,2-Trichloroethane	20	20.4	102	19.6	98	4	80-123/30
79-01-6	Trichloroethylene	20	22.2	111	21.0	105	6	62-125/30
75-69-4	Trichlorofluoromethane	20	19.9	100	19.4	97	3	62-148/30
75-01-4	Vinyl Chloride	20	17.0	85	17.0	85	0	67-130/30
	m,p-Xylene	40	41.7	104	39.4	99	6	82-121/30
95-47-6	o-Xylene	20	20.4	102	19.3	97	6	84-119/30
1330-20-7	Xylene (total)	60	62.1	104	58.7	98	6	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	89%	89%	84-124%
2037-26-5	Toluene-D8	100%	98%	83-115%
460-00-4	4-Bromofluorobenzene	102%	100%	89-111%

(a) Outside control limits biased high. Analyte not detected in associated samples.
(b) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1779-BS1	2I038274.D	1	09/10/18	NN	n/a	n/a	V2I1779
V2I1779-BSD1	2I038276.D	1	09/10/18	NN	n/a	n/a	V2I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-10, LA47398-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	52.5	105	50.3	101	4	38-178/30
71-43-2	Benzene	20	20.0	100	20.1	101	0	82-119/30
75-27-4	Bromodichloromethane	20	19.6	98	19.2	96	2	79-120/30
75-25-2	Bromoform	20	17.3	87	17.4	87	1	68-128/30
75-15-0	Carbon Disulfide	20	26.8	134* [a]	26.5	133	1	64-133/30
56-23-5	Carbon Tetrachloride	20	19.4	97	19.5	98	1	69-132/30
108-90-7	Chlorobenzene	20	19.5	98	19.3	97	1	85-120/30
75-00-3	Chloroethane	20	19.4	97	19.3	97	1	33-170/30
67-66-3	Chloroform	20	19.4	97	19.4	97	0	80-122/30
124-48-1	Dibromochloromethane	20	22.0	110	21.8	109	1	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	18.2	91	17.2	86	6	67-131/30
541-73-1	m-Dichlorobenzene	20	20.5	103	19.7	99	4	84-121/30
95-50-1	o-Dichlorobenzene	20	19.6	98	19.0	95	3	83-120/30
106-46-7	p-Dichlorobenzene	20	20.1	101	19.3	97	4	83-122/30
75-34-3	1,1-Dichloroethane	20	17.1	86	17.1	86	0	78-124/30
107-06-2	1,2-Dichloroethane	20	19.9	100	19.4	97	3	74-127/30
75-35-4	1,1-Dichloroethylene	20	24.5	123	24.2	121	1	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	20.3	102	20.4	102	0	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	21.4	107	21.2	106	1	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	41.7	104	41.5	104	0	78-123/30
78-87-5	1,2-Dichloropropane	20	19.5	98	19.4	97	1	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	19.8	99	19.6	98	1	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	19.3	97	19.2	96	1	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	39.1	98	38.8	97	1	50-150/30 [b]
100-41-4	Ethylbenzene	20	20.3	102	20.3	102	0	84-117/30
67-72-1	Hexachloroethane	20	17.4	87	16.5	83	5	53-141/30
78-83-1	Isobutyl Alcohol	200	162	81	155	78	4	20-175/30
74-83-9	Methyl Bromide	20	21.2	106	20.4	102	4	37-198/30
74-87-3	Methyl Chloride	20	14.9	75	15.7	79	5	50-136/30
75-09-2	Methylene Chloride	20	20.7	104	20.5	103	1	71-130/30
78-93-3	Methyl Ethyl Ketone	50	47.9	96	46.1	92	4	59-149/30
108-10-1	4-Methyl-2-pentanone	50	51.6	103	50.4	101	2	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	18.9	95	18.7	94	1	70-126/30
100-42-5	Styrene	20	20.2	101	19.9	100	1	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	21.2	106	21.6	108	2	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	20.3	102	20.0	100	1	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1779-BS1	2I038274.D	1	09/10/18	NN	n/a	n/a	V2I1779
V2I1779-BSD1	2I038276.D	1	09/10/18	NN	n/a	n/a	V2I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-10, LA47398-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	21.2	106	20.9	105	1	75-133/30
108-88-3	Toluene	20	19.8	99	19.7	99	1	80-121/30
71-55-6	1,1,1-Trichloroethane	20	20.1	101	19.7	99	2	74-126/30
79-00-5	1,1,2-Trichloroethane	20	20.3	102	20.3	102	0	80-123/30
79-01-6	Trichloroethylene	20	22.1	111	21.5	108	3	62-125/30
75-69-4	Trichlorofluoromethane	20	20.9	105	20.8	104	0	62-148/30
75-01-4	Vinyl Chloride	20	18.0	90	17.9	90	1	67-130/30
	m,p-Xylene	40	41.1	103	40.3	101	2	82-121/30
95-47-6	o-Xylene	20	20.0	100	19.9	100	1	84-119/30
1330-20-7	Xylene (total)	60	61.1	102	60.3	101	1	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	90%	91%	84-124%
2037-26-5	Toluene-D8	98%	99%	83-115%
460-00-4	4-Bromofluorobenzene	101%	102%	89-111%

(a) Outside control limits biased high. Analyte not detected in associated samples.
(b) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2136-BS1	1Q0441991.D	1	09/10/18	NN	n/a	n/a	V1Q2136
V1Q2136-BSD1	1Q0441992.D	1	09/10/18	NN	n/a	n/a	V1Q2136

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-11, LA47398-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	52.1	104	50.3	101	4	38-178/30
71-43-2	Benzene	20	20.6	103	20.8	104	1	82-119/30
75-27-4	Bromodichloromethane	20	21.3	107	21.6	108	1	79-120/30
75-25-2	Bromoform	20	21.6	108	21.3	107	1	68-128/30
75-15-0	Carbon Disulfide	20	22.8	114	23.9	120	5	64-133/30
56-23-5	Carbon Tetrachloride	20	21.3	107	22.0	110	3	69-132/30
108-90-7	Chlorobenzene	20	21.2	106	21.7	109	2	85-120/30
75-00-3	Chloroethane	20	19.1	96	20.1	101	5	33-170/30
67-66-3	Chloroform	20	21.2	106	21.8	109	3	80-122/30
124-48-1	Dibromochloromethane	20	21.3	107	22.0	110	3	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	18.7	94	21.6	108	14	67-131/30
541-73-1	m-Dichlorobenzene	20	21.0	105	21.1	106	0	84-121/30
95-50-1	o-Dichlorobenzene	20	23.0	115	22.9	115	0	83-120/30
106-46-7	p-Dichlorobenzene	20	21.8	109	22.8	114	4	83-122/30
75-34-3	1,1-Dichloroethane	20	20.5	103	21.5	108	5	78-124/30
107-06-2	1,2-Dichloroethane	20	21.3	107	22.2	111	4	74-127/30
75-35-4	1,1-Dichloroethylene	20	20.7	104	21.1	106	2	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	20.8	104	20.7	104	0	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	24.0	120	24.0	120	0	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	44.8	112	44.8	112	0	78-123/30
78-87-5	1,2-Dichloropropane	20	21.1	106	22.0	110	4	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.6	103	21.4	107	4	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	20.8	104	20.8	104	0	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	41.4	104	42.3	106	2	50-150/30 [a]
100-41-4	Ethylbenzene	20	21.3	107	21.9	110	3	84-117/30
67-72-1	Hexachloroethane	20	21.9	110	22.1	111	1	53-141/30
78-83-1	Isobutyl Alcohol	200	138	69	136	68	1	20-175/30
74-83-9	Methyl Bromide	20	21.5	108	22.2	111	3	37-198/30
74-87-3	Methyl Chloride	20	18.0	90	17.9	90	1	50-136/30
75-09-2	Methylene Chloride	20	22.2	111	23.2	116	4	71-130/30
78-93-3	Methyl Ethyl Ketone	50	50.8	102	51.0	102	0	59-149/30
108-10-1	4-Methyl-2-pentanone	50	44.6	89	46.1	92	3	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	20.3	102	20.5	103	1	70-126/30
100-42-5	Styrene	20	23.5	118	24.1	121	3	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	21.0	105	21.9	110	4	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	20.9	105	21.5	108	3	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2136-BS1	1Q0441991.D	1	09/10/18	NN	n/a	n/a	V1Q2136
V1Q2136-BSD1	1Q0441992.D	1	09/10/18	NN	n/a	n/a	V1Q2136

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-11, LA47398-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	21.8	109	20.4	102	7	75-133/30
108-88-3	Toluene	20	21.8	109	21.8	109	0	80-121/30
71-55-6	1,1,1-Trichloroethane	20	21.5	108	21.9	110	2	74-126/30
79-00-5	1,1,2-Trichloroethane	20	21.3	107	21.0	105	1	80-123/30
79-01-6	Trichloroethylene	20	21.7	109	22.1	111	2	62-125/30
75-69-4	Trichlorofluoromethane	20	20.3	102	20.3	102	0	62-148/30
75-01-4	Vinyl Chloride	20	19.1	96	19.3	97	1	67-130/30
	m,p-Xylene	40	44.1	110	45.0	113	2	82-121/30
95-47-6	o-Xylene	20	22.0	110	22.2	111	1	84-119/30
1330-20-7	Xylene (total)	60	66.1	110	67.2	112	2	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	103%	103%	84-124%
2037-26-5	Toluene-D8	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	103%	98%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1781-BS1	2I038328.D	1	09/11/18	NN	n/a	n/a	V2I1781
V2I1781-BSD1	2I038330.D	1	09/11/18	NN	n/a	n/a	V2I1781

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1R, LA47398-3R

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	19.5	98	19.7	99	1	82-119/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	90%	91%	84-124%
2037-26-5	Toluene-D8	98%	97%	83-115%
460-00-4	4-Bromofluorobenzene	98%	99%	89-111%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2J1456-BS1	2J0054605.D	1	09/11/18	NN	n/a	n/a	V2J1456
V2J1456-BSD1	2J0054607.D	1	09/11/18	NN	n/a	n/a	V2J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-17, LA47398-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	45.9	92	43.8	88	5	38-178/30
71-43-2	Benzene	20	20.3	102	19.7	99	3	82-119/30
75-27-4	Bromodichloromethane	20	19.9	100	19.1	96	4	79-120/30
75-25-2	Bromoform	20	17.8	89	17.7	89	1	68-128/30
75-15-0	Carbon Disulfide	20	19.5	98	18.7	94	4	64-133/30
56-23-5	Carbon Tetrachloride	20	20.0	100	19.5	98	3	69-132/30
108-90-7	Chlorobenzene	20	19.6	98	19.2	96	2	85-120/30
75-00-3	Chloroethane	20	18.2	91	18.4	92	1	33-170/30
67-66-3	Chloroform	20	19.7	99	18.6	93	6	80-122/30
124-48-1	Dibromochloromethane	20	19.5	98	17.9	90	9	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	18.2	91	17.3	87	5	67-131/30
541-73-1	m-Dichlorobenzene	20	20.1	101	19.5	98	3	84-121/30
95-50-1	o-Dichlorobenzene	20	19.4	97	20.1	101	4	83-120/30
106-46-7	p-Dichlorobenzene	20	19.2	96	19.4	97	1	83-122/30
75-34-3	1,1-Dichloroethane	20	19.0	95	18.7	94	2	78-124/30
107-06-2	1,2-Dichloroethane	20	18.9	95	19.0	95	1	74-127/30
75-35-4	1,1-Dichloroethylene	20	20.8	104	19.4	97	7	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	20.7	104	19.6	98	5	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	19.4	97	18.9	95	3	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	40.1	100	38.5	96	4	78-123/30
78-87-5	1,2-Dichloropropane	20	19.0	95	19.3	97	2	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.4	102	19.8	99	3	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	19.2	96	18.9	95	2	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	39.6	99	38.7	97	2	50-150/30 [a]
100-41-4	Ethylbenzene	20	20.9	105	20.2	101	3	84-117/30
67-72-1	Hexachloroethane	20	18.6	93	18.6	93	0	53-141/30
78-83-1	Isobutyl Alcohol	200	197	99	182	91	8	20-175/30
74-83-9	Methyl Bromide	20	22.6	113	22.3	112	1	37-198/30
74-87-3	Methyl Chloride	20	19.9	100	19.1	96	4	50-136/30
75-09-2	Methylene Chloride	20	19.8	99	19.8	99	0	71-130/30
78-93-3	Methyl Ethyl Ketone	50	47.8	96	47.4	95	1	59-149/30
108-10-1	4-Methyl-2-pentanone	50	49.0	98	46.0	92	6	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	20.6	103	20.4	102	1	70-126/30
100-42-5	Styrene	20	21.4	107	20.6	103	4	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	20.4	102	20.2	101	1	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	19.1	96	19.0	95	1	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2J1456-BS1	2J0054605.D	1	09/11/18	NN	n/a	n/a	V2J1456
V2J1456-BSD1	2J0054607.D	1	09/11/18	NN	n/a	n/a	V2J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-17, LA47398-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	20.0	100	19.0	95	5	75-133/30
108-88-3	Toluene	20	20.8	104	19.6	98	6	80-121/30
71-55-6	1,1,1-Trichloroethane	20	20.7	104	20.0	100	3	74-126/30
79-00-5	1,1,2-Trichloroethane	20	20.0	100	19.9	100	1	80-123/30
79-01-6	Trichloroethylene	20	20.8	104	20.8	104	0	62-125/30
75-69-4	Trichlorofluoromethane	20	20.5	103	19.6	98	4	62-148/30
75-01-4	Vinyl Chloride	20	19.8	99	19.6	98	1	67-130/30
	m,p-Xylene	40	42.9	107	41.5	104	3	82-121/30
95-47-6	o-Xylene	20	21.3	107	20.4	102	4	84-119/30
1330-20-7	Xylene (total)	60	64.1	107	62.0	103	3	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	94%	96%	84-124%
2037-26-5	Toluene-D8	98%	99%	83-115%
460-00-4	4-Bromofluorobenzene	103%	100%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-BS1	1I038483.D	1	09/12/18	NN	n/a	n/a	V1I1787
V1I1787-BSD1	1I038485.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	48.2	96	49.0	98	2	38-178/30
71-43-2	Benzene	20	19.9	100	19.0	95	5	82-119/30
75-27-4	Bromodichloromethane	20	20.0	100	19.2	96	4	79-120/30
75-25-2	Bromoform	20	17.2	86	17.8	89	3	68-128/30
75-15-0	Carbon Disulfide	20	21.2	106	20.3	102	4	64-133/30
56-23-5	Carbon Tetrachloride	20	18.9	95	18.3	92	3	69-132/30
108-90-7	Chlorobenzene	20	20.3	102	20.1	101	1	85-120/30
75-00-3	Chloroethane	20	22.6	113	21.6	108	5	33-170/30
67-66-3	Chloroform	20	19.4	97	18.7	94	4	80-122/30
124-48-1	Dibromochloromethane	20	18.1	91	18.4	92	2	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	17.1	86	17.3	87	1	67-131/30
541-73-1	m-Dichlorobenzene	20	20.1	101	19.8	99	2	84-121/30
95-50-1	o-Dichlorobenzene	20	20.0	100	19.7	99	2	83-120/30
106-46-7	p-Dichlorobenzene	20	19.1	96	19.0	95	1	83-122/30
75-34-3	1,1-Dichloroethane	20	17.8	89	19.1	96	7	78-124/30
107-06-2	1,2-Dichloroethane	20	19.1	96	18.7	94	2	74-127/30
75-35-4	1,1-Dichloroethylene	20	19.3	97	18.9	95	2	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	19.7	99	19.2	96	3	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	19.9	100	18.8	94	6	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	39.7	99	38.1	95	4	78-123/30
78-87-5	1,2-Dichloropropane	20	20.2	101	19.9	100	1	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.3	102	19.3	97	5	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	19.7	99	19.5	98	1	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	40.0	100	38.8	97	3	50-150/30 [a]
100-41-4	Ethylbenzene	20	19.3	97	19.3	97	0	84-117/30
67-72-1	Hexachloroethane	20	20.4	102	19.6	98	4	53-141/30
78-83-1	Isobutyl Alcohol	200	178	89	180	90	1	20-175/30
74-83-9	Methyl Bromide	20	22.5	113	20.7	104	8	37-198/30
74-87-3	Methyl Chloride	20	20.7	104	20.1	101	3	50-136/30
75-09-2	Methylene Chloride	20	21.1	106	20.6	103	2	71-130/30
78-93-3	Methyl Ethyl Ketone	50	46.8	94	46.3	93	1	59-149/30
108-10-1	4-Methyl-2-pentanone	50	48.3	97	48.5	97	0	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	18.7	94	18.4	92	2	70-126/30
100-42-5	Styrene	20	21.5	108	21.2	106	1	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	19.7	99	19.5	98	1	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	18.7	94	18.5	93	1	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-BS1	1I038483.D	1	09/12/18	NN	n/a	n/a	V1I1787
V1I1787-BSD1	1I038485.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	19.4	97	18.4	92	5	75-133/30
108-88-3	Toluene	20	19.4	97	18.8	94	3	80-121/30
71-55-6	1,1,1-Trichloroethane	20	19.5	98	19.0	95	3	74-126/30
79-00-5	1,1,2-Trichloroethane	20	18.3	92	18.9	95	3	80-123/30
79-01-6	Trichloroethylene	20	20.2	101	19.8	99	2	62-125/30
75-69-4	Trichlorofluoromethane	20	19.0	95	18.3	92	4	62-148/30
75-01-4	Vinyl Chloride	20	20.9	105	20.0	100	4	67-130/30
	m,p-Xylene	40	39.2	98	38.5	96	2	82-121/30
95-47-6	o-Xylene	20	19.7	99	19.5	98	1	84-119/30
1330-20-7	Xylene (total)	60	58.9	98	58.0	97	2	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	92%	92%	84-124%
2037-26-5	Toluene-D8	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	96%	98%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47375-30MS	2I038318.D	10	09/10/18	NN	n/a	n/a	V2I1779
LA47375-30MSD	2I038320.D	10	09/10/18	NN	n/a	n/a	V2I1779
LA47375-30	2I038312.D	10	09/10/18	NN	n/a	n/a	V2I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-10, LA47398-15

CAS No.	Compound	LA47375-30 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	118		500	431	63	500	423	61	2	39-164/27
71-43-2	Benzene	110		200	296	93	200	298	94	1	31-161/15
75-27-4	Bromodichloromethane	ND		200	172	86	200	172	86	0	64-122/36
75-25-2	Bromoform	ND		200	140	70	200	140	70	0	43-125/37
75-15-0	Carbon Disulfide	ND		200	219	110	200	225	113	3	38-138/36
56-23-5	Carbon Tetrachloride	ND		200	164	82	200	172	86	5	53-133/36
108-90-7	Chlorobenzene	9.7		200	181	86	200	186	88	3	74-122/34
75-00-3	Chloroethane	ND		200	182	91	200	188	94	3	14-181/43
67-66-3	Chloroform	ND		200	175	88	200	174	87	1	65-130/24
124-48-1	Dibromochloromethane	ND		200	186	93	200	190	95	2	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		200	139	70	200	151	76	8	46-135/25
541-73-1	m-Dichlorobenzene	ND		200	185	93	200	193	97	4	70-120/35
95-50-1	o-Dichlorobenzene	ND		200	180	90	200	185	93	3	72-120/35
106-46-7	p-Dichlorobenzene	ND		200	184	92	200	186	93	1	68-120/35
75-34-3	1,1-Dichloroethane	ND		200	179	90	200	178	89	1	56-138/32
107-06-2	1,2-Dichloroethane	ND		200	184	92	200	182	91	1	51-141/39
75-35-4	1,1-Dichloroethylene	ND		200	212	106	200	215	108	1	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		200	185	93	200	181	91	2	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		200	193	97	200	192	96	1	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		400	379	95	400	372	93	2	54-134/30
78-87-5	1,2-Dichloropropane	ND		200	175	88	200	175	88	0	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		200	163	82	200	163	82	0	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		200	165	83	200	168	84	2	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		400	328	82	400	332	83	1	50-150/30 [a]
100-41-4	Ethylbenzene	369		200	574	103	200	580	106	1	47-146/30
67-72-1	Hexachloroethane	ND		200	134	67	200	143	72	6	32-128/39
78-83-1	Isobutyl Alcohol	ND		2000	1050	53	2000	1040	52	1	33-142/54
74-83-9	Methyl Bromide	ND		200	180	90	200	194	97	7	1-150/64
74-87-3	Methyl Chloride	ND		200	162	81	200	167	84	3	16-146/29
75-09-2	Methylene Chloride	4.5		200	183	89	200	182	89	1	55-134/36
78-93-3	Methyl Ethyl Ketone	ND		500	363	73	500	366	73	1	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		500	385	77	500	391	78	2	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		200	157	79	200	158	79	1	52-146/32
100-42-5	Styrene	ND		200	184	92	200	185	93	1	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		200	193	97	200	196	98	2	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	176	88	200	181	91	3	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47375-30MS	2I038318.D	10	09/10/18	NN	n/a	n/a	V2I1779
LA47375-30MSD	2I038320.D	10	09/10/18	NN	n/a	n/a	V2I1779
LA47375-30	2I038312.D	10	09/10/18	NN	n/a	n/a	V2I1779

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-10, LA47398-15

CAS No.	Compound	LA47375-30 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		200	196	98	200	202	101	3	58-135/37
108-88-3	Toluene	1170		200	1360	95	200	1370	100	1	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		200	175	88	200	181	91	3	63-128/36
79-00-5	1,1,2-Trichloroethane	ND		200	183	92	200	185	93	1	61-138/17
79-01-6	Trichloroethylene	ND		200	193	97	200	194	97	1	57-131/36
75-69-4	Trichlorofluoromethane	ND		200	197	99	200	198	99	1	31-156/36
75-01-4	Vinyl Chloride	ND		200	171	86	200	172	86	1	22-155/49
	m,p-Xylene	1370		400	1750	95	400	1770	100	1	35-159/31
95-47-6	o-Xylene	500		200	706	103	200	708	104	0	50-144/35
1330-20-7	Xylene (total)	1870		600	2460	98	600	2480	102	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47375-30	Limits
17060-07-0	1,2-Dichloroethane-D4	93%	93%	95%	84-124%
2037-26-5	Toluene-D8	97%	98%	97%	83-115%
460-00-4	4-Bromofluorobenzene	100%	99%	99%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47416-4MS	1Q0442015.D	2	09/11/18	NN	n/a	n/a	V1Q2136
LA47416-4MSD	1Q0442016.D	2	09/11/18	NN	n/a	n/a	V1Q2136
LA47416-4	1Q0442004.D	1	09/11/18	NN	n/a	n/a	V1Q2136

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-11, LA47398-16

CAS No.	Compound	LA47416-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2.0		100	100	98	100	97.4	95	3	39-164/27
71-43-2	Benzene	ND		40	41.3	103	40	40.4	101	2	31-161/15
75-27-4	Bromodichloromethane	ND		40	41.5	104	40	41.6	104	0	64-122/36
75-25-2	Bromoform	ND		40	40.5	101	40	38.7	97	5	43-125/37
75-15-0	Carbon Disulfide	ND		40	46.3	116	40	45.2	113	2	38-138/36
56-23-5	Carbon Tetrachloride	ND		40	42.9	107	40	42.0	105	2	53-133/36
108-90-7	Chlorobenzene	ND		40	40.7	102	40	39.5	99	3	74-122/34
75-00-3	Chloroethane	ND		40	43.0	108	40	40.1	100	7	14-181/43
67-66-3	Chloroform	0.34		40	42.1	104	40	41.2	102	2	65-130/24
124-48-1	Dibromochloromethane	ND		40	41.9	105	40	40.0	100	5	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		40	34.8	87	40	35.1	88	1	46-135/25
541-73-1	m-Dichlorobenzene	ND		40	37.2	93	40	38.4	96	3	70-120/35
95-50-1	o-Dichlorobenzene	ND		40	38.7	97	40	41.7	104	7	72-120/35
106-46-7	p-Dichlorobenzene	ND		40	38.4	96	40	40.8	102	6	68-120/35
75-34-3	1,1-Dichloroethane	ND		40	41.5	104	40	40.9	102	1	56-138/32
107-06-2	1,2-Dichloroethane	ND		40	43.4	109	40	41.5	104	4	51-141/39
75-35-4	1,1-Dichloroethylene	ND		40	41.0	103	40	41.3	103	1	48-139/37
156-59-2	cis-1,2-Dichloroethylene	5.3		40	47.2	105	40	44.9	99	5	56-133/15
156-60-5	trans-1,2-Dichloroethylene	0.29		40	48.6	121	40	46.8	116	4	59-128/37
540-59-0	1,2-Dichloroethene (total)	5.6		80	95.9	113	80	91.7	108	4	54-134/30
78-87-5	1,2-Dichloropropane	ND		40	42.1	105	40	41.2	103	2	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		40	40.7	102	40	39.6	99	3	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		40	37.6	94	40	37.5	94	0	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		80	78.4	98	80	77.1	96	2	50-150/30 [a]
100-41-4	Ethylbenzene	ND		40	40.9	102	40	39.8	100	3	47-146/30
67-72-1	Hexachloroethane	ND		40	41.7	104	40	43.2	108	4	32-128/39
78-83-1	Isobutyl Alcohol	ND		400	294	74	400	309	77	5	33-142/54
74-83-9	Methyl Bromide	ND		40	37.5	94	40	38.9	97	4	1-150/64
74-87-3	Methyl Chloride	ND		40	43.4	109	40	40.1	100	8	16-146/29
75-09-2	Methylene Chloride	ND		40	45.6	114	40	44.3	111	3	55-134/36
78-93-3	Methyl Ethyl Ketone	ND		100	97.6	98	100	93.0	93	5	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		100	86.5	87	100	85.1	85	2	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		40	39.0	98	40	38.0	95	3	52-146/32
100-42-5	Styrene	ND		40	36.7	92	40	41.4	104	12	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		40	41.0	103	40	40.8	102	0	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		40	37.7	94	40	38.3	96	2	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47416-4MS	1Q0442015.D	2	09/11/18	NN	n/a	n/a	V1Q2136
LA47416-4MSD	1Q0442016.D	2	09/11/18	NN	n/a	n/a	V1Q2136
LA47416-4	1Q0442004.D	1	09/11/18	NN	n/a	n/a	V1Q2136

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-11, LA47398-16

CAS No.	Compound	LA47416-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	643	E	40	600	-108* [b]	40	597	-115* [b]	1	58-135/37
108-88-3	Toluene	ND		40	42.3	106	40	41.5	104	2	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		40	44.2	111	40	42.3	106	4	63-128/36
79-00-5	1,1,2-Trichloroethane	ND		40	37.7	94	40	37.3	93	1	61-138/17
79-01-6	Trichloroethylene	6.8		40	49.9	108	40	49.4	107	1	57-131/36
75-69-4	Trichlorofluoromethane	ND		40	42.3	106	40	40.4	101	5	31-156/36
75-01-4	Vinyl Chloride	ND		40	41.2	103	40	39.2	98	5	22-155/49
	m,p-Xylene	ND		80	81.9	102	80	82.1	103	0	35-159/31
95-47-6	o-Xylene	ND		40	40.9	102	40	40.7	102	0	50-144/35
1330-20-7	Xylene (total)	ND		120	123	103	120	123	103	0	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47416-4	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	103%	100%	84-124%
2037-26-5	Toluene-D8	98%	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	102%	102%	95%	89-111%

