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: LA49126

Sampling Date: 10/23/18

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: 77

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)

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SGS North America Inc.

Sample Summary

Hydro-Environmental Technology, Inc.

Job No: LA49126

8060.00 Indigo-Desoto Parish, LA

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA49126-1	10/23/18	11:25	LV/EM	10/25/18	AQ	Water	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)
LA49126-1F	10/23/18	11:25	LV/EM	10/25/18	AQ	Water Filtered	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)
LA49126-2	10/23/18	14:20	LV/EM	10/25/18	AQ	Water	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)
LA49126-2F	10/23/18	14:20	LV/EM	10/25/18	AQ	Water Filtered	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)
LA49126-3	10/23/18	07:15	LV/EM	10/25/18	AQ	Field Blank Water	FIELD BLANK
LA49126-4	10/23/18	06:30	LV/EM	10/25/18	AQ	Trip Blank Water	TRIP BLANK

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)		
Lab Sample ID:	LA49126-1	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
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	C0039925.D	1	10/31/18 05:35	IK	10/29/18 07:19	OP12657	EC1681
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	0.0048	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0048	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0048	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.019	mg/l	
100-02-7	4-Nitrophenol	ND	0.024	mg/l	
87-86-5	Pentachlorophenol	ND	0.00096	mg/l	
108-95-2	Phenol	ND	0.0048	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0048	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0048	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0048	mg/l	
83-32-9	Acenaphthene	ND	0.00019	mg/l	
208-96-8	Acenaphthylene	ND	0.00019	mg/l	
62-53-3	Aniline	ND	0.0048	mg/l	
120-12-7	Anthracene	ND	0.00019	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.00019	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.00019	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.00019	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.00019	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0096	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0048	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.0048	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0048	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	0.0048	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0048	mg/l	
218-01-9	Chrysene	ND	0.00019	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.00019	mg/l	
132-64-9	Dibenzofuran	ND	0.0048	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0096	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0048	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0048	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0048	mg/l	
99-65-0	1,3-Dinitrobenzene	ND	0.0048	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:	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)		
Lab Sample ID:	LA49126-1	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
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	ND	0.0048	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0048	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0048	mg/l	
206-44-0	Fluoranthene	ND	0.00019	mg/l	
86-73-7	Fluorene	ND	0.00019	mg/l	
118-74-1	Hexachlorobenzene	ND	0.00096	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.00048	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0096	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.00019	mg/l	
78-59-1	Isophorone	ND	0.0048	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.00019	mg/l	
91-20-3	Naphthalene	ND	0.00019	mg/l	
88-74-4	2-Nitroaniline	ND	0.0048	mg/l	
99-09-2	3-Nitroaniline	ND	0.0048	mg/l	
100-01-6	4-Nitroaniline	ND	0.0048	mg/l	
98-95-3	Nitrobenzene	ND	0.00096	mg/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.0048	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0048	mg/l	
85-01-8	Phenanthrene	ND	0.00019	mg/l	
129-00-0	Pyrene	ND	0.00019	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.00096	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	44%		23-85%
4165-62-2	Phenol-d5	29%		10-69%
118-79-6	2,4,6-Tribromophenol	83%		48-138%
4165-60-0	Nitrobenzene-d5	82%		51-128%
321-60-8	2-Fluorobiphenyl	90%		55-122%
1718-51-0	Terphenyl-d14	84%		43-138%

(a) Associated CCV outside of control limits high, sample was ND.