(a) Advisory control limits.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47398-9MS	2I038364.D	5	09/11/18	NN	n/a	n/a	V2I1781
LA47398-9MSD	2I038366.D	5	09/11/18	NN	n/a	n/a	V2I1781
LA47398-9 [a]	2I038352.D	1	09/11/18	NN	n/a	n/a	V2I1781

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1R, LA47398-3R

CAS No.	Compound	LA47398-9 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		100	92.0	92	100	88.9	89	3	31-161/15

CAS No.	Surrogate Recoveries	MS	MSD	LA47398-9	Limits
17060-07-0	1,2-Dichloroethane-D4	93%	94%	93%	84-124%
2037-26-5	Toluene-D8	97%	97%	97%	83-115%
460-00-4	4-Bromofluorobenzene	99%	99%	96%	89-111%

(a) Sample used for QC purposes only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-18MS	2J0054653.D	5	09/12/18	NN	n/a	n/a	V2J1456
LA47472-18MSD	2J0054655.D	5	09/12/18	NN	n/a	n/a	V2J1456
LA47472-18	2J0054651.D	1	09/12/18	NN	n/a	n/a	V2J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-17, LA47398-18

CAS No.	Compound	LA47472-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	164	66	250	161	64	2	39-164/27
71-43-2	Benzene	6.3		100	109	103	100	107	101	2	31-161/15
75-27-4	Bromodichloromethane	ND		100	106	106	100	100	100	6	64-122/36
75-25-2	Bromoform	ND		100	95.6	96	100	98.2	98	3	43-125/37
75-15-0	Carbon Disulfide	ND		100	91.5	92	100	94.8	95	4	38-138/36
56-23-5	Carbon Tetrachloride	ND		100	95.2	95	100	98.5	99	3	53-133/36
108-90-7	Chlorobenzene	ND		100	103	103	100	104	104	1	74-122/34
75-00-3	Chloroethane	ND		100	64.5	65	100	99.7	100	43	14-181/43
67-66-3	Chloroform	ND		100	94.7	95	100	96.0	96	1	65-130/24
124-48-1	Dibromochloromethane	ND		100	96.0	96	100	99.6	100	4	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	105	105	100	124	124	17	46-135/25
541-73-1	m-Dichlorobenzene	ND		100	102	102	100	109	109	7	70-120/35
95-50-1	o-Dichlorobenzene	ND		100	104	104	100	110	110	6	72-120/35
106-46-7	p-Dichlorobenzene	ND		100	101	101	100	104	104	3	68-120/35
75-34-3	1,1-Dichloroethane	ND		100	97.2	97	100	96.3	96	1	56-138/32
107-06-2	1,2-Dichloroethane	ND		100	98.4	98	100	99.8	100	1	51-141/39
75-35-4	1,1-Dichloroethylene	ND		100	96.1	96	100	101	101	5	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		100	99.8	100	100	98.4	98	1	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		100	92.6	93	100	97.7	98	5	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		200	192	96	200	196	98	2	54-134/30
78-87-5	1,2-Dichloropropane	ND		100	101	101	100	100	100	1	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		100	102	102	100	99.0	99	3	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		100	97.0	97	100	99.0	99	2	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		200	199	100	200	198	99	1	50-150/30 [a]
100-41-4	Ethylbenzene	56.4		100	157	101	100	159	103	1	47-146/30
67-72-1	Hexachloroethane	ND		100	90.9	91	100	94.0	94	3	32-128/39
78-83-1	Isobutyl Alcohol	ND		1000	1150	115	1000	1260	126	9	33-142/54
74-83-9	Methyl Bromide	ND		100	62.3	62	100	90.6	91	37	1-150/64
74-87-3	Methyl Chloride	ND		100	92.4	92	100	90.2	90	2	16-146/29
75-09-2	Methylene Chloride	ND		100	96.3	96	100	104	104	8	55-134/36
78-93-3	Methyl Ethyl Ketone	ND		250	255	102	250	268	107	5	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		250	291	116	250	287	115	1	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		100	102	102	100	107	107	5	52-146/32
100-42-5	Styrene	ND		100	111	111	100	112	112	1	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	107	107	100	109	109	2	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	116	116	100	123	123	6	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-18MS	2J0054653.D	5	09/12/18	NN	n/a	n/a	V2J1456
LA47472-18MSD	2J0054655.D	5	09/12/18	NN	n/a	n/a	V2J1456
LA47472-18	2J0054651.D	1	09/12/18	NN	n/a	n/a	V2J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-17, LA47398-18

CAS No.	Compound	LA47472-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		100	98.7	99	100	98.4	98	0	58-135/37
108-88-3	Toluene	4.7		100	107	102	100	106	101	1	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		100	98.6	99	100	104	104	5	63-128/36
79-00-5	1,1,2-Trichloroethane	ND		100	104	104	100	109	109	5	61-138/17
79-01-6	Trichloroethylene	ND		100	98.2	98	100	94.6	95	4	57-131/36
75-69-4	Trichlorofluoromethane	ND		100	95.9	96	100	98.5	99	3	31-156/36
75-01-4	Vinyl Chloride	ND		100	97.0	97	100	94.1	94	3	22-155/49
	m,p-Xylene	105		200	322	109	200	319	107	1	35-159/31
95-47-6	o-Xylene	3.7		100	111	107	100	115	111	4	50-144/35
1330-20-7	Xylene (total)	109		300	434	108	300	434	108	0	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47472-18	Limits
17060-07-0	1,2-Dichloroethane-D4	92%	98%	98%	84-124%
2037-26-5	Toluene-D8	100%	97%	100%	83-115%
460-00-4	4-Bromofluorobenzene	99%	100%	99%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-4MS	1I038525.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4MSD	1I038527.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4	1I038521.D	5	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	LA47472-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	14.9		500	339	65	500	353	68	4	39-164/27
71-43-2	Benzene	199		200	394	98	200	401	101	2	31-161/15
75-27-4	Bromodichloromethane	ND		200	190	95	200	188	94	1	64-122/36
75-25-2	Bromoform	ND		200	159	80	200	160	80	1	43-125/37
75-15-0	Carbon Disulfide	ND		200	205	103	200	204	102	0	38-138/36
56-23-5	Carbon Tetrachloride	ND		200	187	94	200	185	93	1	53-133/36
108-90-7	Chlorobenzene	ND		200	203	102	200	202	101	0	74-122/34
75-00-3	Chloroethane	ND		200	303	152	200	222	111	31	14-181/43
67-66-3	Chloroform	1.5		200	184	91	200	185	92	1	65-130/24
124-48-1	Dibromochloromethane	ND		200	175	88	200	179	90	2	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		200	162	81	200	166	83	2	46-135/25
541-73-1	m-Dichlorobenzene	ND		200	191	96	200	189	95	1	70-120/35
95-50-1	o-Dichlorobenzene	ND		200	187	94	200	185	93	1	72-120/35
106-46-7	p-Dichlorobenzene	ND		200	184	92	200	179	90	3	68-120/35
75-34-3	1,1-Dichloroethane	ND		200	198	99	200	193	97	3	56-138/32
107-06-2	1,2-Dichloroethane	ND		200	191	96	200	192	96	1	51-141/39
75-35-4	1,1-Dichloroethylene	ND		200	194	97	200	193	97	1	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		200	197	99	200	193	97	2	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		200	195	98	200	197	99	1	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		400	391	98	400	390	98	0	54-134/30
78-87-5	1,2-Dichloropropane	1.8		200	200	99	200	203	101	1	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		200	184	92	200	185	93	1	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		200	185	93	200	183	92	1	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		400	368	92	400	369	92	0	50-150/30 [a]
100-41-4	Ethylbenzene	433		200	636	102	200	637	102	0	47-146/30
67-72-1	Hexachloroethane	ND		200	168	84	200	173	87	3	32-128/39
78-83-1	Isobutyl Alcohol	154		2000	1330	59	2000	1380	61	4	33-142/54
74-83-9	Methyl Bromide	ND		200	121	61	200	113	57	7	1-150/64
74-87-3	Methyl Chloride	1.6		200	171	85	200	171	85	0	16-146/29
75-09-2	Methylene Chloride	ND		200	205	103	200	205	103	0	55-134/36
78-93-3	Methyl Ethyl Ketone	11.9		500	405	79	500	416	81	3	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		500	468	94	500	477	95	2	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		200	183	92	200	183	92	0	52-146/32
100-42-5	Styrene	ND		200	207	104	200	210	105	1	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		200	185	93	200	193	97	4	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	188	94	200	185	93	2	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-4MS	1I038525.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4MSD	1I038527.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4	1I038521.D	5	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	LA47472-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		200	190	95	200	191	96	1	58-135/37
108-88-3	Toluene	40.2		200	229	94	200	234	97	2	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		200	188	94	200	189	95	1	63-128/36
79-00-5	1,1,2-Trichloroethane	1.3		200	181	90	200	186	92	3	61-138/17
79-01-6	Trichloroethylene	ND		200	185	93	200	186	93	1	57-131/36
75-69-4	Trichlorofluoromethane	ND		200	171	86	200	169	85	1	31-156/36
75-01-4	Vinyl Chloride	ND		200	181	91	200	180	90	1	22-155/49
	m,p-Xylene	835		400	1240	101	400	1240	101	0	35-159/31
95-47-6	o-Xylene	36.4		200	233	98	200	232	98	0	50-144/35
1330-20-7	Xylene (total)	871		600	1470	100	600	1480	102	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47472-4	Limits
17060-07-0	1,2-Dichloroethane-D4	91%	92%	92%	84-124%
2037-26-5	Toluene-D8	99%	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	96%	98%	97%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-MB	A0024620.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
100-02-7	4-Nitrophenol	ND	25	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
83-32-9	Acenaphthene	ND	0.20	ug/l	
208-96-8	Acenaphthylene	ND	0.20	ug/l	
62-53-3	Aniline	ND	5.0	ug/l	
120-12-7	Anthracene	ND	0.20	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
92-52-4	1,1'-Biphenyl	ND	10	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-MB	A0024620.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10

CAS No.	Compound	Result	RL	Units	Q
86-73-7	Fluorene	ND	0.20	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	0.20	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	63%	23-85%
4165-62-2	Phenol-d5	49%	10-69%
118-79-6	2,4,6-Tribromophenol	85%	48-138%
4165-60-0	Nitrobenzene-d5	82%	51-128%
321-60-8	2-Fluorobiphenyl	75%	55-122%
1718-51-0	Terphenyl-d14	94%	43-138%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-BS	A0024621.D	1	09/15/18	PC	09/11/18	OP12226	EA634
OP12226-BSD	A0024622.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	5	4.1	82	4.0	80	2	63-104/19
120-83-2	2,4-Dichlorophenol	5	4.5	90	4.5	90	0	68-112/19
105-67-9	2,4-Dimethylphenol	5	4.4	88	4.2	84	5	64-110/20
51-28-5	2,4-Dinitrophenol	25	21.5	86	22.1	88	3	51-121/30
100-02-7	4-Nitrophenol	25	13.1	52	13.3	53	2	20-68/23
87-86-5	Pentachlorophenol	25	24.1	96	23.7	95	2	52-120/29
108-95-2	Phenol	5	2.6	52	2.4	48	8	18-67/20
58-90-2	2,3,4,6-Tetrachlorophenol	5	4.8	96	4.6	92	4	67-121/21
95-95-4	2,4,5-Trichlorophenol	5	4.5	90	4.8	96	6	67-119/21
88-06-2	2,4,6-Trichlorophenol	5	4.4	88	4.4	88	0	67-120/21
83-32-9	Acenaphthene	5	4.1	82	4.0	80	2	67-114/28
208-96-8	Acenaphthylene	5	4.2	84	4.2	84	0	67-119/26
62-53-3	Aniline	5	3.7	74	4.1	82	10	40-114/40
120-12-7	Anthracene	5	4.4	88	4.2	84	5	68-121/24
56-55-3	Benzo(a)anthracene	5	4.4	88	4.3	86	2	69-113/20
50-32-8	Benzo(a)pyrene	5	4.7	94	4.6	92	2	71-124/22
205-99-2	Benzo(b)fluoranthene	5	4.7	94	4.6	92	2	72-120/22
207-08-9	Benzo(k)fluoranthene	5	4.5	90	4.4	88	2	71-124/21
92-52-4	1,1'-Biphenyl	5	4.1	82	4.0	80	2	65-122/29
85-68-7	Butyl Benzyl Phthalate	5	4.9	98	4.9	98	0	73-123/21
106-47-8	4-Chloroaniline	5	5.0	100	4.8	96	4	58-113/51
111-44-4	bis(2-Chloroethyl)ether	5	4.3	86	4.2	84	2	50-118/28
108-60-1	2,2'-Oxybis(1-chloropropane)	5	4.3	86	4.1	82	5	43-138/21
91-58-7	2-Chloronaphthalene	5	4.0	80	4.0	80	0	64-114/30
218-01-9	Chrysene	5	4.5	90	4.4	88	2	70-115/20
53-70-3	Dibenzo(a,h)anthracene	5	4.9	98	4.7	94	4	70-124/21
132-64-9	Dibenzofuran	5	4.2	84	4.0	80	5	67-117/27
91-94-1	3,3'-Dichlorobenzidine	5	6.6	132* [a]	6.4	128* [a]	3	69-122/38
84-66-2	Diethyl Phthalate	5	4.5	90	4.5	90	0	71-123/21
131-11-3	Dimethyl Phthalate	5	4.4	88	4.4	88	0	69-119/20
117-84-0	Di-n-octyl Phthalate	5	5.3	106	5.2	104	2	66-121/22
99-65-0	1,3-Dinitrobenzene	25	24.4	98	24.0	96	2	71-122/21
121-14-2	2,4-Dinitrotoluene	5	4.7	94	4.7	94	0	73-122/21
606-20-2	2,6-Dinitrotoluene	5	4.6	92	4.5	90	2	72-121/21
117-81-7	bis(2-Ethylhexyl)phthalate	5	4.9	98	4.8	96	2	68-126/21
206-44-0	Fluoranthene	5	4.7	94	4.5	90	4	73-120/21

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-BS	A0024621.D	1	09/15/18	PC	09/11/18	OP12226	EA634
OP12226-BSD	A0024622.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
86-73-7	Fluorene	5	4.3	86	4.2	84	2	69-118/25
118-74-1	Hexachlorobenzene	5	4.1	82	4.0	80	2	67-117/23
87-68-3	Hexachlorobutadiene	5	3.0	60	2.7	54	11	42-120/35
77-47-4	Hexachlorocyclopentadiene	5	3.1	62	2.8	56	10	35-123/48
193-39-5	Indeno(1,2,3-cd)pyrene	5	4.9	98	4.7	94	4	70-123/21
78-59-1	Isophorone	5	4.5	90	4.4	88	2	70-119/19
91-57-6	2-Methylnaphthalene	5	4.0	80	4.0	80	0	65-113/27
91-20-3	Naphthalene	5	4.0	80	3.9	78	3	63-114/23
88-74-4	2-Nitroaniline	25	25.3	101	25.2	101	0	68-125/21
99-09-2	3-Nitroaniline	25	24.2	97	24.0	96	1	69-117/23
100-01-6	4-Nitroaniline	25	25.2	101	25.1	100	0	67-122/19
98-95-3	Nitrobenzene	5	4.3	86	4.2	84	2	69-116/21
621-64-7	N-Nitroso-di-n-propylamine	5	4.5	90	4.3	86	5	67-120/20
86-30-6	N-Nitrosodiphenylamine	5	4.5	90	4.3	86	5	67-119/25
85-01-8	Phenanthrene	5	4.3	86	4.1	82	5	70-117/23
129-00-0	Pyrene	5	4.5	90	4.3	86	5	70-119/21
95-94-3	1,2,4,5-Tetrachlorobenzene	5	3.6	72	3.4	68	6	55-117/35
120-82-1	1,2,4-Trichlorobenzene	5	3.7	74	3.6	72	3	56-111/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	68%	66%	23-85%
4165-62-2	Phenol-d5	54%	50%	10-69%
118-79-6	2,4,6-Tribromophenol	103%	98%	48-138%
4165-60-0	Nitrobenzene-d5	85%	82%	51-128%
321-60-8	2-Fluorobiphenyl	81%	76%	55-122%
1718-51-0	Terphenyl-d14	94%	89%	43-138%

(a) Outside control limits biased high. Analyte not detected in associated samples.

* = Outside of Control Limits.

GC Volatiles

6

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1483-MB2	LE335978.D	1	09/07/18	SV	n/a	n/a	GLE1483

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.)	ND	30	ug/l	
	Aliphatics > C8-C10 (Unadj.)	ND	50	ug/l	
	Aromatics > C8-C10 (Unadj.)	ND	50	ug/l	

CAS No.	Surrogate Recoveries		Limits
615-59-8	2,5-Dibromotoluene	106% [a]	70-130%
615-59-8	2,5-Dibromotoluene	92% [b]	70-130%

(a) Recovery from Aliphatics fraction.
(b) Recovery from Aromatics fraction.

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC1819-MB1	LC379884.D	1	09/07/18	MB	n/a	n/a	GLC1819

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47398-10, LA47398-11, LA47398-12, LA47398-13, LA47398-14, LA47398-15, LA47398-16, LA47398-17, LA47398-18

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.)	ND	30	ug/l	
	Aliphatics > C8-C10 (Unadj.)	ND	50	ug/l	
	Aromatics > C8-C10 (Unadj.)	ND	50	ug/l	

CAS No.	Surrogate Recoveries		Limits
615-59-8	2,5-Dibromotoluene	87% [a]	70-130%
615-59-8	2,5-Dibromotoluene	86% [b]	70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics fraction.

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12214-MB	LK113131.D	1	09/11/18	DF	09/09/18	OP12214	GLK724

The QC reported here applies to the following samples: **Method:** SW846 8011

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.020	ug/l	

CAS No.	Surrogate Recoveries		Limits
348-51-6	1-Chloro-2-fluorobenzene	101%	55-149%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1483-BS1	LE335973.D	1	09/07/18	SV	n/a	n/a	GLE1483
GLE1483-BSD1	LE335974.D	1	09/07/18	SV	n/a	n/a	GLE1483

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	150	145	97	144	96	1	70-130/30
	Aliphatics > C8-C10 (Unadj.)	250	253	101	251	100	1	70-130/30
	Aromatics > C8-C10 (Unadj.)	250	242	97	241	96	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
615-59-8	2,5-Dibromotoluene	105% [b]	106% [a]	70-130%
615-59-8	2,5-Dibromotoluene	96%	98% [b]	70-130%

(a) Recovery from Aliphatics fraction.
(b) Recovery from Aromatics fraction.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC1819-BS1	LC379882.D	1	09/07/18	MB	n/a	n/a	GLC1819
GLC1819-BSD1	LC379883.D	1	09/07/18	MB	n/a	n/a	GLC1819

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47398-10, LA47398-11, LA47398-12, LA47398-13, LA47398-14, LA47398-15, LA47398-16, LA47398-17, LA47398-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	150	140	93	129	86	8	70-130/30
	Aliphatics > C8-C10 (Unadj.)	250	238	95	231	92	3	70-130/30
	Aromatics > C8-C10 (Unadj.)	250	238	95	235	94	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
615-59-8	2,5-Dibromotoluene	98% [a]	89% [a]	70-130%
615-59-8	2,5-Dibromotoluene	93% [b]	91% [b]	70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics fraction.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12214-BS	LK113132.D	1	09/11/18	DF	09/09/18	OP12214	GLK724
OP12214-BSD	LK113133.D	1	09/11/18	DF	09/09/18	OP12214	GLK724

The QC reported here applies to the following samples: **Method:** SW846 8011

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	0.251	0.29	115	0.31	123	7	60-148/18

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
348-51-6	1-Chloro-2-fluorobenzene	99%	102%	55-149%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47398-1MS	LE335986.D	5	09/07/18	SV	n/a	n/a	GLE1483
LA47398-1MSD	LE335987.D	5	09/07/18	SV	n/a	n/a	GLE1483
LA47398-1	LE335981.D	1	09/07/18	SV	n/a	n/a	GLE1483

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	LA47398-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	64.7		750	784	96	750	797	98	2	70-130/50
	Aliphatics > C8-C10 (Unadj.)	14.7		1250	1250	99	1250	1310	104	5	70-130/50
	Aromatics > C8-C10 (Unadj.)	13.8		1250	1200	95	1250	1240	98	3	70-130/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47398-1	Limits
615-59-8	2,5-Dibromotoluene	102%	112%	105%	70-130%
615-59-8	2,5-Dibromotoluene	95%	102%	90%	70-130%

* = Outside of Control Limits.

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12205-MB	X0050681.D	1	09/10/18	JT	09/08/18	OP12205	GLB1598

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Result	RL	Units	Q
	Aromatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aromatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aromatics > C16-C21 (Unadj.)	ND	140	ug/l	
	Aromatics > C21-C35 (Unadj.)	ND	140	ug/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	83%	40-140%
321-60-8	2-Fluorobiphenyl	87%	40-140%

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12205-MB	Y0050681.D	1	09/10/18	JT	09/08/18	OP12205	GLB1599

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aliphatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aliphatics > C16-C35 (Unadj.)	91.5	140	ug/l	J

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	71%	40-140%

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12207-MB	X0050756.D	1	09/12/18	JT	09/10/18	OP12207	GLB1606

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-10

CAS No.	Compound	Result	RL	Units	Q
	Aromatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aromatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aromatics > C16-C21 (Unadj.)	ND	140	ug/l	
	Aromatics > C21-C35 (Unadj.)	ND	140	ug/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	87%	40-140%
321-60-8	2-Fluorobiphenyl	82%	40-140%

Method Blank Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12207-MB	Y0050756.D	1	09/12/18	JT	09/10/18	OP12207	GLB1607

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-10

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aliphatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aliphatics > C16-C35 (Unadj.)	101	140	ug/l	J

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	77%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12205-BS	X0050682.D	1	09/10/18	JT	09/08/18	OP12205	GLB1598
OP12205-BSD	X0050683.D	1	09/10/18	JT	09/08/18	OP12205	GLB1598

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	460	334	73	339	73	1	40-140/30
	Aromatics > C12-C16 (Unadj.)	1380	1090	79	1110	80	2	40-140/30
	Aromatics > C16-C21 (Unadj.)	2300	1920	84	1950	84	2	40-140/30
	Aromatics > C21-C35 (Unadj.)	3680	3370	92	3420	92	1	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	83%	84%	40-140%
321-60-8	2-Fluorobiphenyl	77%	78%	40-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12205-BS	Y0050682.D	1	09/10/18	JT	09/08/18	OP12205	GLB1599
OP12205-BSD	Y0050683.D	1	09/10/18	JT	09/08/18	OP12205	GLB1599

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	460	221	48	224	48	1	40-140/30
	Aliphatics > C12-C16 (Unadj.)	919	460	50	472	51	3	40-140/30
	Aliphatics > C16-C35 (Unadj.)	4140	1880	45	1930	46	3	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	52%	52%	40-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12207-BS	X0050713.D	1	09/11/18	JT	09/10/18	OP12207	GLB1602
OP12207-BSD	X0050714.D	1	09/11/18	JT	09/10/18	OP12207	GLB1602

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	469	318	68	346	74	8	40-140/30
	Aromatics > C12-C16 (Unadj.)	1410	1040	74	1140	81	9	40-140/30
	Aromatics > C16-C21 (Unadj.)	2350	1810	77	1990	85	9	40-140/30
	Aromatics > C21-C35 (Unadj.)	3750	3120	83	3410	91	9	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	78%	84%	40-140%
321-60-8	2-Fluorobiphenyl	75%	84%	40-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12207-BS	Y0050713.D	1	09/11/18	JT	09/10/18	OP12207	GLB1603
OP12207-BSD	Y0050714.D	1	09/11/18	JT	09/10/18	OP12207	GLB1603

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	469	239	51	250	53	4	40-140/30
	Aliphatics > C12-C16 (Unadj.)	938	509	54	531	57	4	40-140/30
	Aliphatics > C16-C35 (Unadj.)	4220	2120	50	2200	52	4	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	57%	58%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12205-MS	X0050692.D	1	09/10/18	JT	09/08/18	OP12205	GLB1598
OP12205-MSD	X0050693.D	1	09/10/18	JT	09/08/18	OP12205	GLB1598
LA47417-4	X0050704.D	1	09/11/18	JT	09/08/18	OP12205	GLB1598

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	LA47417-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	ND		500	370	74	500	369	74	0	40-140/50
	Aromatics > C12-C16 (Unadj.)	ND		1500	1220	81	1500	1210	81	1	40-140/50
	Aromatics > C16-C21 (Unadj.)	ND		2500	2130	85	2500	2110	84	1	40-140/50
	Aromatics > C21-C35 (Unadj.)	ND		4000	3590	90	4000	3620	91	1	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47417-4	Limits
84-15-1	o-Terphenyl	83%	83%	88%	40-140%
321-60-8	2-Fluorobiphenyl	83%	85%	82%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47398
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12205-MS	Y0050692.D	1	09/10/18	JT	09/08/18	OP12205	GLB1599
OP12205-MSD	Y0050693.D	1	09/10/18	JT	09/08/18	OP12205	GLB1599
LA47417-4	Y0050704.D	1	09/11/18	JT	09/08/18	OP12205	GLB1599

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9

CAS No.	Compound	LA47417-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	ND		500	312	62	500	302	60	3	40-140/50
	Aliphatics > C12-C16 (Unadj.)	ND		1000	663	66	1000	643	64	3	40-140/50
	Aliphatics > C16-C35 (Unadj.)	143		4500	2810	59	4500	2730	57	3	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47417-4	Limits
3386-33-2	1-Chlorooctadecane	68%	67%	78%	40-140%

* = Outside of Control Limits.

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: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	6.9	9.3	5.9	<100
Antimony	1.0	.043	.34		
Arsenic	1.0	.062	.26	0.11	<1.0
Barium	1.0	.033	.46	-0.015	<1.0
Beryllium	1.0	.0077	.28		
Boron	20	1.3	2.9		
Cadmium	0.50	.011	.12	0.062	<0.50
Calcium	100	5.7	20	-50	<100
Cerium	1.0	.0041	.16		
Chromium	1.0	.11	.15	-0.037	<1.0
Cobalt	1.0	.012	.14		
Copper	1.0	.91	.74		
Iron	100	48	16	-24	<100
Lanthanum	1.0	.0038	.41		
Lithium	2.0	.1	.61		
Lead	1.0	.0081	.13	-0.26	<1.0
Magnesium	100	1.6	11	-5.6	<100
Manganese	2.0	.48	.53	-0.061	<2.0
Molybdenum	1.0	.048	.89		
Nickel	1.0	.037	.2		
Potassium	100	3.4	7.6	-45	<100
Selenium	5.0	.38	3.1	-0.19	<5.0
Silver	1.0	.0047	.13	0.0041	<1.0
Silicon	500	6.6	130		
Sodium	100	24	9.9	-14	<100
Strontium	2.0	.12	.27	0.054	<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	-0.62	<5.0

Associated samples MP12641: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F,

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	RL	IDL	MDL	MB raw	final

LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	LA47398-1 Original	MS	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	60200	55200	5100	-98.0(a)	75-125
Antimony					
Arsenic	18.0	107	100	89.0	75-125
Barium	13800	11300	100	-2500.0a	75-125
Beryllium					
Boron					
Cadmium	1.8	97.6	100	95.8	75-125
Calcium	27400	26300	5000	-22.0(a)	75-125
Cerium					
Chromium	113	188	100	75.0	75-125
Cobalt					
Copper					
Iron	70900	62300	5000	-172.0(a	75-125
Lanthanum					
Lithium					
Lead	40.0	122	100	82.0	75-125
Magnesium	20900	21600	5000	14.0 (a)	75-125
Manganese	1410	1230	100	-180.0(a	75-125
Molybdenum					
Nickel					
Potassium	11600	14000	5000	48.0N(b)	75-125
Selenium	8.6	487	500	95.7	75-125
Silver	0.67	95.8	100	95.1	75-125
Silicon					
Sodium	371000	302000	5000	-1380.0a	75-125
Strontium	814	749	100	-65.0(a)	75-125
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	244	288	100	44.0N(b)	75-125

Associated samples MP12641: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F,

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	LA47398-1 Original MS	Spikelot MPICPMS6 % Rec	QC Limits

LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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.
(b) Spike recovery indicates possible matrix interference or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	LA47398-1 Original	MSD	Spikelot MPICPMS6	% Rec	MSD RPD	QC Limit
Aluminum	60200	56200	5100	-78.4(a)	1.8	20
Antimony						
Arsenic	18.0	119	100	101.0	10.6	20
Barium	13800	12200	100	-1600.0a	7.7	20
Beryllium						
Boron						
Cadmium	1.8	103	100	101.2	5.4	20
Calcium	27400	28600	5000	24.0 (a)	8.4	20
Cerium						
Chromium	113	202	100	89.0	7.2	20
Cobalt						
Copper						
Iron	70900	69100	5000	-36.0(a)	10.4	20
Lanthanum						
Lithium						
Lead	40.0	127	100	87.0	4.0	20
Magnesium	20900	24100	5000	64.0 (a)	10.9	20
Manganese	1410	1370	100	-40.0(a)	10.8	20
Molybdenum						
Nickel						
Potassium	11600	14400	5000	56.0N(b)	2.8	20
Selenium	8.6	510	500	100.3	4.6	20
Silver	0.67	103	100	102.3	7.2	20
Silicon						
Sodium	371000	339000	5000	-640.0(a	11.5	20
Strontium	814	841	100	27.0 (a)	11.6	20
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	244	334	100	90.0	14.8	20

Associated samples MP12641: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F,

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	LA47398-1 Original MSD	Spikelot MPICPMS6 % Rec	MSD RPD	QC Limit

LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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.
(b) Spike recovery indicates possible matrix interference or sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/06/18

Metal	BSP Result	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	4560	5100	89.4	80-120
Antimony				
Arsenic	96.0	100	96.0	80-120
Barium	89.9	100	89.9	80-120
Beryllium				
Boron				
Cadmium	95.8	100	95.8	80-120
Calcium	4840	5000	96.8	80-120
Cerium				
Chromium	95.6	100	95.6	80-120
Cobalt				
Copper				
Iron	4900	5000	98.0	80-120
Lanthanum				
Lithium				
Lead	92.6	100	92.6	80-120
Magnesium	4750	5000	95.0	80-120
Manganese	96.7	100	96.7	80-120
Molybdenum				
Nickel				
Potassium	4850	5000	97.0	80-120
Selenium	491	500	98.2	80-120
Silver	96.3	100	96.3	80-120
Silicon				
Sodium	4800	5000	96.0	80-120
Strontium	95.6	100	95.6	80-120
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	101	100	101.0	80-120

Associated samples MP12641: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F,

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	BSP Result	Spikelot MPICPMS6 % Rec	QC Limits

LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	LA47398-1 Original	SDL 10:50%DIF		QC Limits
Aluminum	60200	46600	22.6*(a)	0-10
Antimony				
Arsenic	18.0	21.8	21.0 (b)	0-10
Barium	13800	10700	22.5*(a)	0-10
Beryllium				
Boron				
Cadmium	1.81	4.19	130.9(b)	0-10
Calcium	27400	19000	30.5*(a)	0-10
Cerium				
Chromium	113	82.3	27.4*(a)	0-10
Cobalt				
Copper				
Iron	70900	55500	21.8*(a)	0-10
Lanthanum				
Lithium				
Lead	40.0	20.7	48.3*(a)	0-10
Magnesium	20900	15900	23.9*(a)	0-10
Manganese	1410	1090	22.5*(a)	0-10
Molybdenum				
Nickel				
Potassium	11600	7230	37.7*(a)	0-10
Selenium	8.56	0.00	100.0(b)	0-10
Silver	0.669	0.754	12.7 (b)	0-10
Silicon				
Sodium	371000	285000	23.1*(a)	0-10
Strontium	814	632	22.4*(a)	0-10
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	244	174	28.4 (b)	0-10

Associated samples MP12641: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F,

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	LA47398-1 Original SDL 10:50%DIF	QC Limits

LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12641 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/06/18

Metal	Sample ml	Final ml	LA47398-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Antimony										
Beryllium										
Boron										
Cerium										
Cobalt										
Copper										
Lanthanum										
Lithium										
Molybdenum										
Nickel										
Potassium	0.2	10	11600	232	5564	0.025	2000	5000	106.6	75-125
Silicon										
Thallium										
Tin										
Titanium										
Uranium										
Vanadium										
Zinc	0.2	10	243.7	4.874	98.37	0.1	10	100	93.5	75-125

Associated samples MP12641: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F, LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12665 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/07/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.06	.081	-0.012	<0.20

Associated samples MP12665: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F, LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12665 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/07/18

Metal	LA47398-2 Original	MS	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	0.0	5.2	5	104.0	75-125

Associated samples MP12665: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F, LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12665 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/07/18

Metal	LA47398-2 Original	MSD	Spikelot HGSPIKE1	% Rec	MSD RPD	QC Limit
Mercury	0.0	5.8	5	116.0	10.9	20

Associated samples MP12665: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F, LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12665 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/07/18

Metal	BSP Result	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	5.5	5	110.0	80-120

Associated samples MP12665: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F, LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47398
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12665 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/07/18

Metal	LA47398-2 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-

Associated samples MP12665: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10, LA47398-1F, LA47398-2F, LA47398-3F, LA47398-4F, LA47398-5F, LA47398-6F, LA47398-7F, LA47398-8F, LA47398-9F, LA47398-10F

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

Misc. Forms

Custody Documents and Other Forms

(SGS Houston, TX)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS

500 Ambassador Caffery Parkway, Scott, LA 70583
Phone: 800-304-5227 Fax: 337-237-7838

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: LA47398

Client / Reporting Information

Company Name: SGS North America Inc.
Street Address: 500 Ambassador Caffery Parkway
City: Scott State: LA Zip: 70583
Project Contact: ralph.frye@sgs.com E-mail:
Phone #: 800-304-5227 Fax #:
Sampler(s) Name(s): KC/LV Phone:

Project Information

Project Name: 8060.00 Indigo-Desoto Parish, LA
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LAB USE ONLY
1	HANSON RELIEF WELL		9/4/18	10:45:00 AM	KC/LV	AQ										X
2	BILLINGSLEY RELIEF WELL		9/4/18	11:40:00 AM	KC/LV	AQ										X
3	DAVID MASON RELIEF WELL		9/4/18	2:50:00 PM	KC/LV	AQ										X
4	DENNISON RIG SUPPLY WELL		9/4/18	4:30:00 PM	KC/LV	AQ										X
5	GAMBLE RIG SUPPLY WELL		9/4/18	4:45:00 PM	KC/LV	AQ										X
6	FIELD DUPLICATE		9/4/18	4:35:00 PM	KC/LV	AQ										X
7	BRYANT POND 2'		9/5/18	11:45:00 AM	KC/LV	AQ										X
8	BRYANT POND 7'		9/5/18	11:15:00 AM	KC/LV	AQ										X
9	BRYANT POND 12'		9/5/18	10:45:00 AM	KC/LV	AQ										X
10	EQUIPMENT BLANK		9/4/18	10:40:00 AM	KC/LV	AQ										X

VERIFIED

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 9/17/2018

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C" X COMMB
- [ ] TRRP
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date Time: 9.6.18 0745	Received By: 1	Relinquished By: 2	Date Time: 9.6.18 1700	Received By: 2
Relinquished by Sampler: 3	Date Time: 9.6.18 2305	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp: 3.4

Cooler 3

Date / Time: 9/6/2018 2:28:50 PM
CSR: ralphf
Job #: LA47398
Client Project: 8060.00 Indigo-Desoto Parish, LA
Deliverable: COMMB
TAT: Due 9/17/2018

Sub Lab: SGS North America Inc. - TX
Address: 10165 Harwin Drive
City: Houston
State: TX Zip: 77036
Contact: Sample Management
Phone: (713) 692-9151

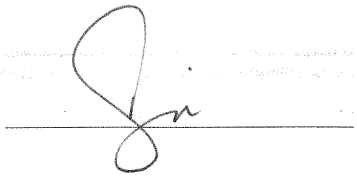
SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
LA47398-1	HANSON RELIEF WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/4/2018	10:45:00 AM	
LA47398-2	BILLINGSLEY RELIEF WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/4/2018	11:40:00 AM	
LA47398-3	DAVID MASON RELIEF WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/4/2018	2:50:00 PM	
LA47398-4	DENNISON RIG SUPPLY WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/4/2018	4:30:00 PM	
LA47398-5	GAMBLE RIG SUPPLY WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/4/2018	4:45:00 PM	
LA47398-6	FIELD DUPLICATE	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/4/2018	4:35:00 PM	
LA47398-7	BRYANT POND 2'	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/5/2018	11:45:00 AM	
LA47398-8	BRYANT POND 7'	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/5/2018	11:15:00 AM	
LA47398-9	BRYANT POND 12'	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/5/2018	10:45:00 AM	

10 - 500ml plastic unp

9.1

LA47398-10	EQUIPMENT BLANK	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS , XCARBICALK	3W2 ,3W2F ,OL ,RLX-464 VW ,RSM-9 1B-3 ,RW-3 11B4 ,	KC/LV	9/4/2018	10:40:00 AM

Comments:

Sample Management Receipt: 

Date: 9-6-18 2305

9.1

9

LA47398: Chain of Custody
Page 3 of 5

SGS Sample Receipt Summary

Job Number: LA47398 **Client:** SGS **Project:** 8060.00 INDIGO

Date / Time Received: **Delivery Method:** **Airbill #'s:**

No. Coolers: 1 **Therm ID:** IR-4; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (3.4/3.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		

Quality Control Preservation	Y	or	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☐		☐	☑	☐	☐
2. Trip Blank listed on COC:	☐		☐	☑		
3. Samples preserved properly:	☑		☐			
4. VOCs headspace free:	☐		☐	☑		

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Sample Receipt Log

Job #: LA47398 **Date / Time Received:** 9/6/2018 11:05:00 PM **Initials:** DS

Client: SGS

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	LA47398-1	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-2	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-3	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-4	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-5	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-6	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-7	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-8	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-9	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4
1	LA47398-10	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-4	3.4	0	3.4

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: LA47398
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	GN92695	5.0	2.0	mg/l				
Alkalinity, Carbonate	GN92696	5.0	0.0	mg/l				
Alkalinity, Total as CaCO3	GN92694	5.0	0.0	mg/l	100	103	103.0	90-100%
Bromide	GP49404/GN92637	0.50	0.0	mg/l	10	9.64	96.4	90-110%
Chloride	GP49406/GN92638	0.50	0.0	mg/l	10	10.2	102.0	90-110%
Silica, Dissolved	GN92737	0.070	0.0	mg/l	1.07	1.0	93.5	80-120%
Solids, Total Dissolved	GN92562	10	7.0	mg/l	500	494	98.8	88-110%
Specific Conductivity	GN92605	1.0	<1.0	umhos/cm				
Specific Conductivity	GN92606	1.0	<1.0	umhos/cm				
Sulfate	GP49404/GN92637	0.50	0.0	mg/l	10	9.66	96.6	90-110%

Associated Samples:
Batch GN92562: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92605: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9
Batch GN92606: LA47398-10
Batch GN92694: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92695: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92696: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92737: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GP49404: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GP49406: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA47398
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	GN92695	LA47398-1	mg/l	415	416	0.0	0-10%
Alkalinity, Carbonate	GN92696	LA47398-1	mg/l	4.8	4.4	0.0	0-20%
Alkalinity, Total as CaCO3	GN92694	LA47398-1	mg/l	420	420	0.0	0-10%
Bromide	GP49404/GN92637	LA47398-4	mg/l	0.78	0.79	1.3	0-19%
Chloride	GP49406/GN92638	LA47398-4	mg/l	127	127	0.0	0-13%
Silica, Dissolved	GN92737	LA47398-10	mg/l	0.0	0.0	0.0	0-20%
Solids, Total Dissolved	GN92562	LA47398-9	mg/l	298	308	2.6	0-5%
Specific Conductivity	GN92605	TD26864-1	umhos/cm	3040	3040	0.0	0-10%
Specific Conductivity	GN92606	LA47398-10	umhos/cm	1.1	1.1	0.0	0-10%
Sulfate	GP49404/GN92637	LA47398-4	mg/l	0.0	0.0	0.0	0-20%

Associated Samples:
Batch GN92562: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92605: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9
Batch GN92606: LA47398-10
Batch GN92694: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92695: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92696: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92737: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GP49404: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GP49406: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA47398
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	GN92694	LA47398-1	mg/l	420	25	445	100.0	75-117%
Bromide	GP49404/GN92637	LA47398-4	mg/l	0.78	10	10.6	98.2	80-120%
Chloride	GP49406/GN92638	LA47398-4	mg/l	127	100	251	124.0N	80-120%
Silica, Dissolved	GN92737	LA47398-10	mg/l	0.0	1.07	0.92	86.0	75-125%
Sulfate	GP49404/GN92637	LA47398-4	mg/l	0.0	10	10.2	102.0	80-120%

Associated Samples:
Batch GN92694: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GN92737: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GP49404: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
Batch GP49406: LA47398-1, LA47398-2, LA47398-3, LA47398-4, LA47398-5, LA47398-6, LA47398-7, LA47398-8, LA47398-9, LA47398-10
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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

e-Hardcopy 2.0
Automated Report

Technical Report for

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

SGS Job Number: LA47469

Sampling Dates: 09/04/18 - 09/06/18

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: **129**

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
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.

SGS is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.
Review standard terms at: http://www.sgs.com/en/terms-and-conditions

Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sections: 1 2 3 4 5 6 7 8 9 10

Table of Contents

SGS North America Inc.

Sample Summary

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

Job No: LA47469

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA47469-1	09/06/18	10:20	KC/LV	09/07/18	AQ	Water	HALEY POND 6'
LA47469-1F	09/06/18	10:20	KC/LV	09/07/18	AQ	Water Filtered	HALEY POND 6'
LA47469-2	09/06/18	10:50	KC/LV	09/07/18	AQ	Water	HALEY POND 2'
LA47469-2F	09/06/18	10:50	KC/LV	09/07/18	AQ	Water Filtered	HALEY POND 2'
LA47469-3	09/06/18	16:10	KC/LV	09/07/18	AQ	Water	LONG 1&2 RIG SUPPLY
LA47469-3F	09/06/18	16:10	KC/LV	09/07/18	AQ	Water Filtered	LONG 1&2 RIG SUPPLY
LA47469-4	09/06/18	16:20	KC/LV	09/07/18	AQ	Water	LONG 3&4 RIG SUPPLY
LA47469-4F	09/06/18	16:20	KC/LV	09/07/18	AQ	Water Filtered	LONG 3&4 RIG SUPPLY
LA47469-5	09/04/18	06:45	KC/LV	09/07/18	AQ	Trip Blank Water	TRIP BLANK
LA47469-6	09/06/18	06:45	KC/LV	09/07/18	AQ	Trip Blank Water	TRIP BLANK 2
LA47469-7	09/06/18	08:20	KC/LV	09/07/18	AQ	Field Blank Water	FIELD BLANK

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038586.D	1	09/13/18 19:32	NN	n/a	n/a	V2I1789
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		84-124%
2037-26-5	Toluene-D8	97%		83-115%
460-00-4	4-Bromofluorobenzene	94%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024633.D	1	09/15/18 17:32	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%		23-85%
4165-62-2	Phenol-d5	49%		10-69%
118-79-6	2,4,6-Tribromophenol	94%		48-138%
4165-60-0	Nitrobenzene-d5	85%		51-128%
321-60-8	2-Fluorobiphenyl	78%		55-122%
1718-51-0	Terphenyl-d14	88%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE336063.D	1	09/10/18 23:19	SV	n/a	n/a	GLE1487
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	98%		70-130%
615-59-8	2,5-Dibromotoluene	88%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: HALEY POND 6'
Lab Sample ID: LA47469-1
Matrix: AQ - Water
Method: SW846 8011 SW846 8011
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/06/18
Date Received: 09/07/18
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113200.D	1	09/12/18 01:14	DF	09/10/18 15:00	OP12220	GLK725
Run #2							

	Initial Volume	Final Volume
Run #1	35.5 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	112%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	122%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050773.D	1	09/16/18 14:30	JT	09/14/18 11:00	OP12260	GLB1608
Run #2	Y0050773.D	1	09/16/18 14:31	JT	09/14/18 11:00	OP12260	GLB1609

	Initial Volume	Final Volume
Run #1	53.7 ml	4.0 ml
Run #2	53.7 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		70%	40-140%
84-15-1	o-Terphenyl	80%		40-140%
321-60-8	2-Fluorobiphenyl	84%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
		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	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	8.73	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	3.69	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	0.0296	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	3.54	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	205	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.499	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	241	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	8.8	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	250	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/12/18 21:12	ATX	SW846 9056A
Chloride [a]	60.9	2.5	mg/l	5	09/12/18 17:49	ATX	SW846 9056A
Silica, Dissolved [a]	2.3	0.070	mg/l	1	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	507	10	mg/l	1	09/12/18	ATX	SM 2540C-2011
Specific Conductivity [b]	876	1.0	umhos/cm	1	09/11/18 17:50	ATX	EPA 120.1
Sulfate [a]	55.2	2.5	mg/l	5	09/12/18 17:49	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 6'		
Lab Sample ID:	LA47469-1F	**Date Sampled:**	09/06/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/07/18
		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	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	9.14	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	3.64	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	< 0.020	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	3.73	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	214	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.502	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0442163.D	1	09/13/18 15:13	NN	n/a	n/a	V1Q2145
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	101%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024634.D	1	09/15/18 17:56	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		23-85%
4165-62-2	Phenol-d5	48%		10-69%
118-79-6	2,4,6-Tribromophenol	92%		48-138%
4165-60-0	Nitrobenzene-d5	84%		51-128%
321-60-8	2-Fluorobiphenyl	76%		55-122%
1718-51-0	Terphenyl-d14	84%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE336064.D	1	09/10/18 23:52	SV	n/a	n/a	GLE1487
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	97%		70-130%
615-59-8	2,5-Dibromotoluene	87%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: HALEY POND 2'
Lab Sample ID: LA47469-2
Matrix: AQ - Water
Method: SW846 8011 SW846 8011
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/06/18
Date Received: 09/07/18
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113201.D	1	09/12/18 01:31	DF	09/10/18 15:00	OP12220	GLK725
Run #2							

	Initial Volume	Final Volume
Run #1	35.3 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	105%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	116%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050775.D	1	09/16/18 15:15	JT	09/14/18 11:00	OP12260	GLB1608
Run #2	Y0050775.D	1	09/16/18 15:16	JT	09/14/18 11:00	OP12260	GLB1609

	Initial Volume	Final Volume
Run #1	53.9 ml	4.0 ml
Run #2	53.9 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		75%	40-140%
84-15-1	o-Terphenyl	80%		40-140%
321-60-8	2-Fluorobiphenyl	73%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
		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	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	8.87	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	3.78	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	< 0.020	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	3.64	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	210	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.495	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	229	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	20.1	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	250	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/12/18 21:29	ATX	SW846 9056A
Chloride [a]	60.8	2.5	mg/l	5	09/12/18 18:06	ATX	SW846 9056A
Silica, Dissolved [a]	1.7	0.070	mg/l	1	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	512	10	mg/l	1	09/12/18	ATX	SM 2540C-2011
Specific Conductivity [b]	879	1.0	umhos/cm	1	09/11/18 17:50	ATX	EPA 120.1
Sulfate [a]	58.8	2.5	mg/l	5	09/12/18 18:06	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	HALEY POND 2'		
Lab Sample ID:	LA47469-2F	**Date Sampled:**	09/06/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/07/18
		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	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	9.75	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	3.94	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	< 0.020	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	3.60	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	199	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.476	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0442165.D	1	09/13/18 15:39	NN	n/a	n/a	V1Q2145
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	102%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024635.D	1	09/15/18 18:20	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%		23-85%
4165-62-2	Phenol-d5	48%		10-69%
118-79-6	2,4,6-Tribromophenol	92%		48-138%
4165-60-0	Nitrobenzene-d5	83%		51-128%
321-60-8	2-Fluorobiphenyl	77%		55-122%
1718-51-0	Terphenyl-d14	93%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE336065.D	1	09/11/18 00:24	SV	n/a	n/a	GLE1487
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	99%		70-130%
615-59-8	2,5-Dibromotoluene	88%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113202.D	1	09/12/18 01:48	DF	09/10/18 15:00	OP12220	GLK725
Run #2							

	Initial Volume	Final Volume
Run #1	34.5 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	107%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	119%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050776.D	1	09/16/18 15:38	JT	09/14/18 11:00	OP12260	GLB1608
Run #2	Y0050776.D	1	09/16/18 15:39	JT	09/14/18 11:00	OP12260	GLB1609

	Initial Volume	Final Volume
Run #1	54.0 ml	4.0 ml
Run #2	54.0 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		59%	40-140%
84-15-1	o-Terphenyl	71%		40-140%
321-60-8	2-Fluorobiphenyl	78%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: LONG 1&2 RIG SUPPLY
Lab Sample ID: LA47469-3
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/06/18
Date Received: 09/07/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	1.32	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	< 1.0	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	< 0.020	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	1.17	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	217	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.106	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 1&2 RIG SUPPLY		
Lab Sample ID:	LA47469-3	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	247	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	8.2	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	255	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/12/18 21:46	ATX	SW846 9056A
Chloride [a]	56.4	2.5	mg/l	5	09/12/18 18:23	ATX	SW846 9056A
Silica, Dissolved [a]	9.0	0.35	mg/l	5	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	490	10	mg/l	1	09/12/18	ATX	SM 2540C-2011
Specific Conductivity [b]	857	1.0	umhos/cm	1	09/11/18 17:50	ATX	EPA 120.1
Sulfate [a]	41.7	2.5	mg/l	5	09/12/18 18:23	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

SGS North America Inc.

Report of Analysis

Client Sample ID: LONG 1&2 RIG SUPPLY
Lab Sample ID: LA47469-3F
Matrix: AQ - Water Filtered
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/06/18
Date Received: 09/07/18
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	1.23	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	< 1.0	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	< 0.020	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	199	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.0975	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0442167.D	1	09/13/18 16:05	NN	n/a	n/a	V1Q2145
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		84-124%
2037-26-5	Toluene-D8	103%		83-115%
460-00-4	4-Bromofluorobenzene	101%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024636.D	1	09/15/18 18:43	PC	09/11/18 08:00	OP12226	EA634
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	54%		23-85%
4165-62-2	Phenol-d5	42%		10-69%
118-79-6	2,4,6-Tribromophenol	83%		48-138%
4165-60-0	Nitrobenzene-d5	73%		51-128%
321-60-8	2-Fluorobiphenyl	70%		55-122%
1718-51-0	Terphenyl-d14	84%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE336066.D	1	09/11/18 00:57	SV	n/a	n/a	GLE1487
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	101%		70-130%
615-59-8	2,5-Dibromotoluene	89%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113203.D	1	09/12/18 02:05	DF	09/10/18 15:00	OP12220	GLK725
Run #2							

	Initial Volume	Final Volume
Run #1	35.0 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	104%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	120%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050777.D	1	09/16/18 16:01	JT	09/14/18 11:00	OP12260	GLB1608
Run #2	Y0050777.D	1	09/16/18 16:02	JT	09/14/18 11:00	OP12260	GLB1609

	Initial Volume	Final Volume
Run #1	54.5 ml	4.0 ml
Run #2	54.5 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		48%	40-140%
84-15-1	o-Terphenyl	64%		40-140%
321-60-8	2-Fluorobiphenyl	80%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: LONG 3&4 RIG SUPPLY
Lab Sample ID: LA47469-4
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/06/18
Date Received: 09/07/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	1.46	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	< 1.0	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	< 0.020	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	1.01	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	185	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.122	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	LONG 3&4 RIG SUPPLY		
Lab Sample ID:	LA47469-4	**Date Sampled:**	09/06/18
Matrix:	AQ - Water	**Date Received:**	09/07/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	264	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Carbonate [a]	10.4	5.0	mg/l	1	09/12/18 17:40	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	275	5.0	mg/l	1	09/12/18 17:40	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/12/18 22:03	ATX	SW846 9056A
Chloride [a]	44.6	2.5	mg/l	5	09/12/18 18:40	ATX	SW846 9056A
Silica, Dissolved [a]	10.9	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	445	10	mg/l	1	09/12/18	ATX	SM 2540C-2011
Specific Conductivity [b]	778	1.0	umhos/cm	1	09/11/18 17:50	ATX	EPA 120.1
Sulfate [a]	6.8	0.50	mg/l	1	09/12/18 22:03	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

SGS North America Inc.