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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:	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)		
Lab Sample ID:	LA49126-1	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
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	LC381173.D	1	10/27/18 23:09	SV	n/a	n/a	GLC1882
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.)	ND	0.15	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% [a]		70-130%
615-59-8	2,5-Dibromotoluene	103% [b]		70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics 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:	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)		
Lab Sample ID:	LA49126-1	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
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	X0005567.D	1	10/29/18 23:08	JT	10/26/18 14:00	OP12635	GLB1651
Run #2	Y0005567.D	1	10/29/18 23:09	JT	10/26/18 14:00	OP12635	GLB1652

	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.)	ND [a]	0.14	mg/l	
	Aliphatics > C12-C16 (Unadj.)	ND [a]	0.14	mg/l	
	Aliphatics > C16-C35 (Unadj.)	ND [a]	0.14	mg/l	
	Aromatics > C10-C12 (Unadj.)	ND	0.14	mg/l	
	Aromatics > C12-C16 (Unadj.)	ND	0.14	mg/l	
	Aromatics > C16-C21 (Unadj.)	ND	0.14	mg/l	
	Aromatics > C21-C35 (Unadj.)	ND	0.14	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		86%	40-140%
84-15-1	o-Terphenyl	76%		40-140%
321-60-8	2-Fluorobiphenyl	78%		40-140%

(a) 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:	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)		
Lab Sample ID:	LA49126-1	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
		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	1.06	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium	0.168	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	17.4	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	4.26	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.0302	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	10/29/18	10/29/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	2.74	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	247	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.831	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13785
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13152
(4) Prep QC Batch: MP13160

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)		
Lab Sample ID:	LA49126-1	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	300	5.0	mg/l	1	10/29/18 16:00	ATX	SM18 2320B
Alkalinity, Carbonate [a]	< 5.0	5.0	mg/l	1	10/29/18 16:00	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	305	5.0	mg/l	1	10/29/18 16:00	ATX	SM 2320B-2011
Bromide [a]	0.60	0.50	mg/l	1	11/07/18 01:33	ATX	SW846 9056A
Chloride [a]	87.7	5.0	mg/l	10	11/06/18 15:24	ATX	SW846 9056A
Silica, Dissolved [a]	7.9	0.70	mg/l	10	11/01/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	559	10	mg/l	1	10/29/18	ATX	SM 2540C-2011
Specific Conductivity [b]	962	1.0	umhos/cm	1	10/29/18 14:45	ATX	EPA 120.1
Sulfate [a]	48.5	5.0	mg/l	10	11/06/18 15:24	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:	031-8321Z (NELSON-MASON 1 ALT RIG SUPPLY)		
Lab Sample ID:	LA49126-1F	**Date Sampled:**	10/23/18
Matrix:	AQ - Water Filtered	**Date Received:**	10/25/18
		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	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium	0.149	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	14.3	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	4.37	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	0.0234	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	10/29/18	10/29/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	2.56	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	258	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.886	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13785
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13152
(4) Prep QC Batch: MP13160

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)		
Lab Sample ID:	LA49126-2	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
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	C0039926.D	1	10/31/18 05:57	IK	10/29/18 07:19	OP12657	EC1681
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN RECAP LIST

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	0.0048	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0048	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0048	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.019	mg/l	
100-02-7	4-Nitrophenol	ND	0.024	mg/l	
87-86-5	Pentachlorophenol	ND	0.00096	mg/l	
108-95-2	Phenol	ND	0.0048	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0048	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0048	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0048	mg/l	
83-32-9	Acenaphthene	ND	0.00019	mg/l	
208-96-8	Acenaphthylene	ND	0.00019	mg/l	
62-53-3	Aniline	ND	0.0048	mg/l	
120-12-7	Anthracene	ND	0.00019	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.00019	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.00019	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.00019	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.00019	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0096	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0048	mg/l	
106-47-8	4-Chloroaniline [a]	ND	0.0048	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0048	mg/l	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	0.0048	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0048	mg/l	
218-01-9	Chrysene	ND	0.00019	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.00019	mg/l	
132-64-9	Dibenzofuran	ND	0.0048	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0096	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0048	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0048	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0048	mg/l	
99-65-0	1,3-Dinitrobenzene	ND	0.0048	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:	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)		
Lab Sample ID:	LA49126-2	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
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	ND	0.0048	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0048	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0048	mg/l	
206-44-0	Fluoranthene	ND	0.00019	mg/l	
86-73-7	Fluorene	ND	0.00019	mg/l	
118-74-1	Hexachlorobenzene	ND	0.00096	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.00048	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0096	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.00019	mg/l	
78-59-1	Isophorone	ND	0.0048	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.00019	mg/l	
91-20-3	Naphthalene	ND	0.00019	mg/l	
88-74-4	2-Nitroaniline	ND	0.0048	mg/l	
99-09-2	3-Nitroaniline	ND	0.0048	mg/l	
100-01-6	4-Nitroaniline	ND	0.0048	mg/l	
98-95-3	Nitrobenzene	ND	0.00096	mg/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.0048	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0048	mg/l	
85-01-8	Phenanthrene	ND	0.00019	mg/l	
129-00-0	Pyrene	ND	0.00019	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.00096	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		23-85%
4165-62-2	Phenol-d5	34%		10-69%
118-79-6	2,4,6-Tribromophenol	85%		48-138%
4165-60-0	Nitrobenzene-d5	85%		51-128%
321-60-8	2-Fluorobiphenyl	92%		55-122%
1718-51-0	Terphenyl-d14	86%		43-138%