Report of Analysis

Client Sample ID: LONG 3&4 RIG SUPPLY
Lab Sample ID: LA47469-4F
Matrix: AQ - Water Filtered
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/06/18
Date Received: 09/07/18
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Arsenic	< 0.010	0.010	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Barium [a]	< 2.0	2.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Cadmium	< 0.0050	0.0050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Calcium	1.37	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Chromium [a]	< 0.10	0.10	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Iron	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Lead [a]	< 0.015	0.015	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Magnesium	< 1.0	1.0	mg/l	10	09/10/18	09/12/18	RT	SW846 6020A [3]	SW846 3010A [4]
Manganese	< 0.020	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/11/18	09/11/18	SA	SW846 7470A [2]	SW846 7470A [5]
Potassium	< 1.0	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Selenium	< 0.050	0.050	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Silver [a]	< 0.018	0.018	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Sodium	184	1.0	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Strontium	0.108	0.020	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]
Zinc [a]	< 1.1	1.1	mg/l	10	09/10/18	09/10/18	RT	SW846 6020A [1]	SW846 3010A [4]

(1) Instrument QC Batch: MA13318
(2) Instrument QC Batch: MA13329
(3) Instrument QC Batch: MA13335
(4) Prep QC Batch: MP12676
(5) Prep QC Batch: MP12683

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47469-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038507.D	1	09/12/18 20:43	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47469-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	104%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47469-5	**Date Sampled:**	09/04/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/07/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LE336062.D	1	09/10/18 22:46	SV	n/a	n/a	GLE1487
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	101%		70-130%
615-59-8	2,5-Dibromotoluene	91%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47469-6	**Date Sampled:**	09/06/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1J0054614.D	1	09/11/18 17:09	NN	n/a	n/a	V1J1456
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47469-6	**Date Sampled:**	09/06/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	97%		84-124%
2037-26-5	Toluene-D8	95%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK 2		
Lab Sample ID:	LA47469-6	**Date Sampled:**	09/06/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/07/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379919.D	1	09/10/18 19:46	MB	n/a	n/a	GLC1821
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	86%		70-130%
615-59-8	2,5-Dibromotoluene	74%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47469-7	**Date Sampled:**	09/06/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1I038505.D	1	09/12/18 20:15	NN	n/a	n/a	V1I1787
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47469-7	**Date Sampled:**	09/06/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/07/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47469-7	**Date Sampled:**	09/06/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/07/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC379920.D	1	09/10/18 20:26	MB	n/a	n/a	GLC1821
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	87%		70-130%
615-59-8	2,5-Dibromotoluene	75%		70-130%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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

LA47469

SAMPLE CHAIN-OF-CUSTODY RECORD

Project Name:	Indigo	*Laboratory:*	SGS Lafayette
Project Number:	8060.00	*Collected By:*	KC/LV/MJ
Project Location:	DeSoto Parish, Louisiana	*Company:*	Hydro-Environmental Technology, Inc.
		Date:	9/6/2018

	Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments	
1	Haley Pond 6'	AQ	9/6/2018	10:20	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
2	Haley Pond 2'	AQ	9/6/2018	10:50	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
3	Long 1&2 Rig Supply	AQ	9/6/2018	16:10	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
4	Long 3&4 Rig Supply	AQ	9/6/2018	16:20	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
5	Trip Blank	AQ	9/4/2018	6:45	(6) 40mL Glass HCl	VOC 8260, VPH	4°C	6

*Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, strontium, zinc
*Cations: aluminum, calcium, iron, magnesium, manganese, potassium, sodium
*Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity

Relinquished By:	[signature]	Relinquished By:	[signature]
Date/Time:	9/7/18 1525	Date/Time:	09/7/18 1525
Relinquished By:		Relinquished By:	
Date/Time:		Date/Time:	
Analysis Due: Verbal:		Written:	

(Sonicate(2.4/2.5 DW441) client 16, RSM 21(W), RRM-76 (BOD) WS-1118(11C4) @ 3WD, Plex(3WD) Above.

Page 1 of 2

LA47469: Chain of Custody
Page 1 of 3

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

LA47469

SAMPLE CHAIN-OF-CUSTODY RECORD

		Laboratory:	SGS Lafayette
Project Name:	Indigo	*Collected By:*	KC/LV/MJ
Project Number:	8060.00	*Company:*	Hydro-Environmental Technology, Inc.
Project Location:	DeSoto Parish, Louisiana	*Date:*	9/6/2018

Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments
Trip Blank 2	AQ	9/6/2018	6:45	(6) 40mL Glass HCl	VOC 8260, VPH	4°C
Field Blank	AQ	9/6/2018	8:20	(6) 40mL Glass HCl	VOC 8260, VPH	4°C

*Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, strontium, zinc
*Cations: aluminum, calcium, iron, magnesium, manganese, potassium, sodium
*Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity

Relinquished By:	Relinquished By:
Date/Time: 9/6/18 1525	Date/Time: 09/5/18 1525
Relinquished By:	Relinquished By:
Date/Time:	Date/Time:
Analysis Due: Verbal:	Written:

Page 2 of 2

LA47469: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: LA47469 **Client:** HYDRO **Project:** INDIGO

Date / Time Received: 9/7/2018 3:25:00 PM **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (2.4/2.4); #2: (2.5/2.5);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	DV439;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	2		

Quality Control _Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1J1456-MB2	1J0054610.D	1	09/11/18	NN	n/a	n/a	V1J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-6

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	1.8	50	ug/l	J
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide	ND	1.0	ug/l	
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	0.44	1.0	ug/l	J
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1J1456-MB2	1J0054610.D	1	09/11/18	NN	n/a	n/a	V1J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-6

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	93%	84-124%
2037-26-5	Toluene-D8	99%	83-115%
460-00-4	4-Bromofluorobenzene	99%	89-111%

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-MB2	1I038489.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-5, LA47469-7

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	2.0	50	ug/l	J
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide	ND	1.0	ug/l	
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-MB2	1I038489.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-5, LA47469-7

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	94%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	98%	89-111%

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1789-MB2	2I038552.D	1	09/13/18	NN	n/a	n/a	V2I1789

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-1

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide [a]	1.1	1.0	ug/l	
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1789-MB2	2I038552.D	1	09/13/18	NN	n/a	n/a	V2I1789

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-1

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	99%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	94%	89-111%

(a) Compound not detected in samples at less than 10 times the hit in the blank.

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2145-MB2	1Q0442151.D	1	09/13/18	NN	n/a	n/a	V1Q2145

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	0.23	1.0	ug/l	J
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	0.26	1.0	ug/l	J
95-50-1	o-Dichlorobenzene	0.34	1.0	ug/l	J
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene [a]	0.53	1.0	ug/l	J
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide [a]	0.58	1.0	ug/l	J
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene [a]	0.79	1.0	ug/l	J
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2145-MB2	1Q0442151.D	1	09/13/18	NN	n/a	n/a	V1Q2145

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	107%	84-124%
2037-26-5	Toluene-D8	102%	83-115%
460-00-4	4-Bromofluorobenzene	101%	89-111%

(a) Compound not detected in samples at less than 10 times the hit in the blank.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1J1456-BS1	1J0054604.D	1	09/11/18	NN	n/a	n/a	V1J1456
V1J1456-BSD1	1J0054606.D	1	09/11/18	NN	n/a	n/a	V1J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	46.0	92	45.4	91	1	38-178/30
71-43-2	Benzene	20	19.7	99	18.6	93	6	82-119/30
75-27-4	Bromodichloromethane	20	20.8	104	20.3	102	2	79-120/30
75-25-2	Bromoform	20	17.9	90	17.7	89	1	68-128/30
75-15-0	Carbon Disulfide	20	22.2	111	21.4	107	4	64-133/30
56-23-5	Carbon Tetrachloride	20	20.4	102	19.4	97	5	69-132/30
108-90-7	Chlorobenzene	20	19.7	99	19.5	98	1	85-120/30
75-00-3	Chloroethane	20	19.5	98	18.7	94	4	33-170/30
67-66-3	Chloroform	20	19.6	98	18.5	93	6	80-122/30
124-48-1	Dibromochloromethane	20	18.0	90	17.8	89	1	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	17.9	90	17.7	89	1	67-131/30
541-73-1	m-Dichlorobenzene	20	19.9	100	19.0	95	5	84-121/30
95-50-1	o-Dichlorobenzene	20	20.4	102	20.4	102	0	83-120/30
106-46-7	p-Dichlorobenzene	20	20.2	101	19.2	96	5	83-122/30
75-34-3	1,1-Dichloroethane	20	19.4	97	18.5	93	5	78-124/30
107-06-2	1,2-Dichloroethane	20	19.5	98	19.0	95	3	74-127/30
75-35-4	1,1-Dichloroethylene	20	19.3	97	18.3	92	5	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	20.1	101	19.3	97	4	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	20.1	101	19.3	97	4	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	40.2	101	38.6	97	4	78-123/30
78-87-5	1,2-Dichloropropane	20	18.5	93	17.6	88	5	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	21.0	105	20.1	101	4	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	21.2	106	20.2	101	5	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	42.2	106	40.3	101	5	50-150/30 [a]
100-41-4	Ethylbenzene	20	20.5	103	19.5	98	5	84-117/30
67-72-1	Hexachloroethane	20	19.4	97	18.3	92	6	53-141/30
78-83-1	Isobutyl Alcohol	200	180	90	182	91	1	20-175/30
74-83-9	Methyl Bromide	20	18.7	94	17.5	88	7	37-198/30
74-87-3	Methyl Chloride	20	18.3	92	17.4	87	5	50-136/30
75-09-2	Methylene Chloride	20	19.8	99	18.7	94	6	71-130/30
78-93-3	Methyl Ethyl Ketone	50	46.4	93	45.6	91	2	59-149/30
108-10-1	4-Methyl-2-pentanone	50	48.5	97	48.1	96	1	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	20.6	103	20.9	105	1	70-126/30
100-42-5	Styrene	20	21.2	106	20.8	104	2	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	20.3	102	20.5	103	1	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	19.7	99	19.3	97	2	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1J1456-BS1	1J0054604.D	1	09/11/18	NN	n/a	n/a	V1J1456
V1J1456-BSD1	1J0054606.D	1	09/11/18	NN	n/a	n/a	V1J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	20.5	103	18.7	94	9	75-133/30
108-88-3	Toluene	20	19.6	98	18.7	94	5	80-121/30
71-55-6	1,1,1-Trichloroethane	20	19.7	99	19.2	96	3	74-126/30
79-00-5	1,1,2-Trichloroethane	20	20.5	103	19.2	96	7	80-123/30
79-01-6	Trichloroethylene	20	20.2	101	18.9	95	7	62-125/30
75-69-4	Trichlorofluoromethane	20	20.1	101	19.3	97	4	62-148/30
75-01-4	Vinyl Chloride	20	19.5	98	18.4	92	6	67-130/30
	m,p-Xylene	40	40.4	101	39.9	100	1	82-121/30
95-47-6	o-Xylene	20	21.8	109	21.1	106	3	84-119/30
1330-20-7	Xylene (total)	60	62.3	104	60.9	102	2	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	96%	84-124%
2037-26-5	Toluene-D8	100%	98%	83-115%
460-00-4	4-Bromofluorobenzene	101%	101%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-BS1	1I038483.D	1	09/12/18	NN	n/a	n/a	V1I1787
V1I1787-BSD1	1I038485.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-5, LA47469-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	48.2	96	49.0	98	2	38-178/30
71-43-2	Benzene	20	19.9	100	19.0	95	5	82-119/30
75-27-4	Bromodichloromethane	20	20.0	100	19.2	96	4	79-120/30
75-25-2	Bromoform	20	17.2	86	17.8	89	3	68-128/30
75-15-0	Carbon Disulfide	20	21.2	106	20.3	102	4	64-133/30
56-23-5	Carbon Tetrachloride	20	18.9	95	18.3	92	3	69-132/30
108-90-7	Chlorobenzene	20	20.3	102	20.1	101	1	85-120/30
75-00-3	Chloroethane	20	22.6	113	21.6	108	5	33-170/30
67-66-3	Chloroform	20	19.4	97	18.7	94	4	80-122/30
124-48-1	Dibromochloromethane	20	18.1	91	18.4	92	2	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	17.1	86	17.3	87	1	67-131/30
541-73-1	m-Dichlorobenzene	20	20.1	101	19.8	99	2	84-121/30
95-50-1	o-Dichlorobenzene	20	20.0	100	19.7	99	2	83-120/30
106-46-7	p-Dichlorobenzene	20	19.1	96	19.0	95	1	83-122/30
75-34-3	1,1-Dichloroethane	20	17.8	89	19.1	96	7	78-124/30
107-06-2	1,2-Dichloroethane	20	19.1	96	18.7	94	2	74-127/30
75-35-4	1,1-Dichloroethylene	20	19.3	97	18.9	95	2	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	19.7	99	19.2	96	3	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	19.9	100	18.8	94	6	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	39.7	99	38.1	95	4	78-123/30
78-87-5	1,2-Dichloropropane	20	20.2	101	19.9	100	1	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.3	102	19.3	97	5	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	19.7	99	19.5	98	1	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	40.0	100	38.8	97	3	50-150/30 [a]
100-41-4	Ethylbenzene	20	19.3	97	19.3	97	0	84-117/30
67-72-1	Hexachloroethane	20	20.4	102	19.6	98	4	53-141/30
78-83-1	Isobutyl Alcohol	200	178	89	180	90	1	20-175/30
74-83-9	Methyl Bromide	20	22.5	113	20.7	104	8	37-198/30
74-87-3	Methyl Chloride	20	20.7	104	20.1	101	3	50-136/30
75-09-2	Methylene Chloride	20	21.1	106	20.6	103	2	71-130/30
78-93-3	Methyl Ethyl Ketone	50	46.8	94	46.3	93	1	59-149/30
108-10-1	4-Methyl-2-pentanone	50	48.3	97	48.5	97	0	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	18.7	94	18.4	92	2	70-126/30
100-42-5	Styrene	20	21.5	108	21.2	106	1	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	19.7	99	19.5	98	1	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	18.7	94	18.5	93	1	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1I1787-BS1	1I038483.D	1	09/12/18	NN	n/a	n/a	V1I1787
V1I1787-BSD1	1I038485.D	1	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-5, LA47469-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	19.4	97	18.4	92	5	75-133/30
108-88-3	Toluene	20	19.4	97	18.8	94	3	80-121/30
71-55-6	1,1,1-Trichloroethane	20	19.5	98	19.0	95	3	74-126/30
79-00-5	1,1,2-Trichloroethane	20	18.3	92	18.9	95	3	80-123/30
79-01-6	Trichloroethylene	20	20.2	101	19.8	99	2	62-125/30
75-69-4	Trichlorofluoromethane	20	19.0	95	18.3	92	4	62-148/30
75-01-4	Vinyl Chloride	20	20.9	105	20.0	100	4	67-130/30
	m,p-Xylene	40	39.2	98	38.5	96	2	82-121/30
95-47-6	o-Xylene	20	19.7	99	19.5	98	1	84-119/30
1330-20-7	Xylene (total)	60	58.9	98	58.0	97	2	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	92%	92%	84-124%
2037-26-5	Toluene-D8	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	96%	98%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1789-BS1	2I038546.D	1	09/13/18	NN	n/a	n/a	V2I1789
V2I1789-BSD1	2I038548.D	1	09/13/18	NN	n/a	n/a	V2I1789

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	53.3	107	55.0	110	3	38-178/30
71-43-2	Benzene	20	20.4	102	20.4	102	0	82-119/30
75-27-4	Bromodichloromethane	20	19.6	98	20.0	100	2	79-120/30
75-25-2	Bromoform	20	17.4	87	17.7	89	2	68-128/30
75-15-0	Carbon Disulfide	20	21.1	106	21.5	108	2	64-133/30
56-23-5	Carbon Tetrachloride	20	19.3	97	19.4	97	1	69-132/30
108-90-7	Chlorobenzene	20	20.3	102	20.7	104	2	85-120/30
75-00-3	Chloroethane	20	18.5	93	19.4	97	5	33-170/30
67-66-3	Chloroform	20	19.3	97	19.7	99	2	80-122/30
124-48-1	Dibromochloromethane	20	18.3	92	18.9	95	3	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	16.8	84	18.1	91	7	67-131/30
541-73-1	m-Dichlorobenzene	20	19.0	95	20.2	101	6	84-121/30
95-50-1	o-Dichlorobenzene	20	19.1	96	19.7	99	3	83-120/30
106-46-7	p-Dichlorobenzene	20	19.0	95	20.0	100	5	83-122/30
75-34-3	1,1-Dichloroethane	20	18.7	94	18.9	95	1	78-124/30
107-06-2	1,2-Dichloroethane	20	18.6	93	18.5	93	1	74-127/30
75-35-4	1,1-Dichloroethylene	20	19.8	99	19.9	100	1	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	20.6	103	20.7	104	0	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	19.9	100	20.1	101	1	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	40.5	101	40.9	102	1	78-123/30
78-87-5	1,2-Dichloropropane	20	20.7	104	20.5	103	1	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.2	101	21.0	105	4	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	20.2	101	20.1	101	0	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	40.4	101	41.1	103	2	50-150/30 [a]
100-41-4	Ethylbenzene	20	20.2	101	20.3	102	0	84-117/30
67-72-1	Hexachloroethane	20	17.5	88	18.4	92	5	53-141/30
78-83-1	Isobutyl Alcohol	200	175	88	181	91	3	20-175/30
74-83-9	Methyl Bromide	20	19.1	96	19.6	98	3	37-198/30
74-87-3	Methyl Chloride	20	19.8	99	20.3	102	2	50-136/30
75-09-2	Methylene Chloride	20	21.4	107	21.5	108	0	71-130/30
78-93-3	Methyl Ethyl Ketone	50	48.2	96	49.5	99	3	59-149/30
108-10-1	4-Methyl-2-pentanone	50	48.4	97	49.3	99	2	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	19.1	96	19.3	97	1	70-126/30
100-42-5	Styrene	20	21.1	106	21.6	108	2	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	20.0	100	20.4	102	2	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	19.2	96	19.5	98	2	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1789-BS1	2I038546.D	1	09/13/18	NN	n/a	n/a	V2I1789
V2I1789-BSD1	2I038548.D	1	09/13/18	NN	n/a	n/a	V2I1789

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	19.8	99	20.3	102	2	75-133/30
108-88-3	Toluene	20	19.7	99	20.0	100	2	80-121/30
71-55-6	1,1,1-Trichloroethane	20	19.3	97	19.8	99	3	74-126/30
79-00-5	1,1,2-Trichloroethane	20	19.7	99	19.9	100	1	80-123/30
79-01-6	Trichloroethylene	20	19.5	98	19.7	99	1	62-125/30
75-69-4	Trichlorofluoromethane	20	19.4	97	19.5	98	1	62-148/30
75-01-4	Vinyl Chloride	20	19.2	96	19.3	97	1	67-130/30
	m,p-Xylene	40	40.6	102	41.2	103	1	82-121/30
95-47-6	o-Xylene	20	20.0	100	20.5	103	2	84-119/30
1330-20-7	Xylene (total)	60	60.7	101	61.7	103	2	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	94%	93%	84-124%
2037-26-5	Toluene-D8	99%	99%	83-115%
460-00-4	4-Bromofluorobenzene	99%	99%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2145-BS1	1Q0442145.D	1	09/13/18	NN	n/a	n/a	V1Q2145
V1Q2145-BSD1	1Q0442147.D	1	09/13/18	NN	n/a	n/a	V1Q2145

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	70.3	141	82.6	165	16	38-178/30
71-43-2	Benzene	20	18.5	93	20.2	101	9	82-119/30
75-27-4	Bromodichloromethane	20	18.9	95	20.2	101	7	79-120/30
75-25-2	Bromoform	20	16.6	83	18.4	92	10	68-128/30
75-15-0	Carbon Disulfide	20	19.8	99	21.0	105	6	64-133/30
56-23-5	Carbon Tetrachloride	20	19.3	97	20.6	103	7	69-132/30
108-90-7	Chlorobenzene	20	18.6	93	19.9	100	7	85-120/30
75-00-3	Chloroethane	20	19.2	96	20.1	101	5	33-170/30
67-66-3	Chloroform	20	19.8	99	20.9	105	5	80-122/30
124-48-1	Dibromochloromethane	20	17.6	88	19.3	97	9	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	18.0	90	19.0	95	5	67-131/30
541-73-1	m-Dichlorobenzene	20	17.8	89	18.7	94	5	84-121/30
95-50-1	o-Dichlorobenzene	20	18.8	94	20.0	100	6	83-120/30
106-46-7	p-Dichlorobenzene	20	18.4	92	19.6	98	6	83-122/30
75-34-3	1,1-Dichloroethane	20	19.1	96	20.2	101	6	78-124/30
107-06-2	1,2-Dichloroethane	20	19.5	98	21.1	106	8	74-127/30
75-35-4	1,1-Dichloroethylene	20	19.6	98	19.8	99	1	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	18.9	95	20.8	104	10	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	21.0	105	22.6	113	7	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	39.9	100	43.3	108	8	78-123/30
78-87-5	1,2-Dichloropropane	20	18.4	92	20.8	104	12	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	18.3	92	20.6	103	12	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	17.3	87	19.4	97	11	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	35.6	89	40.0	100	12	50-150/30 [a]
100-41-4	Ethylbenzene	20	19.0	95	20.7	104	9	84-117/30
67-72-1	Hexachloroethane	20	19.0	95	19.6	98	3	53-141/30
78-83-1	Isobutyl Alcohol	200	195	98	225	113	14	20-175/30
74-83-9	Methyl Bromide	20	20.2	101	21.6	108	7	37-198/30
74-87-3	Methyl Chloride	20	19.5	98	20.8	104	6	50-136/30
75-09-2	Methylene Chloride	20	20.2	101	22.1	111	9	71-130/30
78-93-3	Methyl Ethyl Ketone	50	55.5	111	66.3	133	18	59-149/30
108-10-1	4-Methyl-2-pentanone	50	46.0	92	53.2	106	15	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	19.1	96	20.9	105	9	70-126/30
100-42-5	Styrene	20	20.2	101	20.4	102	1	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	18.0	90	19.3	97	7	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	17.2	86	19.6	98	13	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q2145-BS1	1Q0442145.D	1	09/13/18	NN	n/a	n/a	V1Q2145
V1Q2145-BSD1	1Q0442147.D	1	09/13/18	NN	n/a	n/a	V1Q2145

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	19.2	96	20.0	100	4	75-133/30
108-88-3	Toluene	20	18.4	92	19.9	100	8	80-121/30
71-55-6	1,1,1-Trichloroethane	20	20.5	103	21.9	110	7	74-126/30
79-00-5	1,1,2-Trichloroethane	20	16.4	82	18.9	95	14	80-123/30
79-01-6	Trichloroethylene	20	20.6	103	21.9	110	6	62-125/30
75-69-4	Trichlorofluoromethane	20	19.6	98	20.7	104	5	62-148/30
75-01-4	Vinyl Chloride	20	20.6	103	21.8	109	6	67-130/30
	m,p-Xylene	40	38.9	97	42.2	106	8	82-121/30
95-47-6	o-Xylene	20	19.4	97	20.9	105	7	84-119/30
1330-20-7	Xylene (total)	60	58.3	97	63.2	105	8	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	106%	84-124%
2037-26-5	Toluene-D8	101%	102%	83-115%
460-00-4	4-Bromofluorobenzene	103%	104%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-19MS	1J0054652.D	2	09/12/18	NN	n/a	n/a	V1J1456
LA47472-19MSD	1J0054654.D	2	09/12/18	NN	n/a	n/a	V1J1456
LA47472-19	1J0054650.D	2	09/12/18	NN	n/a	n/a	V1J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-6

CAS No.	Compound	LA47472-19 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	3.7		100	64.9	61	100	59.5	56	9	39-164/27
71-43-2	Benzene	58.0		40	63.5	14*	40	62.9	12*	1	31-161/15
75-27-4	Bromodichloromethane	ND		40	40.7	102	40	41.5	104	2	64-122/36
75-25-2	Bromoform	ND		40	34.7	87	40	37.8	95	9	43-125/37
75-15-0	Carbon Disulfide	ND		40	39.4	99	40	38.9	97	1	38-138/36
56-23-5	Carbon Tetrachloride	ND		40	37.3	93	40	38.0	95	2	53-133/36
108-90-7	Chlorobenzene	ND		40	41.1	103	40	39.7	99	3	74-122/34
75-00-3	Chloroethane	ND		40	44.6	112	40	36.2	91	21	14-181/43
67-66-3	Chloroform	ND		40	37.0	93	40	35.2	88	5	65-130/24
124-48-1	Dibromochloromethane	ND		40	36.3	91	40	37.9	95	4	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		40	38.6	97	40	40.5	101	5	46-135/25
541-73-1	m-Dichlorobenzene	ND		40	39.1	98	40	38.1	95	3	70-120/35
95-50-1	o-Dichlorobenzene	ND		40	41.5	104	40	41.2	103	1	72-120/35
106-46-7	p-Dichlorobenzene	ND		40	40.2	101	40	39.4	99	2	68-120/35
75-34-3	1,1-Dichloroethane	ND		40	36.8	92	40	35.2	88	4	56-138/32
107-06-2	1,2-Dichloroethane	ND		40	38.1	95	40	38.3	96	1	51-141/39
75-35-4	1,1-Dichloroethylene	ND		40	37.9	95	40	36.8	92	3	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		40	37.8	95	40	38.2	96	1	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		40	36.1	90	40	36.1	90	0	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		80	74.0	93	80	74.2	93	0	54-134/30
78-87-5	1,2-Dichloropropane	ND		40	36.3	91	40	35.2	88	3	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		40	39.8	100	40	38.0	95	5	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		40	40.5	101	40	42.4	106	5	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		80	80.3	100	80	80.5	101	0	50-150/30 [a]
100-41-4	Ethylbenzene	137		40	103	-85* [b]	40	101	-90* [b]	2	47-146/30
67-72-1	Hexachloroethane	ND		40	39.0	98	40	34.6	87	12	32-128/39
78-83-1	Isobutyl Alcohol	ND		400	392	98	400	466	117	17	33-142/54
74-83-9	Methyl Bromide	ND		40	34.4	86	40	31.4	79	9	1-150/64
74-87-3	Methyl Chloride	ND		40	33.9	85	40	34.5	86	2	16-146/29
75-09-2	Methylene Chloride	ND		40	35.1	88	40	38.2	96	8	55-134/36
78-93-3	Methyl Ethyl Ketone	ND		100	94.5	95	100	81.4	81	15	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		100	108	108	100	107	107	1	60-140/40
1634-04-4	Methyl Tert Butyl Ether	0.51		40	38.8	96	40	39.3	97	1	52-146/32
100-42-5	Styrene	ND		40	43.4	109	40	43.2	108	0	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		40	41.3	103	40	41.5	104	0	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		40	46.1	115	40	45.2	113	2	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-19MS	1J0054652.D	2	09/12/18	NN	n/a	n/a	V1J1456
LA47472-19MSD	1J0054654.D	2	09/12/18	NN	n/a	n/a	V1J1456
LA47472-19	1J0054650.D	2	09/12/18	NN	n/a	n/a	V1J1456

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-6

CAS No.	Compound	LA47472-19 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		40	39.1	98	40	40.0	100	2	58-135/37
108-88-3	Toluene	42.8		40	58.0	38	40	57.3	36	1	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		40	38.2	96	40	38.0	95	1	63-128/36
79-00-5	1,1,2-Trichloroethane	ND		40	40.5	101	40	41.1	103	1	61-138/17
79-01-6	Trichloroethylene	ND		40	36.1	90	40	35.0	88	3	57-131/36
75-69-4	Trichlorofluoromethane	ND		40	36.6	92	40	36.8	92	1	31-156/36
75-01-4	Vinyl Chloride	ND		40	35.1	88	40	35.3	88	1	22-155/49
	m,p-Xylene	456		80	291	-206* [b]	80	288	-210* [b]	1	35-159/31
95-47-6	o-Xylene	253		40	159	-235* [b]	40	156	-243* [b]	2	50-144/35
1330-20-7	Xylene (total)	710		120	450	-217* [b]	120	444	-222* [b]	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47472-19	Limits
17060-07-0	1,2-Dichloroethane-D4	92%	96%	94%	84-124%
2037-26-5	Toluene-D8	96%	98%	99%	83-115%
460-00-4	4-Bromofluorobenzene	102%	100%	98%	89-111%

(a) Advisory control limits.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-4MS	1I038525.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4MSD	1I038527.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4	1I038521.D	5	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-5, LA47469-7

CAS No.	Compound	LA47472-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	14.9		500	339	65	500	353	68	4	39-164/27
71-43-2	Benzene	199		200	394	98	200	401	101	2	31-161/15
75-27-4	Bromodichloromethane	ND		200	190	95	200	188	94	1	64-122/36
75-25-2	Bromoform	ND		200	159	80	200	160	80	1	43-125/37
75-15-0	Carbon Disulfide	ND		200	205	103	200	204	102	0	38-138/36
56-23-5	Carbon Tetrachloride	ND		200	187	94	200	185	93	1	53-133/36
108-90-7	Chlorobenzene	ND		200	203	102	200	202	101	0	74-122/34
75-00-3	Chloroethane	ND		200	303	152	200	222	111	31	14-181/43
67-66-3	Chloroform	1.5		200	184	91	200	185	92	1	65-130/24
124-48-1	Dibromochloromethane	ND		200	175	88	200	179	90	2	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		200	162	81	200	166	83	2	46-135/25
541-73-1	m-Dichlorobenzene	ND		200	191	96	200	189	95	1	70-120/35
95-50-1	o-Dichlorobenzene	ND		200	187	94	200	185	93	1	72-120/35
106-46-7	p-Dichlorobenzene	ND		200	184	92	200	179	90	3	68-120/35
75-34-3	1,1-Dichloroethane	ND		200	198	99	200	193	97	3	56-138/32
107-06-2	1,2-Dichloroethane	ND		200	191	96	200	192	96	1	51-141/39
75-35-4	1,1-Dichloroethylene	ND		200	194	97	200	193	97	1	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		200	197	99	200	193	97	2	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		200	195	98	200	197	99	1	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		400	391	98	400	390	98	0	54-134/30
78-87-5	1,2-Dichloropropane	1.8		200	200	99	200	203	101	1	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		200	184	92	200	185	93	1	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		200	185	93	200	183	92	1	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		400	368	92	400	369	92	0	50-150/30 [a]
100-41-4	Ethylbenzene	433		200	636	102	200	637	102	0	47-146/30
67-72-1	Hexachloroethane	ND		200	168	84	200	173	87	3	32-128/39
78-83-1	Isobutyl Alcohol	154		2000	1330	59	2000	1380	61	4	33-142/54
74-83-9	Methyl Bromide	ND		200	121	61	200	113	57	7	1-150/64
74-87-3	Methyl Chloride	1.6		200	171	85	200	171	85	0	16-146/29
75-09-2	Methylene Chloride	ND		200	205	103	200	205	103	0	55-134/36
78-93-3	Methyl Ethyl Ketone	11.9		500	405	79	500	416	81	3	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		500	468	94	500	477	95	2	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		200	183	92	200	183	92	0	52-146/32
100-42-5	Styrene	ND		200	207	104	200	210	105	1	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		200	185	93	200	193	97	4	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	188	94	200	185	93	2	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47472-4MS	1I038525.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4MSD	1I038527.D	10	09/13/18	NN	n/a	n/a	V1I1787
LA47472-4	1I038521.D	5	09/12/18	NN	n/a	n/a	V1I1787

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-5, LA47469-7

CAS No.	Compound	LA47472-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		200	190	95	200	191	96	1	58-135/37
108-88-3	Toluene	40.2		200	229	94	200	234	97	2	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		200	188	94	200	189	95	1	63-128/36
79-00-5	1,1,2-Trichloroethane	1.3		200	181	90	200	186	92	3	61-138/17
79-01-6	Trichloroethylene	ND		200	185	93	200	186	93	1	57-131/36
75-69-4	Trichlorofluoromethane	ND		200	171	86	200	169	85	1	31-156/36
75-01-4	Vinyl Chloride	ND		200	181	91	200	180	90	1	22-155/49
	m,p-Xylene	835		400	1240	101	400	1240	101	0	35-159/31
95-47-6	o-Xylene	36.4		200	233	98	200	232	98	0	50-144/35
1330-20-7	Xylene (total)	871		600	1470	100	600	1480	102	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47472-4	Limits
17060-07-0	1,2-Dichloroethane-D4	91%	92%	92%	84-124%
2037-26-5	Toluene-D8	99%	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	96%	98%	97%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47605-1MS	1Q0442173.D	100	09/13/18	NN	n/a	n/a	V1Q2145
LA47605-1MSD	1Q0442175.D	100	09/13/18	NN	n/a	n/a	V1Q2145
LA47605-1	1Q0442169.D	100	09/13/18	NN	n/a	n/a	V1Q2145

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	LA47605-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		5000	7840	157	5000	7750	155	1	39-164/27
71-43-2	Benzene	ND		2000	2040	102	2000	2090	105	2	31-161/15
75-27-4	Bromodichloromethane	ND		2000	2060	103	2000	2060	103	0	64-122/36
75-25-2	Bromoform	ND		2000	1860	93	2000	1880	94	1	43-125/37
75-15-0	Carbon Disulfide	ND		2000	2200	110	2000	2240	112	2	38-138/36
56-23-5	Carbon Tetrachloride	ND		2000	2220	111	2000	2180	109	2	53-133/36
108-90-7	Chlorobenzene	19.2		2000	1970	98	2000	2070	103	5	74-122/34
75-00-3	Chloroethane	ND		2000	1980	99	2000	2120	106	7	14-181/43
67-66-3	Chloroform	ND		2000	2180	109	2000	2260	113	4	65-130/24
124-48-1	Dibromochloromethane	ND		2000	1870	94	2000	1920	96	3	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		2000	1870	94	2000	2030	102	8	46-135/25
541-73-1	m-Dichlorobenzene	ND		2000	1810	91	2000	2020	101	11	70-120/35
95-50-1	o-Dichlorobenzene	ND		2000	1900	95	2000	2070	104	9	72-120/35
106-46-7	p-Dichlorobenzene	ND		2000	1880	94	2000	2010	101	7	68-120/35
75-34-3	1,1-Dichloroethane	ND		2000	2100	105	2000	2130	107	1	56-138/32
107-06-2	1,2-Dichloroethane	ND		2000	2200	110	2000	2200	110	0	51-141/39
75-35-4	1,1-Dichloroethylene	ND		2000	2090	105	2000	2130	107	2	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		2000	2110	106	2000	2180	109	3	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		2000	2220	111	2000	2350	118	6	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		4000	4330	108	4000	4530	113	5	54-134/30
78-87-5	1,2-Dichloropropane	ND		2000	2080	104	2000	2170	109	4	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		2000	2100	105	2000	2110	106	0	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		2000	1900	95	2000	1970	99	4	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		4000	4000	100	4000	4080	102	2	50-150/30 [a]
100-41-4	Ethylbenzene	32.0		2000	2060	101	2000	2100	103	2	47-146/30
67-72-1	Hexachloroethane	ND		2000	1890	95	2000	2090	105	10	32-128/39
78-83-1	Isobutyl Alcohol	ND		20000	24900	125	20000	24000	120	4	33-142/54
74-83-9	Methyl Bromide	ND		2000	2040	102	2000	2130	107	4	1-150/64
74-87-3	Methyl Chloride	ND		2000	2000	100	2000	2030	102	1	16-146/29
75-09-2	Methylene Chloride	ND		2000	2340	117	2000	2310	116	1	55-134/36
78-93-3	Methyl Ethyl Ketone	ND		5000	6960	139	5000	6750	135	3	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		5000	5720	114	5000	5560	111	3	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		2000	2050	103	2000	2190	110	7	52-146/32
100-42-5	Styrene	ND		2000	1920	96	2000	2080	104	8	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		2000	1950	98	2000	1970	99	1	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		2000	2020	101	2000	2020	101	0	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47605-1MS	1Q0442173.D	100	09/13/18	NN	n/a	n/a	V1Q2145
LA47605-1MSD	1Q0442175.D	100	09/13/18	NN	n/a	n/a	V1Q2145
LA47605-1	1Q0442169.D	100	09/13/18	NN	n/a	n/a	V1Q2145

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	LA47605-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		2000	1980	99	2000	2080	104	5	58-135/37
108-88-3	Toluene	ND		2000	2000	100	2000	2020	101	1	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		2000	2210	111	2000	2310	116	4	63-128/36
79-00-5	1,1,2-Trichloroethane	ND		2000	1930	97	2000	1910	96	1	61-138/17
79-01-6	Trichloroethylene	ND		2000	2150	108	2000	2250	113	5	57-131/36
75-69-4	Trichlorofluoromethane	ND		2000	2040	102	2000	2130	107	4	31-156/36
75-01-4	Vinyl Chloride	ND		2000	2170	109	2000	2200	110	1	22-155/49
	m,p-Xylene	48.9		4000	4280	106	4000	4450	110	4	35-159/31
95-47-6	o-Xylene	ND		2000	2120	106	2000	2160	108	2	50-144/35
1330-20-7	Xylene (total)	48.9		6000	6400	106	6000	6610	109	3	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47605-1	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	105%	104%	84-124%
2037-26-5	Toluene-D8	101%	102%	101%	83-115%
460-00-4	4-Bromofluorobenzene	107%	104%	99%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47408-5MS	2I038588.D	2	09/13/18	NN	n/a	n/a	V2I1789
LA47408-5MSD	2I038590.D	2	09/13/18	NN	n/a	n/a	V2I1789
LA47408-5	2I038564.D	1	09/13/18	NN	n/a	n/a	V2I1789

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-1

CAS No.	Compound	LA47408-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U		100	77.2	77	100	77.4	77	0	39-164/27
71-43-2	Benzene	0.42	J	40	39.5	98	40	40.6	100	3	31-161/15
75-27-4	Bromodichloromethane	5.0 U		40	38.7	97	40	39.1	98	1	64-122/36
75-25-2	Bromoform	5.0 U		40	32.7	82	40	32.5	81	1	43-125/37
75-15-0	Carbon Disulfide	5.0 U		40	38.3	96	40	39.8	100	4	38-138/36
56-23-5	Carbon Tetrachloride	5.0 U		40	37.7	94	40	37.5	94	1	53-133/36
108-90-7	Chlorobenzene	1.0	J	40	41.2	101	40	42.5	104	3	74-122/34
75-00-3	Chloroethane	5.0 U		40	39.2	98	40	34.5	86	13	14-181/43
67-66-3	Chloroform	5.0 U		40	38.7	97	40	39.6	99	2	65-130/24
124-48-1	Dibromochloromethane	5.0 U		40	36.6	92	40	36.3	91	1	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U		40	30.2	76	40	32.6	82	8	46-135/25
541-73-1	m-Dichlorobenzene	0.54	J	40	36.7	90	40	37.3	92	2	70-120/35
95-50-1	o-Dichlorobenzene	1.8	J	40	38.0	91	40	38.7	92	2	72-120/35
106-46-7	p-Dichlorobenzene	5.0 U		40	36.0	90	40	37.7	94	5	68-120/35
75-34-3	1,1-Dichloroethane	5.0 U		40	37.3	93	40	37.6	94	1	56-138/32
107-06-2	1,2-Dichloroethane	5.0 U		40	37.3	93	40	37.4	94	0	51-141/39
75-35-4	1,1-Dichloroethylene	5.0 U		40	38.2	96	40	39.1	98	2	48-139/37
156-59-2	cis-1,2-Dichloroethylene	5.0 U		40	39.7	99	40	41.4	104	4	56-133/15
156-60-5	trans-1,2-Dichloroethylene	5.0 U		40	38.7	97	40	39.3	98	2	59-128/37
540-59-0	1,2-Dichloroethene (total)	5.0 U		80	78.4	98	80	80.8	101	3	54-134/30
78-87-5	1,2-Dichloropropane	5.0 U		40	40.5	101	40	39.9	100	1	68-124/32
10061-01-5	cis-1,3-Dichloropropene	5.0 U		40	33.8	85	40	34.5	86	2	62-120/35
10061-02-6	trans-1,3-Dichloropropene	5.0 U		40	34.4	86	40	34.7	87	1	64-119/36
542-75-6	1,3-Dichloropropene (total)	5.0 U		80	68.2	85	80	69.3	87	2	50-150/30 [a]
100-41-4	Ethylbenzene	5.0 U		40	39.2	98	40	39.9	100	2	47-146/30
67-72-1	Hexachloroethane	5.0 U		40	33.5	84	40	33.2	83	1	32-128/39
78-83-1	Isobutyl Alcohol	100 U		400	340	85	400	345	86	1	33-142/54
74-83-9	Methyl Bromide	5.0 U		40	26.4	66	40	29.4	74	11	1-150/64
74-87-3	Methyl Chloride	5.0 U		40	27.9	70	40	30.1	75	8	16-146/29
75-09-2	Methylene Chloride	5.0 U		40	42.0	105	40	43.1	108	3	55-134/36
78-93-3	Methyl Ethyl Ketone	5.0 U		100	83.1	83	100	82.5	83	1	54-142/39
108-10-1	4-Methyl-2-pentanone	5.0 U		100	98.1	98	100	98.0	98	0	60-140/40
1634-04-4	Methyl Tert Butyl Ether	15.9		40	48.6	82	40	49.7	85	2	52-146/32
100-42-5	Styrene	5.0 U		40	40.1	100	40	40.3	101	0	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	5.0 U		40	39.1	98	40	39.9	100	2	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	0.50 U		40	38.3	96	40	38.3	96	0	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47408-5MS	2I038588.D	2	09/13/18	NN	n/a	n/a	V2I1789
LA47408-5MSD	2I038590.D	2	09/13/18	NN	n/a	n/a	V2I1789
LA47408-5	2I038564.D	1	09/13/18	NN	n/a	n/a	V2I1789

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47469-1

CAS No.	Compound	LA47408-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	0.36	J	40	38.3	95	40	39.0	97	2	58-135/37
108-88-3	Toluene	5.0 U		40	38.6	97	40	39.6	99	3	36-155/17
71-55-6	1,1,1-Trichloroethane	5.0 U		40	39.2	98	40	39.3	98	0	63-128/36
79-00-5	1,1,2-Trichloroethane	5.0 U		40	37.6	94	40	38.8	97	3	61-138/17
79-01-6	Trichloroethylene	5.0 U		40	39.4	99	40	38.8	97	2	57-131/36
75-69-4	Trichlorofluoromethane	5.0 U		40	35.5	89	40	36.0	90	1	31-156/36
75-01-4	Vinyl Chloride	2.0 U		40	29.4	74	40	30.2	76	3	22-155/49
	m,p-Xylene	5.0 U		80	79.2	99	80	80.3	100	1	35-159/31
95-47-6	o-Xylene	0.20	J	40	38.8	97	40	39.7	99	2	50-144/35
1330-20-7	Xylene (total)	10 U		120	118	98	120	120	100	2	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47408-5	Limits
17060-07-0	1,2-Dichloroethane-D4	95%	96%	99%	84-124%
2037-26-5	Toluene-D8	98%	99%	99%	83-115%
460-00-4	4-Bromofluorobenzene	98%	98%	95%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-MB	A0024620.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
100-02-7	4-Nitrophenol	ND	25	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
83-32-9	Acenaphthene	ND	0.20	ug/l	
208-96-8	Acenaphthylene	ND	0.20	ug/l	
62-53-3	Aniline	ND	5.0	ug/l	
120-12-7	Anthracene	ND	0.20	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
92-52-4	1,1'-Biphenyl	ND	10	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-MB	A0024620.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Result	RL	Units	Q
86-73-7	Fluorene	ND	0.20	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	0.20	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	63%	23-85%
4165-62-2	Phenol-d5	49%	10-69%
118-79-6	2,4,6-Tribromophenol	85%	48-138%
4165-60-0	Nitrobenzene-d5	82%	51-128%
321-60-8	2-Fluorobiphenyl	75%	55-122%
1718-51-0	Terphenyl-d14	94%	43-138%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-BS	A0024621.D	1	09/15/18	PC	09/11/18	OP12226	EA634
OP12226-BSD	A0024622.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	5	4.1	82	4.0	80	2	63-104/19
120-83-2	2,4-Dichlorophenol	5	4.5	90	4.5	90	0	68-112/19
105-67-9	2,4-Dimethylphenol	5	4.4	88	4.2	84	5	64-110/20
51-28-5	2,4-Dinitrophenol	25	21.5	86	22.1	88	3	51-121/30
100-02-7	4-Nitrophenol	25	13.1	52	13.3	53	2	20-68/23
87-86-5	Pentachlorophenol	25	24.1	96	23.7	95	2	52-120/29
108-95-2	Phenol	5	2.6	52	2.4	48	8	18-67/20
58-90-2	2,3,4,6-Tetrachlorophenol	5	4.8	96	4.6	92	4	67-121/21
95-95-4	2,4,5-Trichlorophenol	5	4.5	90	4.8	96	6	67-119/21
88-06-2	2,4,6-Trichlorophenol	5	4.4	88	4.4	88	0	67-120/21
83-32-9	Acenaphthene	5	4.1	82	4.0	80	2	67-114/28
208-96-8	Acenaphthylene	5	4.2	84	4.2	84	0	67-119/26
62-53-3	Aniline	5	3.7	74	4.1	82	10	40-114/40
120-12-7	Anthracene	5	4.4	88	4.2	84	5	68-121/24
56-55-3	Benzo(a)anthracene	5	4.4	88	4.3	86	2	69-113/20
50-32-8	Benzo(a)pyrene	5	4.7	94	4.6	92	2	71-124/22
205-99-2	Benzo(b)fluoranthene	5	4.7	94	4.6	92	2	72-120/22
207-08-9	Benzo(k)fluoranthene	5	4.5	90	4.4	88	2	71-124/21
92-52-4	1,1'-Biphenyl	5	4.1	82	4.0	80	2	65-122/29
85-68-7	Butyl Benzyl Phthalate	5	4.9	98	4.9	98	0	73-123/21
106-47-8	4-Chloroaniline	5	5.0	100	4.8	96	4	58-113/51
111-44-4	bis(2-Chloroethyl)ether	5	4.3	86	4.2	84	2	50-118/28
108-60-1	2,2'-Oxybis(1-chloropropane)	5	4.3	86	4.1	82	5	43-138/21
91-58-7	2-Chloronaphthalene	5	4.0	80	4.0	80	0	64-114/30
218-01-9	Chrysene	5	4.5	90	4.4	88	2	70-115/20
53-70-3	Dibenzo(a,h)anthracene	5	4.9	98	4.7	94	4	70-124/21
132-64-9	Dibenzofuran	5	4.2	84	4.0	80	5	67-117/27
91-94-1	3,3'-Dichlorobenzidine	5	6.6	132* [a]	6.4	128* [a]	3	69-122/38
84-66-2	Diethyl Phthalate	5	4.5	90	4.5	90	0	71-123/21
131-11-3	Dimethyl Phthalate	5	4.4	88	4.4	88	0	69-119/20
117-84-0	Di-n-octyl Phthalate	5	5.3	106	5.2	104	2	66-121/22
99-65-0	1,3-Dinitrobenzene	25	24.4	98	24.0	96	2	71-122/21
121-14-2	2,4-Dinitrotoluene	5	4.7	94	4.7	94	0	73-122/21
606-20-2	2,6-Dinitrotoluene	5	4.6	92	4.5	90	2	72-121/21
117-81-7	bis(2-Ethylhexyl)phthalate	5	4.9	98	4.8	96	2	68-126/21
206-44-0	Fluoranthene	5	4.7	94	4.5	90	4	73-120/21

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12226-BS	A0024621.D	1	09/15/18	PC	09/11/18	OP12226	EA634
OP12226-BSD	A0024622.D	1	09/15/18	PC	09/11/18	OP12226	EA634

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
86-73-7	Fluorene	5	4.3	86	4.2	84	2	69-118/25
118-74-1	Hexachlorobenzene	5	4.1	82	4.0	80	2	67-117/23
87-68-3	Hexachlorobutadiene	5	3.0	60	2.7	54	11	42-120/35
77-47-4	Hexachlorocyclopentadiene	5	3.1	62	2.8	56	10	35-123/48
193-39-5	Indeno(1,2,3-cd)pyrene	5	4.9	98	4.7	94	4	70-123/21
78-59-1	Isophorone	5	4.5	90	4.4	88	2	70-119/19
91-57-6	2-Methylnaphthalene	5	4.0	80	4.0	80	0	65-113/27
91-20-3	Naphthalene	5	4.0	80	3.9	78	3	63-114/23
88-74-4	2-Nitroaniline	25	25.3	101	25.2	101	0	68-125/21
99-09-2	3-Nitroaniline	25	24.2	97	24.0	96	1	69-117/23
100-01-6	4-Nitroaniline	25	25.2	101	25.1	100	0	67-122/19
98-95-3	Nitrobenzene	5	4.3	86	4.2	84	2	69-116/21
621-64-7	N-Nitroso-di-n-propylamine	5	4.5	90	4.3	86	5	67-120/20
86-30-6	N-Nitrosodiphenylamine	5	4.5	90	4.3	86	5	67-119/25
85-01-8	Phenanthrene	5	4.3	86	4.1	82	5	70-117/23
129-00-0	Pyrene	5	4.5	90	4.3	86	5	70-119/21
95-94-3	1,2,4,5-Tetrachlorobenzene	5	3.6	72	3.4	68	6	55-117/35
120-82-1	1,2,4-Trichlorobenzene	5	3.7	74	3.6	72	3	56-111/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	68%	66%	23-85%
4165-62-2	Phenol-d5	54%	50%	10-69%
118-79-6	2,4,6-Tribromophenol	103%	98%	48-138%
4165-60-0	Nitrobenzene-d5	85%	82%	51-128%
321-60-8	2-Fluorobiphenyl	81%	76%	55-122%
1718-51-0	Terphenyl-d14	94%	89%	43-138%

(a) Outside control limits biased high. Analyte not detected in associated samples.

* = Outside of Control Limits.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC1821-MB1	LC379908.D	1	09/10/18	MB	n/a	n/a	GLC1821

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47469-6, LA47469-7

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.)	ND	30	ug/l	
	Aliphatics > C8-C10 (Unadj.)	ND	50	ug/l	
	Aromatics > C8-C10 (Unadj.)	ND	50	ug/l	

CAS No.	Surrogate Recoveries		Limits
615-59-8	2,5-Dibromotoluene	96% [a]	70-130%
615-59-8	2,5-Dibromotoluene	86% [b]	70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics fraction.

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1487-MB1	LE336061.D	1	09/10/18	SV	n/a	n/a	GLE1487

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-5

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.)	ND	30	ug/l	
	Aliphatics > C8-C10 (Unadj.)	ND	50	ug/l	
	Aromatics > C8-C10 (Unadj.)	ND	50	ug/l	

CAS No.	Surrogate Recoveries		Limits
615-59-8	2,5-Dibromotoluene	102% [a]	70-130%
615-59-8	2,5-Dibromotoluene	91% [b]	70-130%

(a) Recovery from Aliphatics fraction.
(b) Recovery from Aromatics fraction.

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12220-MB	LK113197.D	1	09/12/18	DF	09/10/18	OP12220	GLK725

The QC reported here applies to the following samples: **Method:** SW846 8011

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.020	ug/l	

CAS No.	Surrogate Recoveries		Limits
348-51-6	1-Chloro-2-fluorobenzene	105%	55-149%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC1821-BS1	LC379903.D	1	09/10/18	MB	n/a	n/a	GLC1821
GLC1821-BSD1	LC379904.D	1	09/10/18	MB	n/a	n/a	GLC1821

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47469-6, LA47469-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	150	157	105	157	105	0	70-130/30
	Aliphatics > C8-C10 (Unadj.)	250	273	109	268	107	2	70-130/30
	Aromatics > C8-C10 (Unadj.)	250	240	96	249	100	4	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
615-59-8	2,5-Dibromotoluene	112% [a]	114% [a]	70-130%
615-59-8	2,5-Dibromotoluene	96% [b]	104% [b]	70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics fraction.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1487-BS1	LE336059.D	1	09/10/18	SV	n/a	n/a	GLE1487
GLE1487-BSD1	LE336060.D	1	09/10/18	SV	n/a	n/a	GLE1487

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	150	140	93	139	93	1	70-130/30
	Aliphatics > C8-C10 (Unadj.)	250	240	96	240	96	0	70-130/30
	Aromatics > C8-C10 (Unadj.)	250	232	93	231	92	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
615-59-8	2,5-Dibromotoluene	105% [a]	105% [a]	70-130%
615-59-8	2,5-Dibromotoluene	97% [b]	97% [b]	70-130%

(a) Recovery from Aliphatics fraction.
(b) Recovery from Aromatics fraction.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12220-BS	LK113198.D	1	09/12/18	DF	09/10/18	OP12220	GLK725
OP12220-BSD	LK113199.D	1	09/12/18	DF	09/10/18	OP12220	GLK725

The QC reported here applies to the following samples: **Method:** SW846 8011

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	0.251	0.34	135	0.33	131	3	60-148/18

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
348-51-6	1-Chloro-2-fluorobenzene	107%	103%	55-149%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47467-4MS	LC379931.D	50	09/11/18	MB	n/a	n/a	GLC1821
LA47467-4MSD	LC379932.D	50	09/11/18	MB	n/a	n/a	GLC1821
LA47467-4	LC379930.D	1	09/11/18	MB	n/a	n/a	GLC1821

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47469-6, LA47469-7

CAS No.	Compound	LA47467-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	ND		7500	6740	90	7500	6640	89	1	70-130/50
	Aliphatics > C8-C10 (Unadj.)	ND		12500	11500	92	12500	11300	90	2	70-130/50
	Aromatics > C8-C10 (Unadj.)	ND		12500	10500	84	12500	10200	82	3	70-130/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47467-4	Limits
615-59-8	2,5-Dibromotoluene	92% [a]	90% [a]	89% [a]	70-130%
615-59-8	2,5-Dibromotoluene	79% [b]	77% [b]	75% [b]	70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics fraction.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47469-1MS	LE336072.D	5	09/11/18	SV	n/a	n/a	GLE1487
LA47469-1MSD	LE336073.D	5	09/11/18	SV	n/a	n/a	GLE1487
LA47469-1	LE336063.D	1	09/10/18	SV	n/a	n/a	GLE1487

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-5

CAS No.	Compound	LA47469-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	ND		750	714	95	750	702	94	2	70-130/50
	Aliphatics > C8-C10 (Unadj.)	ND		1250	1190	95	1250	1200	96	1	70-130/50
	Aromatics > C8-C10 (Unadj.)	ND		1250	1140	91	1250	1150	92	1	70-130/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47469-1	Limits
615-59-8	2,5-Dibromotoluene	105% [a]	102% [a]	98%	70-130%
615-59-8	2,5-Dibromotoluene	94% [b]	94% [b]	88%	70-130%

(a) Recovery from Aliphatics fraction.
(b) Recovery from Aromatics fraction.

* = Outside of Control Limits.