(a) 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:	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)		
Lab Sample ID:	LA49126-2	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
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	LC381174.D	1	10/27/18 23:53	SV	n/a	n/a	GLC1882
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.)	ND	0.15	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	102% [a]		70-130%
615-59-8	2,5-Dibromotoluene	104% [b]		70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics 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: 031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)
Lab Sample ID: LA49126-2
Matrix: AQ - Water
Method: MADEP EPH REV 1.1 SW846 3511
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 10/23/18
Date Received: 10/25/18
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0005568.D	1	10/29/18 23:33	JT	10/26/18 14:00	OP12635	GLB1651
Run #2	Y0005568.D	1	10/29/18 23:34	JT	10/26/18 14:00	OP12635	GLB1652

	Initial Volume	Final Volume
Run #1	55.3 ml	4.0 ml
Run #2	55.3 ml	4.0 ml

Louisiana EPH Ranges

CAS No.	Compound	Result	RL	Units	Q
	Aliphatics > C10-C12 (Unadj.)	ND [a]	0.14	mg/l	
	Aliphatics > C12-C16 (Unadj.)	ND [a]	0.14	mg/l	
	Aliphatics > C16-C35 (Unadj.)	ND [a]	0.14	mg/l	
	Aromatics > C10-C12 (Unadj.)	ND	0.14	mg/l	
	Aromatics > C12-C16 (Unadj.)	ND	0.14	mg/l	
	Aromatics > C16-C21 (Unadj.)	ND	0.14	mg/l	
	Aromatics > C21-C35 (Unadj.)	ND	0.14	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
3386-33-2	1-Chlorooctadecane		85%	40-140%
84-15-1	o-Terphenyl	81%		40-140%
321-60-8	2-Fluorobiphenyl	81%		40-140%

(a) 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:	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)		
Lab Sample ID:	LA49126-2	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
		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	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium	0.0322	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	1.44	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	10/29/18	10/29/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.27	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	324	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.103	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13785
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13152
(4) Prep QC Batch: MP13160