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12260-MB	X0050764.D	1	09/16/18	JT	09/14/18	OP12260	GLB1608

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Result	RL	Units	Q
	Aromatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aromatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aromatics > C16-C21 (Unadj.)	ND	140	ug/l	
	Aromatics > C21-C35 (Unadj.)	ND	140	ug/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	75%	40-140%
321-60-8	2-Fluorobiphenyl	71%	40-140%

Method Blank Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12260-MB	Y0050764.D	1	09/16/18	JT	09/14/18	OP12260	GLB1609

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aliphatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aliphatics > C16-C35 (Unadj.)	88.1	140	ug/l	J

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	69%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12260-BS	X0050765.D	1	09/16/18	JT	09/14/18	OP12260	GLB1608
OP12260-BSD	X0050766.D	1	09/16/18	JT	09/14/18	OP12260	GLB1608

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	476	334	70	324	69	3	40-140/30
	Aromatics > C12-C16 (Unadj.)	1430	1090	76	1050	74	4	40-140/30
	Aromatics > C16-C21 (Unadj.)	2380	1930	81	1840	78	5	40-140/30
	Aromatics > C21-C35 (Unadj.)	3810	3380	89	3110	83	8	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	61%	67%	40-140%
321-60-8	2-Fluorobiphenyl	71%	73%	40-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12260-BS	Y0050765.D	1	09/16/18	JT	09/14/18	OP12260	GLB1609
OP12260-BSD	Y0050766.D	1	09/16/18	JT	09/14/18	OP12260	GLB1609

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	476	310	65	251	53	21	40-140/30
	Aliphatics > C12-C16 (Unadj.)	952	652	68	526	56	21	40-140/30
	Aliphatics > C16-C35 (Unadj.)	4290	2690	63	2270	54	17	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	53%	51%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12260-MS	X0050914.D	1	09/24/18	JT	09/14/18	OP12260	GLB1613
OP12260-MSD	X0050915.D	1	09/24/18	JT	09/14/18	OP12260	GLB1613
LA47579-6	X0050780.D	1	09/16/18	JT	09/14/18	OP12260	GLB1608

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	LA47579-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	ND		464	394	85	464	394	85	0	40-140/50
	Aromatics > C12-C16 (Unadj.)	ND		1390	1260	91	1390	1270	91	1	40-140/50
	Aromatics > C16-C21 (Unadj.)	102		2320	2190	90	2320	2190	90	0	40-140/50
	Aromatics > C21-C35 (Unadj.)	ND		3710	3920	106	3710	3920	106	0	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47579-6	Limits
84-15-1	o-Terphenyl	80%	80%	86%	40-140%
321-60-8	2-Fluorobiphenyl	81%	81%	83%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47469
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12260-MS	Y0050914.D	1	09/24/18	JT	09/14/18	OP12260	GLB1614
OP12260-MSD	Y0050915.D	1	09/24/18	JT	09/14/18	OP12260	GLB1614
LA47579-6	Y0050780.D	1	09/16/18	JT	09/14/18	OP12260	GLB1609

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47469-1, LA47469-2, LA47469-3, LA47469-4

CAS No.	Compound	LA47579-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	ND		464	319	69	464	321	69	1	40-140/50
	Aliphatics > C12-C16 (Unadj.)	ND		928	676	73	928	678	73	0	40-140/50
	Aliphatics > C16-C35 (Unadj.)	94.1		4170	2840	66	4170	2800	65	1	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47579-6	Limits
3386-33-2	1-Chlorooctadecane	68%	67%	70%	40-140%

* = Outside of Control Limits.

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: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	6.9	9.3	0.87	<100
Antimony	1.0	.043	.34		
Arsenic	1.0	.062	.26	-0.088	<1.0
Barium	1.0	.033	.46	-0.082	<1.0
Beryllium	1.0	.0077	.28		
Boron	20	1.3	2.9		
Cadmium	0.50	.011	.12	0.083	<0.50
Calcium	100	5.7	20	-32	<100
Cerium	1.0	.0041	.16		
Chromium	1.0	.11	.15	0.038	<1.0
Cobalt	1.0	.012	.14		
Copper	1.0	.91	.74		
Iron	100	48	16	-14	<100
Lanthanum	1.0	.0038	.41		
Lithium	2.0	.1	.61		
Lead	1.0	.0081	.13	-0.056	<1.0
Magnesium	100	1.6	11	10.5	<100
Manganese	2.0	.48	.53	-0.28	<2.0
Molybdenum	1.0	.048	.89		
Nickel	1.0	.037	.2		
Potassium	100	3.4	7.6	-20	<100
Selenium	5.0	.38	3.1	-0.91	<5.0
Silver	1.0	.0047	.13	-0.062	<1.0
Silicon	500	6.6	130		
Sodium	100	24	9.9	11.6	<100
Strontium	2.0	.12	.27	0.069	<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	-0.10	<5.0

Associated samples MP12676: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

Metal	RL	IDL	MDL	MB raw	final

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: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/10/18

Metal	TD26638-1 Original	MS	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	3020	7410	5100	86.1	75-125
Antimony					
Arsenic	2.0	94.9	100	92.9	75-125
Barium	47.2	146	100	98.8	75-125
Beryllium					
Boron					
Cadmium	0.38	95.5	100	95.1	75-125
Calcium	46100	48300	5000	44.0 (a)	75-125
Cerium					
Chromium	5.1	105	100	99.9	75-125
Cobalt					
Copper	anr				
Iron	3110	7360	5000	85.0	75-125
Lanthanum					
Lithium					
Lead	2.9	102	100	99.1	75-125
Magnesium	1350	5530	5000	83.6	75-125
Manganese	42.9	139	100	96.1	75-125
Molybdenum					
Nickel	anr				
Potassium	3770	8480	5000	94.2	75-125
Selenium	0.0	429	500	85.8	75-125
Silver	0.0	99.4	100	99.4	75-125
Silicon					
Sodium	3420	7280	5000	77.2	75-125
Strontium	55.0	145	100	90.0	75-125
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	148	168	100	20.0N(b)	75-125

Associated samples MP12676: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

Metal	TD26638-1 Original MS	Spikelot MPICPMS6 % Rec	QC Limits

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.
(b) Spike recovery indicates possible matrix interference or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

Metal	TD26638-1 Original	MSD	Spikelot MPICPMS6	% Rec	MSD RPD	QC Limit
Aluminum	3020	7680	5100	91.4	3.6	20
Antimony						
Arsenic	2.0	95.7	100	93.7	0.8	20
Barium	47.2	146	100	98.8	0.0	20
Beryllium						
Boron						
Cadmium	0.38	97.1	100	96.7	1.7	20
Calcium	46100	49100	5000	60.0 (a)	1.6	20
Cerium						
Chromium	5.1	106	100	100.9	0.9	20
Cobalt						
Copper	anr					
Iron	3110	7610	5000	90.0	3.3	20
Lanthanum						
Lithium						
Lead	2.9	104	100	101.1	1.9	20
Magnesium	1350	5460	5000	82.2	1.3	20
Manganese	42.9	140	100	97.1	0.7	20
Molybdenum						
Nickel	anr					
Potassium	3770	8620	5000	97.0	1.6	20
Selenium	0.0	432	500	86.4	0.7	20
Silver	0.0	99.5	100	99.5	0.1	20
Silicon						
Sodium	3420	7190	5000	75.4	1.2	20
Strontium	55.0	144	100	89.0	0.7	20
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	148	183	100	35.0N(b)	8.5	20

Associated samples MP12676: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

	TD26638-1	Spikelot	MSD	QC
Metal	Original MSD	MPICPMS6 % Rec	RPD	Limit

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.
(b) Spike recovery indicates possible matrix interference or sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/10/18

Metal	BSP Result	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	5040	5100	98.8	80-120
Antimony				
Arsenic	108	100	108.0	80-120
Barium	105	100	105.0	80-120
Beryllium				
Boron				
Cadmium	104	100	104.0	80-120
Calcium	5220	5000	104.4	80-120
Cerium				
Chromium	105	100	105.0	80-120
Cobalt				
Copper	anr			
Iron	5210	5000	104.2	80-120
Lanthanum				
Lithium				
Lead	105	100	105.0	80-120
Magnesium	4870	5000	97.4	80-120
Manganese	105	100	105.0	80-120
Molybdenum				
Nickel	anr			
Potassium	5150	5000	103.0	80-120
Selenium	532	500	106.4	80-120
Silver	105	100	105.0	80-120
Silicon				
Sodium	5140	5000	102.8	80-120
Strontium	104	100	104.0	80-120
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	114	100	114.0	80-120

Associated samples MP12676: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

Metal	BSP Result	Spikelot MPICPMS6 % Rec	QC Limits

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

Metal	TD26638-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	3020	3740	23.9*(a)	0-10
Antimony				
Arsenic	1.96	1.84	5.9	0-10
Barium	47.2	51.4	8.7	0-10
Beryllium				
Boron				
Cadmium	0.375	0.746	98.9 (b)	0-10
Calcium	46100	52200	13.2*(a)	0-10
Cerium				
Chromium	5.05	6.30	24.7 (b)	0-10
Cobalt				
Copper	anr			
Iron	3110	3700	18.9*(a)	0-10
Lanthanum				
Lithium				
Lead	2.90	2.89	0.2	0-10
Magnesium	1350	1670	23.9*(a)	0-10
Manganese	42.9	49.3	14.9*(a)	0-10
Molybdenum				
Nickel	anr			
Potassium	3770	4220	11.9*(a)	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Silicon				
Sodium	3420	4110	20.4*(a)	0-10
Strontium	55.0	65.5	19.2*(a)	0-10
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	148	184	24.3*(a)	0-10

Associated samples MP12676: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

	TD26638-1		QC
Metal	Original SDL 1:5	%DIF	Limits

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12676 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/18

Metal	Sample ml	Final ml	TD26638-1 Raw	TD26638-1 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Antimony										
Beryllium										
Boron										
Cerium										
Cobalt										
Lanthanum										
Lithium										
Molybdenum										
Silicon										
Thallium										
Tin										
Titanium										
Uranium										
Vanadium										
Zinc	2	10	147.8	29.56	145.6	0.1	10	100	116.0	75-125

Associated samples MP12676: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12683 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/11/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.06	.081	-0.018	<0.20

Associated samples MP12683: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

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: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12683 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/11/18

Metal	LA47418-1 Original	MS	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	0.23	4.8	5	91.4	75-125

Associated samples MP12683: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12683 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/11/18

Metal	LA47418-1 Original	MSD	Spikelot HGSPIKE1	% Rec	MSD RPD	QC Limit
Mercury	0.23	4.8	5	91.4	0.0	20

Associated samples MP12683: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12683
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 09/11/18

Metal	BSP Result	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	5.1	5	102.0	80-120

Associated samples MP12683: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47469
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12683 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/11/18

Metal	LA47418-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.229	0.00	100.0(a)	0-

Associated samples MP12683: LA47469-1, LA47469-2, LA47469-3, LA47469-4, LA47469-1F, LA47469-2F, LA47469-3F, LA47469-4F

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).

Misc. Forms

Custody Documents and Other Forms

(SGS Houston, TX)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS

Page 1 of 1

500 Ambassador Caffery Parkway, Scott, LA 70583
Phone: 800-304-5227 Fax: 337-237-7838

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: LA47469

Client / Reporting Information

Company Name: SGS North America Inc.
Street Address: 500 Ambassador Caffery Parkway
City: Scott State: LA Zip: 70583
Project Contact: ralph.frye@sgs.com E-mail:
Phone #: 800-304-5227 Fax #:
Sampler(s) Name(s): KC/LV Phone:

Project Information

Project Name: 8060.00 Indigo-Desoto Parish, LA
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS
XCARBICALK

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE		LAB USE ONLY
1	HALEY POND 6'		9/6/18	10:20:00 AM	KC/LV	AQ										X	
2	HALEY POND 2'		9/6/18	10:50:00 AM	KC/LV	AQ										X	
3	LONG 1&2 RIG SUPPLY		9/6/18	4:10:00 PM	KC/LV	AQ										X	
4	LONG 3&4 RIG SUPPLY		9/6/18	4:20:00 PM	KC/LV	AQ										X	

"AGGIE" "PRESERVED"

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 9/17/2018

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C" X COMMB
- [ ] TRRP
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		9/10/18				
2						
3		9/10/18 2240	2240 9-10-18			
4						
5				Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp: 3.4

9.1.9

Cooler 1

Date / Time: 9/10/2018 11:00:10 AM
CSR: ralphf
Job #: LA47469
Client Project: 8060.00 Indigo-Desoto Parish, LA
Deliverable: COMMB
TAT: Due 9/17/2018

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
LA47469-1	HALEY POND 6'	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK	3W2 ,3W2F ,OL ,RRM-76 1 B-2 ,RSM-21 VW ,WS-1118 11 C-4 ,	KC/LV	9/6/2018	10:20:00 AM	
LA47469-2	HALEY POND 2'	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK	3W2 ,3W2F ,OL ,RRM-76 1 B-2 ,RSM-21 VW ,WS-1118 11 C-4 ,	KC/LV	9/6/2018	10:50:00 AM	
LA47469-3	LONG 1&2 RIG SUPPLY	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK	3W2 ,3W2F ,OL ,RRM-76 1 B-2 ,RSM-21 VW ,WS-1118 11 C-4 ,	KC/LV	9/6/2018	4:10:00 PM	
LA47469-4	LONG 3&4 RIG SUPPLY	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK	3W2 ,3W2F ,OL ,RRM-76 1 B-2 ,RSM-21 VW ,WS-1118 11 C-4 ,	KC/LV	9/6/2018	4:20:00 PM	

Comments:

4-500mL amp

Sample Management Receipt: _____ Date: 22410 9-10-18

SGS Sample Receipt Summary

Job Number: LA47469 **Client:** SGS **Project:** 8060.00 INDIGO DESOTO

Date / Time Received: 9/10/2018 10:40:00 PM **Delivery Method:** **Airbill #'s:**

No. Coolers: 1 **Therm ID:** IR-4; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (3.6/3.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		

Quality Control Preservation	Y	or	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☐		☐	☑	☐	☐
2. Trip Blank listed on COC:	☐		☐	☑		
3. Samples preserved properly:	☑		☐			
4. VOCs headspace free:	☐		☐	☑		

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Sample Receipt Log

Job #: LA47469 **Date / Time Received:** 9/10/2018 10:40:00 PM 10:4 **Initials:** DS

Client: SGS

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	LA47469-1	500ml	1	M3A	N/P	Note #2 - Preservative check not applicable.	IR-4	3.6	0	3.6
1	LA47469-2	500ml	1	M3A	N/P	Note #2 - Preservative check not applicable.	IR-4	3.6	0	3.6
1	LA47469-3	500ml	1	M3A	N/P	Note #2 - Preservative check not applicable.	IR-4	3.6	0	3.6
1	LA47469-4	500ml	1	M3A	N/P	Note #2 - Preservative check not applicable.	IR-4	3.6	0	3.6

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: LA47469
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	GN92695	5.0	2.0	mg/l				
Alkalinity, Carbonate	GN92696	5.0	0.0	mg/l				
Alkalinity, Total as CaCO3	GN92694	5.0	0.0	mg/l	100	103	103.0	90-100%
Bromide	GP49424/GN92686	0.50	0.0	mg/l	10	10.6	106.0	90-110%
Chloride	GP49424/GN92686	0.50	0.0	mg/l	10	10.4	104.0	90-110%
Silica, Dissolved	GN92737	0.070	0.0	mg/l	1.07	1.0	93.5	80-120%
Solids, Total Dissolved	GN92643	10	3.0	mg/l	500	485	97.0	88-110%
Specific Conductivity	GN92665	1.0	<1.0	umhos/cm				
Sulfate	GP49424/GN92686	0.50	0.0	mg/l	10	9.53	95.3	90-110%

Associated Samples:
Batch GN92643: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92665: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92694: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92695: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92696: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92737: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GP49424: LA47469-1, LA47469-2, LA47469-3, LA47469-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA47469
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	GN92695	LA47398-1	mg/l	415	416	0.0	0-10%
Alkalinity, Carbonate	GN92696	LA47398-1	mg/l	4.8	4.4	0.0	0-20%
Alkalinity, Total as CaCO3	GN92694	LA47398-1	mg/l	420	420	0.0	0-10%
Bromide	GP49424/GN92686	LA47467-1	mg/l	0.40	0.38	5.1	0-19%
Chloride	GP49424/GN92686	LA47467-1	mg/l	215	216	0.5	0-13%
Silica, Dissolved	GN92737	LA47398-10	mg/l	0.0	0.0	0.0	0-20%
Solids, Total Dissolved	GN92643	LA47469-1	mg/l	507	518	2.1	0-5%
Specific Conductivity	GN92665	LA47467-3	umhos/cm	1900	1900	0.0	0-10%
Sulfate	GP49424/GN92686	LA47467-1	mg/l	4.8	4.8	0.0	0-20%

Associated Samples:
Batch GN92643: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92665: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92694: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92695: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92696: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92737: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GP49424: LA47469-1, LA47469-2, LA47469-3, LA47469-4
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA47469
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	GN92694	LA47398-1	mg/l	420	25	445	100.0	75-117%
Bromide	GP49424/GN92686	LA47467-1	mg/l	0.40	10	11.7	113.0	80-120%
Chloride	GP49424/GN92686	LA47467-1	mg/l	215	200	467	126.0N	80-120%
Silica, Dissolved	GN92737	LA47398-10	mg/l	0.0	1.07	0.92	86.0	75-125%
Sulfate	GP49424/GN92686	LA47467-1	mg/l	4.8	10	16.8	120.0	80-120%

Associated Samples:
Batch GN92694: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GN92737: LA47469-1, LA47469-2, LA47469-3, LA47469-4
Batch GP49424: LA47469-1, LA47469-2, LA47469-3, LA47469-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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

e-Hardcopy 2.0
Automated Report

Technical Report for

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

SGS Job Number: LA47639

Sampling Date: 09/11/18

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: **94**

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
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.

SGS is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.
Review standard terms at: http://www.sgs.com/en/terms-and-conditions

Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sections: 1 2 3 4 5 6 7 8 9 10

Table of Contents

SGS North America Inc.

Sample Summary

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

Job No: LA47639

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA47639-1	09/11/18	11:50	KC/WP	09/12/18	AQ	Water	BAGLEY RIG SUPPLY WELL
LA47639-1F	09/11/18	11:50	KC/WP	09/12/18	AQ	Water Filtered	BAGLEY RIG SUPPLY WELL
LA47639-2	09/11/18	14:55	KC/WP	09/12/18	AQ	Water	ROM RIG SUPPLY WELL
LA47639-2F	09/11/18	14:55	KC/WP	09/12/18	AQ	Water Filtered	ROM RIG SUPPLY WELL
LA47639-3	09/11/18	16:00	KC/WP	09/12/18	AQ	Water	DERBONNE RELIEF WELL
LA47639-3F	09/11/18	16:00	KC/WP	09/12/18	AQ	Water Filtered	DERBONNE RELIEF WELL
LA47639-4	09/11/18	11:05	KC/WP	09/12/18	AQ	Field Blank Water	FIELD BLANK
LA47639-5	09/11/18	06:45	KC/WP	09/12/18	AQ	Trip Blank Water	TRIP BLANK

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038660.D	1	09/14/18 14:55	AR	n/a	n/a	V2I1790
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	94%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024723.D	1	09/17/18 14:26	PC	09/16/18 07:00	OP12269	EA638
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	61%		23-85%
4165-62-2	Phenol-d5	47%		10-69%
118-79-6	2,4,6-Tribromophenol	93%		48-138%
4165-60-0	Nitrobenzene-d5	78%		51-128%
321-60-8	2-Fluorobiphenyl	73%		55-122%
1718-51-0	Terphenyl-d14	88%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC380020.D	1	09/14/18 23:52	MB	n/a	n/a	GLC1825
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	96% [b]		70-130%
615-59-8	2,5-Dibromotoluene	99% [c]		70-130%

(a) Client Defined Limit.
(b) Recovery from Aliphatics fraction.
(c) Recovery from Aromatics fraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113195.D	1	09/14/18 04:27	DF	09/13/18 15:00	OP12251	GLK726
Run #2							

	Initial Volume	Final Volume
Run #1	34.9 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	88%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	93%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050929.D	1	09/24/18 22:21	JT	09/20/18 08:00	OP12311	GLB1613
Run #2	Y0050929.D	1	09/24/18 22:22	JT	09/20/18 08:00	OP12311	GLB1614

	Initial Volume	Final Volume
Run #1	54.7 ml	4.0 ml
Run #2	54.7 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		73%	40-140%
84-15-1	o-Terphenyl	78%		40-140%
321-60-8	2-Fluorobiphenyl	88%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: BAGLEY RIG SUPPLY WELL
Lab Sample ID: LA47639-1
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/11/18
Date Received: 09/12/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	1.43	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	2.17	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/14/18	09/14/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.19	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	138	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.151	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13369
(2) Instrument QC Batch: MA13375
(3) Prep QC Batch: MP12723
(4) Prep QC Batch: MP12724

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	75.0	5.0	mg/l	1	09/14/18 17:00	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	09/14/18 17:00	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	75.0	5.0	mg/l	1	09/14/18 17:00	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/17/18 15:27	ATX	SW846 9056A
Chloride [a]	15.1	0.50	mg/l	1	09/17/18 15:27	ATX	SW846 9056A
Silica, Dissolved [a]	9.8	0.70	mg/l	10	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	338	10	mg/l	1	09/14/18	ATX	SM 2540C-2011
Specific Conductivity [b]	572	1.0	umhos/cm	1	09/17/18 18:00	ATX	EPA 120.1
Sulfate [a]	1.4	0.50	mg/l	1	09/17/18 15:27	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	BAGLEY RIG SUPPLY WELL		
Lab Sample ID:	LA47639-1F	**Date Sampled:**	09/11/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/12/18
		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	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	8.54	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/14/18	09/14/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.03	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	149	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.156	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13369
(2) Instrument QC Batch: MA13375
(3) Prep QC Batch: MP12723
(4) Prep QC Batch: MP12724

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038662.D	1	09/14/18 15:23	AR	n/a	n/a	V2I1790
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	98%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	95%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024724.D	1	09/17/18 14:50	PC	09/16/18 07:00	OP12269	EA638
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		23-85%
4165-62-2	Phenol-d5	45%		10-69%
118-79-6	2,4,6-Tribromophenol	92%		48-138%
4165-60-0	Nitrobenzene-d5	79%		51-128%
321-60-8	2-Fluorobiphenyl	75%		55-122%
1718-51-0	Terphenyl-d14	87%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC380021.D	1	09/15/18 00:36	MB	n/a	n/a	GLC1825
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	98% [b]		70-130%
615-59-8	2,5-Dibromotoluene	103% [c]		70-130%

(a) Client Defined Limit.
(b) Recovery from Aliphatics fraction.
(c) Recovery from Aromatics fraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: ROM RIG SUPPLY WELL
Lab Sample ID: LA47639-2
Matrix: AQ - Water
Method: SW846 8011 SW846 8011
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/11/18
Date Received: 09/12/18
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113196.D	1	09/14/18 04:44	DF	09/13/18 15:00	OP12251	GLK726
Run #2							

	Initial Volume	Final Volume
Run #1	34.9 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	93%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	99%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050930.D	1	09/24/18 22:44	JT	09/20/18 08:00	OP12311	GLB1613
Run #2	Y0050930.D	1	09/24/18 22:45	JT	09/20/18 08:00	OP12311	GLB1614

	Initial Volume	Final Volume
Run #1	53.7 ml	4.0 ml
Run #2	53.7 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		70%	40-140%
84-15-1	o-Terphenyl	79%		40-140%
321-60-8	2-Fluorobiphenyl	86%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID: ROM RIG SUPPLY WELL
Lab Sample ID: LA47639-2
Matrix: AQ - Water
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 09/11/18
Date Received: 09/12/18
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/14/18	09/14/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	210	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0412	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13369
(2) Instrument QC Batch: MA13375
(3) Prep QC Batch: MP12723
(4) Prep QC Batch: MP12724

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	296	5.0	mg/l	1	09/14/18 17:00	ATX	SM18 2320B
Alkalinity, Carbonate [a]	13.9	5.0	mg/l	1	09/14/18 17:00	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	310	5.0	mg/l	1	09/14/18 17:00	ATX	SM 2320B-2011
Bromide [a]	0.54	0.50	mg/l	1	09/17/18 15:44	ATX	SW846 9056A
Chloride [a]	41.5	2.5	mg/l	5	09/17/18 19:07	ATX	SW846 9056A
Silica, Dissolved [a]	7.8	0.35	mg/l	5	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	486	10	mg/l	1	09/14/18	ATX	SM 2540C-2011
Specific Conductivity [b]	844	1.0	umhos/cm	1	09/17/18 18:00	ATX	EPA 120.1
Sulfate [a]	< 0.50	0.50	mg/l	1	09/17/18 15:44	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	ROM RIG SUPPLY WELL		
Lab Sample ID:	LA47639-2F	**Date Sampled:**	09/11/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/12/18
		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	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/14/18	09/14/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	212	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0402	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13369
(2) Instrument QC Batch: MA13375
(3) Prep QC Batch: MP12723
(4) Prep QC Batch: MP12724

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038664.D	1	09/14/18 15:51	AR	n/a	n/a	V2I1790
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	94%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0024725.D	1	09/17/18 15:15	PC	09/16/18 07:00	OP12269	EA638
Run #2							

	Initial Volume	Final Volume
Run #1	113 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol [a]	ND	0.010	mg/l	
120-83-2	2,4-Dichlorophenol [a]	ND	0.011	mg/l	
105-67-9	2,4-Dimethylphenol [a]	ND	0.073	mg/l	
51-28-5	2,4-Dinitrophenol [a]	ND	0.050	mg/l	
100-02-7	4-Nitrophenol [a]	ND	0.050	mg/l	
87-86-5	Pentachlorophenol [a]	ND	0.0010	mg/l	
108-95-2	Phenol [a]	ND	0.18	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol [a]	ND	0.11	mg/l	
95-95-4	2,4,5-Trichlorophenol [a]	ND	0.37	mg/l	
88-06-2	2,4,6-Trichlorophenol [a]	ND	0.010	mg/l	
83-32-9	Acenaphthene [a]	ND	0.037	mg/l	
208-96-8	Acenaphthylene [a]	ND	0.10	mg/l	
62-53-3	Aniline [a]	ND	0.012	mg/l	
120-12-7	Anthracene [a]	ND	0.043	mg/l	
56-55-3	Benzo(a)anthracene [a]	ND	0.0078	mg/l	
50-32-8	Benzo(a)pyrene [a]	ND	0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene [a]	ND	0.0048	mg/l	
207-08-9	Benzo(k)fluoranthene [a]	ND	0.0025	mg/l	
92-52-4	1,1'-Biphenyl [a]	ND	0.030	mg/l	
85-68-7	Butyl Benzyl Phthalate [a]	ND	0.73	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.020	mg/l	
111-44-4	bis(2-Chloroethyl)ether [a]	ND	0.0057	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane) [a]	ND	0.0057	mg/l	
91-58-7	2-Chloronaphthalene [a]	ND	0.049	mg/l	
218-01-9	Chrysene [a]	ND	0.0016	mg/l	
53-70-3	Dibenzo(a,h)anthracene [a]	ND	0.0025	mg/l	
132-64-9	Dibenzofuran [a]	ND	0.010	mg/l	
91-94-1	3,3'-Dichlorobenzidine [b]	ND	0.020	mg/l	
84-66-2	Diethyl Phthalate [a]	ND	2.9	mg/l	
131-11-3	Dimethyl Phthalate [a]	ND	37	mg/l	
117-84-0	Di-n-octyl Phthalate [a]	ND	0.020	mg/l	
99-65-0	1,3-Dinitrobenzene [a]	ND	0.010	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene [a]	ND	0.010	mg/l	
606-20-2	2,6-Dinitrotoluene [a]	ND	0.010	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate [a]	ND	0.0060	mg/l	
206-44-0	Fluoranthene [a]	ND	0.15	mg/l	
86-73-7	Fluorene [a]	ND	0.024	mg/l	
118-74-1	Hexachlorobenzene [a]	ND	0.0010	mg/l	
87-68-3	Hexachlorobutadiene [a]	ND	0.00073	mg/l	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene [a]	ND	0.0037	mg/l	
78-59-1	Isophorone [a]	ND	0.070	mg/l	
91-57-6	2-Methylnaphthalene [a]	ND	0.00062	mg/l	
91-20-3	Naphthalene [a]	ND	0.010	mg/l	
88-74-4	2-Nitroaniline [a]	ND	0.050	mg/l	
99-09-2	3-Nitroaniline [a]	ND	0.050	mg/l	
100-01-6	4-Nitroaniline [a]	ND	0.050	mg/l	
98-95-3	Nitrobenzene [a]	ND	0.0019	mg/l	
621-64-7	N-Nitroso-di-n-propylamine [a]	ND	0.010	mg/l	
86-30-6	N-Nitrosodiphenylamine [a]	ND	0.014	mg/l	
85-01-8	Phenanthrene [a]	ND	0.18	mg/l	
129-00-0	Pyrene [a]	ND	0.18	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene [a]	ND	0.0011	mg/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	0.070	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%		23-85%
4165-62-2	Phenol-d5	45%		10-69%
118-79-6	2,4,6-Tribromophenol	88%		48-138%
4165-60-0	Nitrobenzene-d5	77%		51-128%
321-60-8	2-Fluorobiphenyl	73%		55-122%
1718-51-0	Terphenyl-d14	86%		43-138%

(a) Client Defined Limit.
(b) Client Defined Limit. Associated CCV outside of control limits low.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC380022.D	1	09/15/18 01:20	MB	n/a	n/a	GLC1825
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	95% [b]		70-130%
615-59-8	2,5-Dibromotoluene	98% [c]		70-130%

(a) Client Defined Limit.
(b) Recovery from Aliphatics fraction.
(c) Recovery from Aromatics fraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LK113197.D	1	09/14/18 05:01	DF	09/13/18 15:00	OP12251	GLK726
Run #2							

	Initial Volume	Final Volume
Run #1	36.0 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
348-51-6	1-Chloro-2-fluorobenzene	96%		55-149%
348-51-6	1-Chloro-2-fluorobenzene	101%		55-149%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
Method:	MADEP EPH REV 1.1 SW846 3511	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0050931.D	1	09/24/18 23:07	JT	09/20/18 08:00	OP12311	GLB1613
Run #2	Y0050931.D	1	09/24/18 23:08	JT	09/20/18 08:00	OP12311	GLB1614

	Initial Volume	Final Volume
Run #1	53.4 ml	4.0 ml
Run #2	53.4 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C12-C16 (Unadj.	[a]ND [b]	0.15	mg/l	
	Aliphatics > C16-C35 (Unadj.	[a]ND [b]	7.3	mg/l	
	Aromatics > C10-C12 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C12-C16 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C16-C21 (Unadj.	[a]ND	0.15	mg/l	
	Aromatics > C21-C35 (Unadj.	[a]ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		74%	40-140%
84-15-1	o-Terphenyl	80%		40-140%
321-60-8	2-Fluorobiphenyl	89%		40-140%

(a) Client Defined Limit.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
		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	2.67	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/14/18	09/14/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.00	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	233	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0547	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13369
(2) Instrument QC Batch: MA13375
(3) Prep QC Batch: MP12723
(4) Prep QC Batch: MP12724

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3	**Date Sampled:**	09/11/18
Matrix:	AQ - Water	**Date Received:**	09/12/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	326	5.0	mg/l	1	09/14/18 17:00	ATX	SM18 2320B
Alkalinity, Carbonate [a]	14.0	5.0	mg/l	1	09/14/18 17:00	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	340	5.0	mg/l	1	09/14/18 17:00	ATX	SM 2320B-2011
Bromide [a]	< 0.50	0.50	mg/l	1	09/17/18 16:34	ATX	SW846 9056A
Chloride [a]	30.8	1.0	mg/l	2	09/17/18 19:57	ATX	SW846 9056A
Silica, Dissolved [a]	8.4	0.35	mg/l	5	09/15/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	526	10	mg/l	1	09/14/18	ATX	SM 2540C-2011
Specific Conductivity [b]	895	1.0	umhos/cm	1	09/17/18 18:00	ATX	EPA 120.1
Sulfate [a]	0.87	0.50	mg/l	1	09/17/18 16:34	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

SGS North America Inc.

Report of Analysis

Client Sample ID:	DERBONNE RELIEF WELL		
Lab Sample ID:	LA47639-3F	**Date Sampled:**	09/11/18
Matrix:	AQ - Water Filtered	**Date Received:**	09/12/18
		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	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium [a]	< 2.0	2.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium [a]	< 0.10	0.10	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead [a]	< 0.015	0.015	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury [a]	< 0.0020	0.0020	mg/l	1	09/14/18	09/14/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	< 1.0	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver [a]	< 0.018	0.018	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	261	1.0	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0510	0.020	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc [a]	< 1.1	1.1	mg/l	10	09/13/18	09/14/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13369
(2) Instrument QC Batch: MA13375
(3) Prep QC Batch: MP12723
(4) Prep QC Batch: MP12724

(a) Client Defined Limit.

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47639-4	**Date Sampled:**	09/11/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038654.D	1	09/14/18 13:31	AR	n/a	n/a	V2I1790
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47639-4	**Date Sampled:**	09/11/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	98%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	94%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA47639-4	**Date Sampled:**	09/11/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/12/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC380023.D	1	09/15/18 02:03	MB	n/a	n/a	GLC1825
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	98% [b]		70-130%
615-59-8	2,5-Dibromotoluene	101% [c]		70-130%

(a) Client Defined Limit.
(b) Recovery from Aliphatics fraction.
(c) Recovery from Aromatics fraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47639-5	**Date Sampled:**	09/11/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2I038652.D	1	09/14/18 13:03	AR	n/a	n/a	V2I1790
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	0.10	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane [a]	ND	0.10	mg/l	
75-25-2	Bromoform [a]	ND	0.10	mg/l	
75-15-0	Carbon Disulfide [a]	ND	0.10	mg/l	
56-23-5	Carbon Tetrachloride [a]	ND	0.0050	mg/l	
108-90-7	Chlorobenzene [a]	ND	0.10	mg/l	
75-00-3	Chloroethane [a]	ND	0.010	mg/l	
67-66-3	Chloroform [a]	ND	0.10	mg/l	
124-48-1	Dibromochloromethane [a]	ND	0.10	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.20	mg/l	
541-73-1	m-Dichlorobenzene [a]	ND	0.010	mg/l	
95-50-1	o-Dichlorobenzene [a]	ND	0.60	mg/l	
106-46-7	p-Dichlorobenzene [a]	ND	0.075	mg/l	
75-34-3	1,1-Dichloroethane [a]	ND	0.081	mg/l	
107-06-2	1,2-Dichloroethane [a]	ND	0.0050	mg/l	
75-35-4	1,1-Dichloroethylene [a]	ND	0.0070	mg/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	0.070	mg/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	0.10	mg/l	
540-59-0	1,2-Dichloroethene (total) [a]	ND	0.070	mg/l	
78-87-5	1,2-Dichloropropane [a]	ND	0.0050	mg/l	
10061-01-5	cis-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
10061-02-6	trans-1,3-Dichloropropene [a]	ND	0.0050	mg/l	
542-75-6	1,3-Dichloropropene (total) [a]	ND	0.0050	mg/l	
100-41-4	Ethylbenzene [a]	ND	0.70	mg/l	
67-72-1	Hexachloroethane [a]	ND	0.010	mg/l	
78-83-1	Isobutyl Alcohol [a]	ND	1.1	mg/l	
74-83-9	Methyl Bromide [a]	ND	0.010	mg/l	
74-87-3	Methyl Chloride [a]	ND	0.010	mg/l	
75-09-2	Methylene Chloride [a]	ND	0.0050	mg/l	
78-93-3	Methyl Ethyl Ketone [a]	ND	0.19	mg/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	0.20	mg/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47639-5	**Date Sampled:**	09/11/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/12/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

VOA RECAP List

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.020	mg/l	
100-42-5	Styrene [a]	ND	0.10	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane [a]	ND	0.0050	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene [a]	ND	0.0050	mg/l	
108-88-3	Toluene [a]	ND	1.0	mg/l	
71-55-6	1,1,1-Trichloroethane [a]	ND	0.20	mg/l	
79-00-5	1,1,2-Trichloroethane [a]	ND	0.0050	mg/l	
79-01-6	Trichloroethylene [a]	ND	0.0050	mg/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.13	mg/l	
75-01-4	Vinyl Chloride [a]	ND	0.0020	mg/l	
	m,p-Xylene [a]	ND	10	mg/l	
95-47-6	o-Xylene [a]	ND	10	mg/l	
1330-20-7	Xylene (total) [a]	ND	10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	93%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	95%		89-111%

(a) Client Defined Limit.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA47639-5	**Date Sampled:**	09/11/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/12/18
Method:	MADEP VPH REV 1.1	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC380017.D	1	09/14/18 21:41	MB	n/a	n/a	GLC1825
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile Petroleum Hydrocarbons (VPH)

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.) [a]	ND	3.2	mg/l	
	Aliphatics > C8-C10 (Unadj.)	ND	0.15	mg/l	
	Aromatics > C8-C10 (Unadj.)	ND	0.15	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
615-59-8	2,5-Dibromotoluene	97% [b]		70-130%
615-59-8	2,5-Dibromotoluene	106% [c]		70-130%

(a) Client Defined Limit.
(b) Recovery from Aliphatics fraction.
(c) Recovery from Aromatics fraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LA47639

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

SAMPLE CHAIN-OF-CUSTODY RECORD

		Laboratory:	SGS Lafayette
Project Name:	Indigo	*Collected By:*	KC/WP
Project Number:	8060.00	*Company:*	Hydro-Environmental Technology, Inc.
Project Location:	DeSoto Parish, Louisiana	*Date:*	9/11/2018

	Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments	
1	Bagley Rig Supply Well	AQ	9/11/2018	11:50	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
2	ROM Rig Supply Well	AQ	9/11/2018	14:55	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
3	Derbonne Relief Well	AQ	9/11/2018	16:00	(8) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals	16
4	Field Blank	AQ	9/11/2018	11:05	(6) 40mL Glass HCl	VOC 8260, VPH	4°C	6
5	Trip Blank	AQ	9/11/2018	6:45	(6) 40mL Glass HCl	VOC 8260, VPH	4°C	6

*Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, strontium, zinc
*Cations: aluminum, calcium, iron, magnesium, manganese, potassium, sodium
*Anions: bromide, sulfate, carbonate alkalinity, bicarbonate alkalinity

Relinquished By: [signature] Date/Time: 09-12-2018 / 1530	Relinquished By: Derek J. Broussard Date/Time: 09/12/2018 1530
Relinquished By: Derek J. Broussard Date/Time: 9/12/2018 1545	Relinquished By: [signature] Date/Time: 09/12/18 1545
Analysis Due: Verbal:	Written:

Page 1 of 1

(SON cul chndls (24 DU-M) WS-4 (W) WS-9 (11 B4), RTC-3 (1B1), (W), (3W2) Aca, (3W3) Aca

LA47639: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: LA47639 **Client:** HYDRO **Project:** INDIGO

Date / Time Received: 9/12/2018 3:45:00 PM **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (2.4/2.4);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Thermometer ID:	DV441;	
3. Cooler media:	Ice (direct contact)	
4. No. Coolers:	1	

Quality Control _Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☑	☐	☐
2. Trip Blank listed on COC:	☑	☐	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1790-MB2	2I038646.D	1	09/14/18	AR	n/a	n/a	V2I1790

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	1.4	50	ug/l	J
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
75-15-0	Carbon Disulfide	ND	1.0	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
540-59-0	1,2-Dichloroethene (total)	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
542-75-6	1,3-Dichloropropene (total)	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
67-72-1	Hexachloroethane	ND	1.0	ug/l	
78-83-1	Isobutyl Alcohol	ND	100	ug/l	
74-83-9	Methyl Bromide	0.78	1.0	ug/l	J
74-87-3	Methyl Chloride	ND	1.0	ug/l	
75-09-2	Methylene Chloride	ND	1.0	ug/l	
78-93-3	Methyl Ethyl Ketone	ND	13	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1790-MB2	2I038646.D	1	09/14/18	AR	n/a	n/a	V2I1790

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	2.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	95%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	95%	89-111%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1790-BS1	2I038648.D	1	09/14/18	AR	n/a	n/a	V2I1790
V2I1790-BSD1	2I038650.D	1	09/14/18	AR	n/a	n/a	V2I1790

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	44.0	88	47.7	95	8	38-178/30
71-43-2	Benzene	20	20.4	102	19.9	100	2	82-119/30
75-27-4	Bromodichloromethane	20	19.6	98	19.2	96	2	79-120/30
75-25-2	Bromoform	20	16.0	80	16.4	82	2	68-128/30
75-15-0	Carbon Disulfide	20	20.3	102	20.5	103	1	64-133/30
56-23-5	Carbon Tetrachloride	20	19.1	96	19.2	96	1	69-132/30
108-90-7	Chlorobenzene	20	20.4	102	20.1	101	1	85-120/30
75-00-3	Chloroethane	20	18.9	95	18.2	91	4	33-170/30
67-66-3	Chloroform	20	20.0	100	19.5	98	3	80-122/30
124-48-1	Dibromochloromethane	20	17.8	89	18.2	91	2	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	15.4	77	16.0	80	4	67-131/30
541-73-1	m-Dichlorobenzene	20	19.8	99	19.5	98	2	84-121/30
95-50-1	o-Dichlorobenzene	20	19.7	99	19.1	96	3	83-120/30
106-46-7	p-Dichlorobenzene	20	19.6	98	19.3	97	2	83-122/30
75-34-3	1,1-Dichloroethane	20	18.7	94	18.7	94	0	78-124/30
107-06-2	1,2-Dichloroethane	20	18.4	92	18.1	91	2	74-127/30
75-35-4	1,1-Dichloroethylene	20	20.2	101	19.9	100	1	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	20.7	104	21.1	106	2	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	19.6	98	20.1	101	3	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	40.3	101	41.2	103	2	78-123/30
78-87-5	1,2-Dichloropropane	20	20.8	104	20.3	102	2	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.0	100	20.2	101	1	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	19.6	98	19.2	96	2	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	39.6	99	39.5	99	0	50-150/30 [a]
100-41-4	Ethylbenzene	20	20.3	102	20.2	101	0	84-117/30
67-72-1	Hexachloroethane	20	15.8	79	16.0	80	1	53-141/30
78-83-1	Isobutyl Alcohol	200	156	78	165	83	6	20-175/30
74-83-9	Methyl Bromide	20	17.6	88	18.3	92	4	37-198/30
74-87-3	Methyl Chloride	20	20.1	101	20.1	101	0	50-136/30
75-09-2	Methylene Chloride	20	21.3	107	21.2	106	0	71-130/30
78-93-3	Methyl Ethyl Ketone	50	43.4	87	45.8	92	5	59-149/30
108-10-1	4-Methyl-2-pentanone	50	46.3	93	49.1	98	6	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	18.5	93	18.8	94	2	70-126/30
100-42-5	Styrene	20	21.2	106	21.3	107	0	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	19.9	100	20.0	100	1	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	18.5	93	19.1	96	3	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2I1790-BS1	2I038648.D	1	09/14/18	AR	n/a	n/a	V2I1790
V2I1790-BSD1	2I038650.D	1	09/14/18	AR	n/a	n/a	V2I1790

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	20.6	103	20.1	101	2	75-133/30
108-88-3	Toluene	20	19.7	99	19.5	98	1	80-121/30
71-55-6	1,1,1-Trichloroethane	20	19.7	99	19.8	99	1	74-126/30
79-00-5	1,1,2-Trichloroethane	20	19.4	97	19.6	98	1	80-123/30
79-01-6	Trichloroethylene	20	19.7	99	19.5	98	1	62-125/30
75-69-4	Trichlorofluoromethane	20	19.2	96	18.6	93	3	62-148/30
75-01-4	Vinyl Chloride	20	18.7	94	18.7	94	0	67-130/30
	m,p-Xylene	40	40.7	102	40.9	102	0	82-121/30
95-47-6	o-Xylene	20	20.1	101	20.3	102	1	84-119/30
1330-20-7	Xylene (total)	60	60.8	101	61.2	102	1	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	93%	95%	84-124%
2037-26-5	Toluene-D8	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	97%	99%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47639-3MS	2I038666.D	5	09/14/18	AR	n/a	n/a	V2I1790
LA47639-3MSD	2I038668.D	5	09/14/18	AR	n/a	n/a	V2I1790
LA47639-3	2I038664.D	1	09/14/18	AR	n/a	n/a	V2I1790

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	LA47639-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	1.8		250	166	66	250	178	70	7	39-164/27
71-43-2	Benzene	ND		100	102	102	100	101	101	1	31-161/15
75-27-4	Bromodichloromethane	ND		100	98.8	99	100	96.3	96	3	64-122/36
75-25-2	Bromoform	ND		100	81.4	81	100	78.7	79	3	43-125/37
75-15-0	Carbon Disulfide	ND		100	103	103	100	103	103	0	38-138/36
56-23-5	Carbon Tetrachloride	ND		100	99.6	100	100	94.1	94	6	53-133/36
108-90-7	Chlorobenzene	ND		100	101	101	100	102	102	1	74-122/34
75-00-3	Chloroethane	ND		100	93.1	93	100	94.6	95	2	14-181/43
67-66-3	Chloroform	ND		100	98.8	99	100	97.0	97	2	65-130/24
124-48-1	Dibromochloromethane	ND		100	91.1	91	100	89.3	89	2	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	75.2	75	100	82.0	82	9	46-135/25
541-73-1	m-Dichlorobenzene	ND		100	95.4	95	100	98.4	98	3	70-120/35
95-50-1	o-Dichlorobenzene	ND		100	92.2	92	100	95.6	96	4	72-120/35
106-46-7	p-Dichlorobenzene	ND		100	94.5	95	100	97.0	97	3	68-120/35
75-34-3	1,1-Dichloroethane	ND		100	96.2	96	100	96.2	96	0	56-138/32
107-06-2	1,2-Dichloroethane	ND		100	94.6	95	100	92.2	92	3	51-141/39
75-35-4	1,1-Dichloroethylene	ND		100	103	103	100	105	105	2	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		100	105	105	100	104	104	1	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		100	100	100	100	101	101	1	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		200	206	103	200	205	103	0	54-134/30
78-87-5	1,2-Dichloropropane	ND		100	103	103	100	102	102	1	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		100	96.1	96	100	97.6	98	2	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		100	95.9	96	100	93.8	94	2	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		200	192	96	200	191	96	1	50-150/30 [a]
100-41-4	Ethylbenzene	ND		100	101	101	100	102	102	1	47-146/30
67-72-1	Hexachloroethane	ND		100	87.0	87	100	81.3	81	7	32-128/39
78-83-1	Isobutyl Alcohol	ND		1000	753	75	1000	823	82	9	33-142/54
74-83-9	Methyl Bromide	ND		100	85.2	85	100	94.9	95	11	1-150/64
74-87-3	Methyl Chloride	ND		100	98.8	99	100	100	100	1	16-146/29
75-09-2	Methylene Chloride	ND		100	107	107	100	109	109	2	55-134/36
78-93-3	Methyl Ethyl Ketone	ND		250	194	78	250	208	83	7	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		250	224	90	250	239	96	6	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		100	91.3	91	100	95.2	95	4	52-146/32
100-42-5	Styrene	ND		100	106	106	100	106	106	0	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	100	100	100	98.9	99	1	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	92.6	93	100	97.3	97	5	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47639-3MS	2I038666.D	5	09/14/18	AR	n/a	n/a	V2I1790
LA47639-3MSD	2I038668.D	5	09/14/18	AR	n/a	n/a	V2I1790
LA47639-3	2I038664.D	1	09/14/18	AR	n/a	n/a	V2I1790

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	LA47639-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	ND		100	99.7	100	100	100	100	0	58-135/37
108-88-3	Toluene	0.80		100	100	99	100	99.1	98	1	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		100	101	101	100	98.8	99	2	63-128/36
79-00-5	1,1,2-Trichloroethane	ND		100	96.0	96	100	95.1	95	1	61-138/17
79-01-6	Trichloroethylene	ND		100	102	102	100	100	100	2	57-131/36
75-69-4	Trichlorofluoromethane	ND		100	96.5	97	100	94.7	95	2	31-156/36
75-01-4	Vinyl Chloride	ND		100	93.6	94	100	96.6	97	3	22-155/49
	m,p-Xylene	ND		200	205	103	200	204	102	0	35-159/31
95-47-6	o-Xylene	ND		100	98.5	99	100	101	101	3	50-144/35
1330-20-7	Xylene (total)	ND		300	303	101	300	305	102	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA47639-3	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	94%	99%	84-124%
2037-26-5	Toluene-D8	99%	100%	99%	83-115%
460-00-4	4-Bromofluorobenzene	99%	97%	94%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12269-MB	A0024717.D	1	09/17/18	PC	09/16/18	OP12269	EA638

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	ug/l	
100-02-7	4-Nitrophenol	ND	25	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
83-32-9	Acenaphthene	ND	0.20	ug/l	
208-96-8	Acenaphthylene	ND	0.20	ug/l	
62-53-3	Aniline	ND	5.0	ug/l	
120-12-7	Anthracene	ND	0.20	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
92-52-4	1,1'-Biphenyl	ND	10	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12269-MB	A0024717.D	1	09/17/18	PC	09/16/18	OP12269	EA638

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Result	RL	Units	Q
86-73-7	Fluorene	ND	0.20	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	0.20	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	5.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	0.20	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	68%	23-85%
4165-62-2	Phenol-d5	52%	10-69%
118-79-6	2,4,6-Tribromophenol	93%	48-138%
4165-60-0	Nitrobenzene-d5	85%	51-128%
321-60-8	2-Fluorobiphenyl	82%	55-122%
1718-51-0	Terphenyl-d14	96%	43-138%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12269-BS	A0024718.D	1	09/17/18	PC	09/16/18	OP12269	EA638
OP12269-BSD	A0024719.D	1	09/17/18	PC	09/16/18	OP12269	EA638

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	5	3.9	78	3.9	78	0	63-104/19
120-83-2	2,4-Dichlorophenol	5	4.3	86	4.4	88	2	68-112/19
105-67-9	2,4-Dimethylphenol	5	4.1	82	4.3	86	5	64-110/20
51-28-5	2,4-Dinitrophenol	25	25.1	100	25.4	102	1	51-121/30
100-02-7	4-Nitrophenol	25	13.2	53	13.6	54	3	20-68/23
87-86-5	Pentachlorophenol	25	23.7	95	23.7	95	0	52-120/29
108-95-2	Phenol	5	2.5	50	2.4	48	4	18-67/20
58-90-2	2,3,4,6-Tetrachlorophenol	5	4.7	94	4.8	96	2	67-121/21
95-95-4	2,4,5-Trichlorophenol	5	4.8	96	4.9	98	2	67-119/21
88-06-2	2,4,6-Trichlorophenol	5	4.3	86	4.4	88	2	67-120/21
83-32-9	Acenaphthene	5	3.9	78	4.0	80	3	67-114/28
208-96-8	Acenaphthylene	5	4.0	80	4.2	84	5	67-119/26
62-53-3	Aniline	5	3.6	72	3.8	76	5	40-114/40
120-12-7	Anthracene	5	4.3	86	4.3	86	0	68-121/24
56-55-3	Benzo(a)anthracene	5	4.3	86	4.3	86	0	69-113/20
50-32-8	Benzo(a)pyrene	5	4.6	92	4.6	92	0	71-124/22
205-99-2	Benzo(b)fluoranthene	5	4.8	96	4.7	94	2	72-120/22
207-08-9	Benzo(k)fluoranthene	5	4.2	84	4.1	82	2	71-124/21
92-52-4	1,1'-Biphenyl	5	3.8	76	4.0	80	5	65-122/29
85-68-7	Butyl Benzyl Phthalate	5	4.9	98	4.9	98	0	73-123/21
106-47-8	4-Chloroaniline	5	4.2	84	4.1	82	2	58-113/51
111-44-4	bis(2-Chloroethyl)ether	5	4.1	82	4.2	84	2	50-118/28
108-60-1	2,2'-Oxybis(1-chloropropane)	5	4.0	80	4.1	82	2	43-138/21
91-58-7	2-Chloronaphthalene	5	3.8	76	3.8	76	0	64-114/30
218-01-9	Chrysene	5	4.3	86	4.4	88	2	70-115/20
53-70-3	Dibenzo(a,h)anthracene	5	4.7	94	4.8	96	2	70-124/21
132-64-9	Dibenzofuran	5	3.9	78	4.0	80	3	67-117/27
91-94-1	3,3'-Dichlorobenzidine	5	8.0	160*	8.5	170*	6	69-122/38
84-66-2	Diethyl Phthalate	5	4.5	90	4.6	92	2	71-123/21
131-11-3	Dimethyl Phthalate	5	4.4	88	4.5	90	2	69-119/20
117-84-0	Di-n-octyl Phthalate	5	5.1	102	5.1	102	0	66-121/22
99-65-0	1,3-Dinitrobenzene	25	24.1	96	24.6	98	2	71-122/21
121-14-2	2,4-Dinitrotoluene	5	4.7	94	4.7	94	0	73-122/21
606-20-2	2,6-Dinitrotoluene	5	4.5	90	4.7	94	4	72-121/21
117-81-7	bis(2-Ethylhexyl)phthalate	5	4.8	96	4.7	94	2	68-126/21
206-44-0	Fluoranthene	5	4.5	90	4.6	92	2	73-120/21

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12269-BS	A0024718.D	1	09/17/18	PC	09/16/18	OP12269	EA638
OP12269-BSD	A0024719.D	1	09/17/18	PC	09/16/18	OP12269	EA638

The QC reported here applies to the following samples: **Method:** SW846 8270D

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
86-73-7	Fluorene	5	4.0	80	4.1	82	2	69-118/25
118-74-1	Hexachlorobenzene	5	4.0	80	4.1	82	2	67-117/23
87-68-3	Hexachlorobutadiene	5	3.0	60	2.8	56	7	42-120/35
77-47-4	Hexachlorocyclopentadiene	5	2.9	58	2.7	54	7	35-123/48
193-39-5	Indeno(1,2,3-cd)pyrene	5	4.7	94	4.7	94	0	70-123/21
78-59-1	Isophorone	5	4.2	84	4.4	88	5	70-119/19
91-57-6	2-Methylnaphthalene	5	3.8	76	3.8	76	0	65-113/27
91-20-3	Naphthalene	5	3.8	76	3.8	76	0	63-114/23
88-74-4	2-Nitroaniline	25	25.1	100	25.8	103	3	68-125/21
99-09-2	3-Nitroaniline	25	23.7	95	23.6	94	0	69-117/23
100-01-6	4-Nitroaniline	25	25.8	103	25.7	103	0	67-122/19
98-95-3	Nitrobenzene	5	4.1	82	4.1	82	0	69-116/21
621-64-7	N-Nitroso-di-n-propylamine	5	4.2	84	4.4	88	5	67-120/20
86-30-6	N-Nitrosodiphenylamine	5	4.3	86	4.4	88	2	67-119/25
85-01-8	Phenanthrene	5	4.1	82	4.2	84	2	70-117/23
129-00-0	Pyrene	5	4.4	88	4.4	88	0	70-119/21
95-94-3	1,2,4,5-Tetrachlorobenzene	5	3.4	68	3.3	66	3	55-117/35
120-82-1	1,2,4-Trichlorobenzene	5	3.5	70	3.4	68	3	56-111/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	66%	64%	23-85%
4165-62-2	Phenol-d5	53%	51%	10-69%
118-79-6	2,4,6-Tribromophenol	101%	100%	48-138%
4165-60-0	Nitrobenzene-d5	83%	80%	51-128%
321-60-8	2-Fluorobiphenyl	77%	78%	55-122%
1718-51-0	Terphenyl-d14	90%	89%	43-138%

* = Outside of Control Limits.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC1825-MB1	LC380008.D	1	09/14/18	MB	n/a	n/a	GLC1825

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics C6-C8 (Unadj.)	ND	30	ug/l	
	Aliphatics > C8-C10 (Unadj.)	ND	50	ug/l	
	Aromatics > C8-C10 (Unadj.)	ND	50	ug/l	

CAS No.	Surrogate Recoveries		Limits
615-59-8	2,5-Dibromotoluene	92% [a]	70-130%
615-59-8	2,5-Dibromotoluene	95% [b]	70-130%

(a) Recovery from Aliphatics fraction.
(b) Recovery from Aromatics fraction.

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12251-MB	LK113192.D	1	09/14/18	DF	09/13/18	OP12251	GLK726

The QC reported here applies to the following samples: **Method:** SW846 8011

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Result	RL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.020	ug/l	

CAS No.	Surrogate Recoveries		Limits
348-51-6	1-Chloro-2-fluorobenzene	91%	55-149%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC1825-BS1	LC380006.D	1	09/14/18	MB	n/a	n/a	GLC1825
GLC1825-BSD1	LC380007.D	1	09/14/18	MB	n/a	n/a	GLC1825

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	150	150	100	138	92	8	70-130/30
	Aliphatics > C8-C10 (Unadj.)	250	253	101	245	98	3	70-130/30
	Aromatics > C8-C10 (Unadj.)	250	267	107	261	104	2	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
615-59-8	2,5-Dibromotoluene	101% [a]	99% [a]	70-130%
615-59-8	2,5-Dibromotoluene	105% [b]	103% [b]	70-130%

(a) Recovery from Aliphatics fraction.
(b) Recovery from Aromatics fraction.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12251-BS	LK113193.D	1	09/14/18	DF	09/13/18	OP12251	GLK726
OP12251-BSD	LK113194.D	1	09/14/18	DF	09/13/18	OP12251	GLK726

The QC reported here applies to the following samples: **Method:** SW846 8011

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	0.251	0.31	123	0.31	123	0	60-148/18

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
348-51-6	1-Chloro-2-fluorobenzene	99%	95%	55-149%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47611-1MS	LC380012.D	100	09/14/18	MB	n/a	n/a	GLC1825
LA47611-1MSD	LC380013.D	100	09/14/18	MB	n/a	n/a	GLC1825
LA47611-1 [a]	LC380011.D	20	09/14/18	MB	n/a	n/a	GLC1825

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

LA47639-1, LA47639-2, LA47639-3, LA47639-4, LA47639-5

CAS No.	Compound	LA47611-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	705		15000	15200	97	15000	14500	92	5	70-130/50
	Aliphatics > C8-C10 (Unadj.)	2940		25000	27100	97	25000	26800	95	1	70-130/50
	Aromatics > C8-C10 (Unadj.)	5610		25000	31900	105	25000	32500	108	2	70-130/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47611-1	Limits
615-59-8	2,5-Dibromotoluene	105% [b]	104% [b]	100% [b]	70-130%
615-59-8	2,5-Dibromotoluene	111% [c]	108% [c]	107% [c]	70-130%

(a) Sample used for QC purposes only.
(b) Recovery from Aliphatics fraction.
(c) Recovery from Aromatics fraction.

* = Outside of Control Limits.

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12311-MB	X0050903.D	1	09/24/18	JT	09/20/18	OP12311	GLB1613

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Result	RL	Units	Q
	Aromatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aromatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aromatics > C16-C21 (Unadj.)	118	140	ug/l	J
	Aromatics > C21-C35 (Unadj.)	101	140	ug/l	J

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	87%	40-140%
321-60-8	2-Fluorobiphenyl	82%	40-140%

Method Blank Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12311-MB	Y0050903.D	1	09/24/18	JT	09/20/18	OP12311	GLB1614

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND	140	ug/l	
	Aliphatics > C12-C16 (Unadj.)	ND	140	ug/l	
	Aliphatics > C16-C35 (Unadj.)	ND	140	ug/l	

CAS No.	Surrogate Recoveries		Limits
3386-33-2	1-Chlorooctadecane	92%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12311-BS	X0050906.D	1	09/24/18	JT	09/20/18	OP12311	GLB1613
OP12311-BSD	X0050907.D	1	09/24/18	JT	09/20/18	OP12311	GLB1613

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	466	353	76	336	73	5	40-140/30
	Aromatics > C12-C16 (Unadj.)	1400	1060	76	1020	74	4	40-140/30
	Aromatics > C16-C21 (Unadj.)	2330	1910	82	1860	81	3	40-140/30
	Aromatics > C21-C35 (Unadj.)	3730	3550	95	3470	94	2	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	76%	77%	40-140%
321-60-8	2-Fluorobiphenyl	74%	76%	40-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12311-BS	Y0050906.D	1	09/24/18	JT	09/20/18	OP12311	GLB1614
OP12311-BSD	Y0050907.D	1	09/24/18	JT	09/20/18	OP12311	GLB1614

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	466	338	72	303	66	11	40-140/30
	Aliphatics > C12-C16 (Unadj.)	933	683	73	611	66	11	40-140/30
	Aliphatics > C16-C35 (Unadj.)	4200	2810	67	2480	60	12	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	71%	66%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12311-MS	X0050916.D	1	09/24/18	JT	09/20/18	OP12311	GLB1613
OP12311-MSD	X0050917.D	1	09/24/18	JT	09/20/18	OP12311	GLB1613
LA47638-8	X0050911.D	1	09/24/18	JT	09/20/18	OP12311	GLB1613

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	LA47638-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	ND		469	332	71	473	325	69	2	40-140/50
	Aromatics > C12-C16 (Unadj.)	85.2		1410	1030	67	1420	1150	75	11	40-140/50
	Aromatics > C16-C21 (Unadj.)	115		2350	1790	71	2360	1680	66	6	40-140/50
	Aromatics > C21-C35 (Unadj.)	84.4		3750	3300	86	3780	3100	80	6	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47638-8	Limits
84-15-1	o-Terphenyl	73%	66%	76%	40-140%
321-60-8	2-Fluorobiphenyl	75%	71%	82%	40-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA47639
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12311-MS	Y0050916.D	1	09/24/18	JT	09/20/18	OP12311	GLB1614
OP12311-MSD	Y0050917.D	1	09/24/18	JT	09/20/18	OP12311	GLB1614
LA47638-8	Y0050911.D	1	09/24/18	JT	09/20/18	OP12311	GLB1614

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

LA47639-1, LA47639-2, LA47639-3

CAS No.	Compound	LA47638-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	ND		454	326	72	455	340	75	4	40-140/50
	Aliphatics > C12-C16 (Unadj.)	ND		907	598	66	909	621	68	4	40-140/50
	Aliphatics > C16-C35 (Unadj.)	ND		4080	2460	60	4090	2560	63	4	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	LA47638-8	Limits
3386-33-2	1-Chlorooctadecane	65%	67%	74%	40-140%

* = Outside of Control Limits.

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: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	6.9	9.3	4.6	<100
Antimony	1.0	.043	.34		
Arsenic	1.0	.062	.26	-0.25	<1.0
Barium	1.0	.033	.46	0.052	<1.0
Beryllium	1.0	.0077	.28		
Boron	20	1.3	2.9		
Cadmium	0.50	.011	.12	-0.0081	<0.50
Calcium	100	5.7	20	-27	<100
Cerium	1.0	.0041	.16		
Chromium	1.0	.11	.15	-0.20	<1.0
Cobalt	1.0	.012	.14		
Copper	1.0	.91	.74		
Iron	100	48	16	-38	<100
Lanthanum	1.0	.0038	.41		
Lithium	2.0	.1	.61		
Lead	1.0	.0081	.13	-0.21	<1.0
Magnesium	100	1.6	11	6.5	<100
Manganese	2.0	.48	.53	-0.046	<2.0
Molybdenum	1.0	.048	.89		
Nickel	1.0	.037	.2		
Potassium	100	3.4	7.6	-13	<100
Selenium	5.0	.38	3.1	-1.1	<5.0
Silver	1.0	.0047	.13	-0.14	<1.0
Silicon	500	6.6	130		
Sodium	100	24	9.9	-7.9	<100
Strontium	2.0	.12	.27	-0.027	<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	0.41	<5.0

Associated samples MP12723: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	RL	IDL	MDL	MB raw	final

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: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	LA47636-1 Original	MS	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	1120	5710	5100	90.0	75-125
Antimony					
Arsenic	0.0	95.7	100	95.7	75-125
Barium	97.1	172	100	74.9N(a)	75-125
Beryllium					
Boron					
Cadmium	0.0	92.5	100	92.5	75-125
Calcium	39100	35500	5000	-72.0(b)	75-125
Cerium					
Chromium	1.6	99.2	100	97.6	75-125
Cobalt					
Copper					
Iron	1340	6030	5000	93.8	75-125
Lanthanum					
Lithium					
Lead	1.1	99.3	100	98.2	75-125
Magnesium	1500	5880	5000	87.6	75-125
Manganese	154	218	100	64.0N(a)	75-125
Molybdenum					
Nickel					
Potassium	2660	7050	5000	87.8	75-125
Selenium	0.0	461	500	92.2	75-125
Silver	0.0	95.7	100	95.7	75-125
Silicon					
Sodium	9760	12500	5000	54.8N(a)	75-125
Strontium	271	310	100	39.0N(a)	75-125
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	42.4	133	100	90.6	75-125

Associated samples MP12723: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	LA47636-1 Original MS	Spikelot MPICPMS6 % Rec	QC Limits

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 recovery indicates possible matrix interference or sample non-homogeneity.
(b) 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: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	LA47636-1 Original	MSD	Spikelot MPICPMS6	% Rec	MSD RPD	QC Limit
Aluminum	1120	5750	5100	90.8	0.7	20
Antimony						
Arsenic	0.0	101	100	101.0	5.4	20
Barium	97.1	178	100	80.9	3.4	20
Beryllium						
Boron						
Cadmium	0.0	94.6	100	94.6	2.2	20
Calcium	39100	37000	5000	-42.0(a)	4.1	20
Cerium						
Chromium	1.6	100	100	98.4	0.8	20
Cobalt						
Copper						
Iron	1340	6010	5000	93.4	0.3	20
Lanthanum						
Lithium						
Lead	1.1	103	100	101.9	3.7	20
Magnesium	1500	5830	5000	86.6	0.9	20
Manganese	154	221	100	67.0N(b)	1.4	20
Molybdenum						
Nickel						
Potassium	2660	7140	5000	89.6	1.3	20
Selenium	0.0	462	500	92.4	0.2	20
Silver	0.0	97.3	100	97.3	1.7	20
Silicon						
Sodium	9760	12600	5000	56.8N(b)	0.8	20
Strontium	271	318	100	47.0N(b)	2.5	20
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	42.4	136	100	93.6	2.2	20

Associated samples MP12723: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	LA47636-1 Original MSD	Spikelot MPICPMS6 % Rec	MSD RPD	QC Limit

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.
(b) Spike recovery indicates possible matrix interference or sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 09/13/18

Metal	BSP Result	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	4930	5100	96.7	80-120
Antimony				
Arsenic	99.5	100	99.5	80-120
Barium	101	100	101.0	80-120
Beryllium				
Boron				
Cadmium	95.0	100	95.0	80-120
Calcium	5000	5000	100.0	80-120
Cerium				
Chromium	95.8	100	95.8	80-120
Cobalt				
Copper				
Iron	4830	5000	96.6	80-120
Lanthanum				
Lithium				
Lead	98.3	100	98.3	80-120
Magnesium	4680	5000	93.6	80-120
Manganese	95.8	100	95.8	80-120
Molybdenum				
Nickel				
Potassium	5000	5000	100.0	80-120
Selenium	494	500	98.8	80-120
Silver	98.6	100	98.6	80-120
Silicon				
Sodium	4930	5000	98.6	80-120
Strontium	95.7	100	95.7	80-120
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	104	100	104.0	80-120

Associated samples MP12723: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	BSP Result	Spikelot MPICPMS6 % Rec	QC Limits

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	LA47636-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum	1120	915	18.6 (a)	0-10
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	97.1	75.3	22.5*(b)	0-10
Beryllium				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	39100	30000	23.4*(b)	0-10
Cerium				
Chromium	1.63	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron	1340	0.00	100.0(a)	0-10
Lanthanum				
Lithium				
Lead	1.14	0.00	100.0(a)	0-10
Magnesium	1500	1250	16.5*(b)	0-10
Manganese	154	111	27.9*(b)	0-10
Molybdenum				
Nickel				
Potassium	2660	1690	36.6*(b)	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Silicon				
Sodium	9760	6950	28.8*(b)	0-10
Strontium	271	202	25.2*(b)	0-10
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	42.4	0.00	100.0(a)	0-10

Associated samples MP12723: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

	LA47636-1	QC
Metal	Original SDL 5:25 %DIF	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.

POST DIGESTATE SPIKE SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12723 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/13/18

Metal	Sample ml	Final ml	LA47636-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Antimony										
Barium	0.4	10	97.11	3.8844	113	0.1	10	100	109.1	75-125
Beryllium										
Boron										
Cerium										
Cobalt										
Copper										
Lanthanum										
Lithium										
Manganese	0.4	10	153.5	6.14	107.7	0.1	10	100	101.6	75-125
Molybdenum										
Nickel										
Silicon										
Sodium	0.4	10	9760	390.4	5650	0.025	2000	5000	105.2	75-125
Strontium	0.4	10	270.5	10.82	112.3	0.1	10	100	101.5	75-125
Thallium										
Tin										
Titanium										
Uranium										
Vanadium										

Associated samples MP12723: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12724 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/14/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.06	.081	-0.0057	<0.20

Associated samples MP12724: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

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: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12724 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/14/18

Metal	LA47639-2 Original	MS	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	0.0	4.9	5	98.0	75-125

Associated samples MP12724: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12724 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/14/18

Metal	LA47639-2 Original	MSD	Spikelot HGSPIKE1	% Rec	MSD RPD	QC Limit
Mercury	0.0	4.9	5	98.0	0.0	20

Associated samples MP12724: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12724
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 09/14/18

Metal	BSP Result	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	4.9	5	98.0	80-120

Associated samples MP12724: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA47639
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP12724 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/14/18

Metal	LA47639-2 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-

Associated samples MP12724: LA47639-1, LA47639-2, LA47639-3, LA47639-1F, LA47639-2F, LA47639-3F

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

Misc. Forms

Custody Documents and Other Forms

(SGS Houston, TX)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS

500 Ambassador Caffery Parkway, Scott, LA 70583
Phone: 800-304-5227 Fax: 337-237-7838

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: LA47639

Client / Reporting Information

Company Name: SGS North America Inc.
Street Address: 500 Ambassador Caffery Parkway
City: Scott State: LA Zip: 70583
Project Contact: ralph.frye@sgs.com E-mail:
Phone #: 800-304-5227 Fax #:
Sampler(s) Name(s): KC/WP Phone:

Project Information

Project Name: 8060.00 Indigo-Desoto Parish, LA
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

BROIC9056,CHLIC9056,SCON,SIL,SO4IC9056,TDS,XCARBICALK

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	BROIC9056,CHLIC9056,SCON,SIL,SO4IC9056,TDS,XCARBICALK	LAB USE ONLY
1	BAGLEY RIG SUPPLY WELL		9/11/18	11:50:00 AM	KC/WP	AQ										X	
2	ROM RIG SUPPLY WELL		9/11/18	2:55:00 PM	KC/WP	AQ										X	
3	DERBONNE RELIEF WELL		9/11/18	4:00:00 PM	KC/WP	AQ										X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 9/24/2018

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other
- [X] COMMB

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		9/13/18				
2					9/13/18 1700	
3		9.13.18 2310	9-13-18 2310			
4						
5						

Custody Seal #: Intact / Not intact | Preserved where applicable | On Ice | Cooler Temp.: 5.1

Cooler 2

Date / Time: 9/13/2018 9:26:43 AM
CSR: ralphf
Job #: LA47639
Client Project: 8060.00 Indigo-Desoto Parish, LA
Deliverable: COMMB
TAT: Due 9/24/2018

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
LA47639-1	BAGLEY RIG SUPPLY WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK	3W2 ,3W2F ,OL ,RTC-3 1B-1 ,WS-41 VW ,WS-9 11B-4	KC/WP	9/11/2018	11:50:00 AM	
LA47639-2	ROM RIG SUPPLY WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK	3W2 ,3W2F ,OL ,RTC-3 1B-1 ,WS-41 VW ,WS-9 11B-4	KC/WP	9/11/2018	2:55:00 PM	
LA47639-3	DERBONNE RELIEF WELL	BROIC9056 ,CHLIC9056 ,SCON ,SIL ,SO4IC9056 ,TDS ,XCARBICALK	3W2 ,3W2F ,OL ,RTC-3 1B-1 ,WS-41 VW ,WS-9 11B-4	KC/WP	9/11/2018	4:00:00 PM	

Comments:

Sample Management Receipt: _____ Date: 2310 9/13/18

3 5200 J (NO)

9.1

SGS Sample Receipt Summary

Job Number: LA47639 **Client:** SGS **Project:** 8060 INDIGO

Date / Time Received: **Delivery Method:** **Airbill #'s:**

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (5.1/5.1);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		

Quality Control Preservation	Y	or	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☐		☐	☑	☐	☐
2. Trip Blank listed on COC:	☐		☐	☑		
3. Samples preserved properly:	☑		☐			
4. VOCs headspace free:	☐		☐	☑		

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Sample Receipt Log

Job #: LA47639 **Date / Time Received:** 9/13/2018 11:10:00 PM **Initials:** DS

Client: SGS

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	LA47639-1	500ml	1	M3A	N/P	Note #2 - Preservative check not applicable.	IR-5	5.1	0	5.1
1	LA47639-2	500ml	1	M3A	N/P	Note #2 - Preservative check not applicable.	IR-5	5.1	0	5.1
1	LA47639-3	500ml	1	M3A	N/P	Note #2 - Preservative check not applicable.	IR-5	5.1	0	5.1

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: LA47639
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	GN92829	5.0	2.0	mg/l				
Alkalinity, Carbonate	GN92830	5.0	0.0	mg/l				
Alkalinity, Total as CaCO3	GN92828	5.0	0.0	mg/l	100	101	101.0	90-100%
Bromide	GP49503/GN92778	0.50	0.0	mg/l	10	9.72	97.2	90-110%
Chloride	GP49503/GN92778	0.50	0.0	mg/l	10	9.06	90.6	90-110%
Silica, Dissolved	GN92737	0.070	0.0	mg/l	1.07	1.0	93.5	80-120%
Solids, Total Dissolved	GN92718	10	0.0	mg/l	500	485	97.0	88-110%
Specific Conductivity	GN92791	1.0	<1.0	umhos/cm				
Sulfate	GP49503/GN92778	0.50	0.0	mg/l	10	9.68	96.8	90-110%

Associated Samples:
Batch GN92718: LA47639-1, LA47639-2, LA47639-3
Batch GN92737: LA47639-1, LA47639-2, LA47639-3
Batch GN92791: LA47639-1, LA47639-2, LA47639-3
Batch GN92828: LA47639-1, LA47639-2, LA47639-3
Batch GN92829: LA47639-1, LA47639-2, LA47639-3
Batch GN92830: LA47639-1, LA47639-2, LA47639-3
Batch GP49503: LA47639-1, LA47639-2, LA47639-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA47639
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, Total as CaCO3	GN92828	LA47525-3	mg/l	490	490	0.0	0-10%
Bromide	GP49503/GN92778	LA47639-1	mg/l	0.0	0.0	0.0	0-19%
Chloride	GP49503/GN92778	LA47639-1	mg/l	15.1	15.2	0.7	0-13%
Silica, Dissolved	GN92737	LA47398-10	mg/l	0.0	0.0	0.0	0-20%
Solids, Total Dissolved	GN92718	LA47618-1	mg/l	423	419	1.0	0-5%
Specific Conductivity	GN92791	TD27218-1	umhos/cm	2780	2780	0.0	0-10%
Sulfate	GP49503/GN92778	LA47639-1	mg/l	1.4	1.4	0.0	0-20%

Associated Samples:
Batch GN92718: LA47639-1, LA47639-2, LA47639-3
Batch GN92737: LA47639-1, LA47639-2, LA47639-3
Batch GN92791: LA47639-1, LA47639-2, LA47639-3
Batch GN92828: LA47639-1, LA47639-2, LA47639-3
Batch GP49503: LA47639-1, LA47639-2, LA47639-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA47639
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	GN92828	LA47525-3	mg/l	490	25	151	100.0	75-117%
Bromide	GP49503/GN92778	LA47639-1	mg/l	0.0	10	10.1	101.0	80-120%
Chloride	GP49503/GN92778	LA47639-1	mg/l	15.1	10	26.0	109.0	80-120%
Silica, Dissolved	GN92737	LA47398-10	mg/l	0.0	1.07	0.92	86.0	75-125%
Sulfate	GP49503/GN92778	LA47639-1	mg/l	1.4	10	11.1	97.0	80-120%

Associated Samples:
Batch GN92737: LA47639-1, LA47639-2, LA47639-3
Batch GN92828: LA47639-1, LA47639-2, LA47639-3
Batch GP49503: LA47639-1, LA47639-2, LA47639-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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

e-Hardcopy 2.0
Automated Report

Technical Report for

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

SGS Job Number: LA48122

Sampling Date: 09/17/18

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: **17**

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
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.

SGS is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.
Review standard terms at: http://www.sgs.com/en/terms-and-conditions

Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sections: 1 2 3 4

Table of Contents

SGS North America Inc.

Sample Summary

Hydro-Environmental Technology, Inc.

8060.00 Indigo-Desoto Parish, LA

Job No: LA48122

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA48122-1	09/17/18	11:35	WP/KC	09/27/18	AQ	Water	MASON DISCHARGE
LA48122-2	09/17/18	12:40	WP/KC	09/27/18	AQ	Water	HANSON DISCHARGE
LA48122-3	09/17/18	10:50	WP/KC	09/27/18	AQ	Field Blank Water	FIELD BLANK
LA48122-4	09/17/18	07:00	WP/KC	09/27/18	AQ	Trip Blank Water	TRIP BLANK

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	MASON DISCHARGE		
Lab Sample ID:	LA48122-1	**Date Sampled:**	09/17/18
Matrix:	AQ - Water	**Date Received:**	09/27/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1J0055399.D	1	09/28/18 04:27	NN	n/a	n/a	V1J1501
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	98%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	HANSON DISCHARGE		
Lab Sample ID:	LA48122-2	**Date Sampled:**	09/17/18
Matrix:	AQ - Water	**Date Received:**	09/27/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1J0055400.D	1	09/28/18 04:51	NN	n/a	n/a	V1J1501
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	94%		84-124%
2037-26-5	Toluene-D8	102%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA48122-3	**Date Sampled:**	09/17/18
Matrix:	AQ - Field Blank Water	**Date Received:**	09/27/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G085029.D	1	09/27/18 22:05	CP	n/a	n/a	V1G4500
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	116%		84-124%
2037-26-5	Toluene-D8	99%		83-115%
460-00-4	4-Bromofluorobenzene	94%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	LA48122-4	**Date Sampled:**	09/17/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/27/18
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G085030.D	1	09/27/18 22:26	CP	n/a	n/a	V1G4500
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	114%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	93%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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

LA48122

SAMPLE CHAIN-OF-CUSTODY RECORD

Laboratory: SGS Lafayette LA

Project Name: Indigo - DeSoto

Collected By: WP/KC

Project #: 8060.00

Company: Hydro-Environmental Technology, Inc.

Project Location: DeSoto Parish LA

Date: 9-27-2018

Sample I.D.	Type	Date/Time Sampled	Containers	Analysis Requested/ Method	Comments
Mason Discharge	AQ	9-27-18 / 11:35	4 . 40ml vials w/ HCL	Benzene Only 8260	Chilled RUSH
Hanson Discharge	AQ	9-27-18 / 12:40	4 . 40ml vials w/HCL	Benzene Only 8260	↓
Field Blank	AQ	9-27-18 / 10:50	4 . 40 ml vials w/HCL	Benzene Only 8260	↓
Trip Blank	AQ	9-27-18 / 7:00	4 . 40 ml vials w/ HCL	Benzene Only 8260	↓

Relinquished By: [signature]	Received By: [signature]
Date/Time: 9-27-18 / 16:17	Date/Time: 092718 1617
Relinquished By:	Received By:
Date/Time:	Date/Time:
Analysis Due: Verbal:	Written:

LA48122: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: LA48122 **Client:** HYDRO **Project:** INDIGO DESOTO

Date / Time Received: 9/27/2018 4:17:00 PM **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (3.4/3.4);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☐	☑	3. COC Present:	☑	☐
2. Custody Seals Intact:	☐	☑	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Thermometer ID:	DV441;	
3. Cooler media:	Ice (direct contact)	
4. No. Coolers:	1	

Quality Control _Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: LA48122
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G4500-MB2	1G085012.D	1	09/27/18	CP	n/a	n/a	V1G4500

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA48122-3, LA48122-4

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	108%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	94%	89-111%

Method Blank Summary

Job Number: LA48122
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1J1501-MB4	1J0055380.D	1	09/27/18	NN	n/a	n/a	V1J1501

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA48122-1, LA48122-2

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	98%	84-124%
2037-26-5	Toluene-D8	101%	83-115%
460-00-4	4-Bromofluorobenzene	97%	89-111%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA48122
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G4500-BS1	1G085006.D	1	09/27/18	CP	n/a	n/a	V1G4500
V1G4500-BSD1	1G085008.D	1	09/27/18	CP	n/a	n/a	V1G4500

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA48122-3, LA48122-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.2	91	17.8	89	2	82-119/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	103%	103%	84-124%
2037-26-5	Toluene-D8	99%	99%	83-115%
460-00-4	4-Bromofluorobenzene	95%	95%	89-111%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA48122
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1J1501-BS2	1J0055377.D	1	09/27/18	NN	n/a	n/a	V1J1501
V1J1501-BSD2	1J0055378.D	1	09/27/18	NN	n/a	n/a	V1J1501

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA48122-1, LA48122-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	21.4	107	21.4	107	0	82-119/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	94%	93%	84-124%
2037-26-5	Toluene-D8	103%	103%	83-115%
460-00-4	4-Bromofluorobenzene	102%	102%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA48122
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA47992-18MS	1J0055382.D	10	09/27/18	NN	n/a	n/a	V1J1501
LA47992-18MSD	1J0055383.D	10	09/27/18	NN	n/a	n/a	V1J1501
LA47992-18	1J0055381.D	5	09/27/18	NN	n/a	n/a	V1J1501

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA48122-1, LA48122-2

CAS No.	Compound	LA47992-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	223		200	369	73	200	364	71	1	31-161/15

CAS No.	Surrogate Recoveries	MS	MSD	LA47992-18	Limits
17060-07-0	1,2-Dichloroethane-D4	93%	95%	94%	84-124%
2037-26-5	Toluene-D8	103%	103%	103%	83-115%
460-00-4	4-Bromofluorobenzene	101%	100%	98%	89-111%

* = Outside of Control Limits.