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)		
Lab Sample ID:	LA49126-2	**Date Sampled:**	10/23/18
Matrix:	AQ - Water	**Date Received:**	10/25/18
		Percent Solids:	n/a
Project:	8060.00 Indigo-Desoto Parish, LA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate [a]	372	5.0	mg/l	1	10/29/18 16:00	ATX	SM18 2320B
Alkalinity, Carbonate [a]	17.9	5.0	mg/l	1	10/29/18 16:00	ATX	SM18 2320B
Alkalinity, Total as CaCO3 [a]	390	5.0	mg/l	1	10/29/18 16:00	ATX	SM 2320B-2011
Bromide [a]	0.50	0.50	mg/l	1	11/07/18 12:58	ATX	SW846 9056A
Chloride [a]	69.5	2.5	mg/l	5	11/06/18 16:15	ATX	SW846 9056A
Silica, Dissolved [a]	6.8	0.70	mg/l	10	11/01/18	ATX	SM4500SIO2 C-2011
Solids, Total Dissolved [a]	638	10	mg/l	1	10/29/18	ATX	SM 2540C-2011
Specific Conductivity [b]	1080	1.0	umhos/cm	1	10/29/18 14:45	ATX	EPA 120.1
Sulfate [a]	6.4	0.50	mg/l	1	11/07/18 12:58	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:	031-7776Z (NELSON-JOHNSON #3 RIG SUPPLY)		
Lab Sample ID:	LA49126-2F	**Date Sampled:**	10/23/18
Matrix:	AQ - Water Filtered	**Date Received:**	10/25/18
		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	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Arsenic	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Barium	0.0243	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Cadmium	< 0.0050	0.0050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Calcium	1.11	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Chromium	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Iron	< 1.0	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Lead	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Magnesium	< 1.0	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Manganese	< 0.020	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Mercury	< 0.00020	0.00020	mg/l	1	10/29/18	10/29/18	SA	SW846 7470A [2]	SW846 7470A [4]
Potassium	1.07	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Selenium	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Silver	< 0.010	0.010	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Sodium	294	1.0	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Strontium	0.0895	0.020	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]
Zinc	< 0.050	0.050	mg/l	10	10/26/18	10/29/18	RT	SW846 6020A [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA13785
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13152
(4) Prep QC Batch: MP13160

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Client Sample ID:	FIELD BLANK		
Lab Sample ID:	LA49126-3	**Date Sampled:**	10/23/18
Matrix:	AQ - Field Blank Water	**Date Received:**	10/25/18
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	1I040657.D	1	10/29/18 18:11	LS	n/a	n/a	V1I1896
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	ND	0.050	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	mg/l	
75-25-2	Bromoform	ND	0.0010	mg/l	
75-15-0	Carbon Disulfide	ND	0.0010	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	mg/l	
75-00-3	Chloroethane	ND	0.0010	mg/l	
67-66-3	Chloroform	ND	0.0010	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene	ND	0.0010	mg/l	
95-50-1	o-Dichlorobenzene	ND	0.0010	mg/l	
106-46-7	p-Dichlorobenzene	ND	0.0010	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	mg/l	
540-59-0	1,2-Dichloroethene (total)	ND	0.0010	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	mg/l	
542-75-6	1,3-Dichloropropene (total)	ND	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
67-72-1	Hexachloroethane	ND	0.0010	mg/l	
78-83-1	Isobutyl Alcohol	ND	0.10	mg/l	
74-83-9	Methyl Bromide	ND	0.0010	mg/l	
74-87-3	Methyl Chloride	ND	0.0010	mg/l	
75-09-2	Methylene Chloride	ND	0.0010	mg/l	
78-93-3	Methyl Ethyl Ketone	ND	0.013	mg/l	
108-10-1	4-Methyl-2-pentanone	ND	0.013	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:	LA49126-3	**Date Sampled:**	10/23/18
Matrix:	AQ - Field Blank Water	**Date Received:**	10/25/18
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	ND	0.0050	mg/l	
100-42-5	Styrene	ND	0.0010	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0010	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0010	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	mg/l	
	m,p-Xylene	ND	0.0050	mg/l	
95-47-6	o-Xylene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		84-124%
2037-26-5	Toluene-D8	98%		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:	FIELD BLANK		
Lab Sample ID:	LA49126-3	**Date Sampled:**	10/23/18
Matrix:	AQ - Field Blank Water	**Date Received:**	10/25/18
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	LC381179.D	1	10/28/18 03:34	SV	n/a	n/a	GLC1882
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.)	ND	0.15	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% [a]		70-130%
615-59-8	2,5-Dibromotoluene	96% [b]		70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics 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:	LA49126-4	**Date Sampled:**	10/23/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/25/18
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	2G090289.D	1	10/31/18 21:46	LS	n/a	n/a	V2G4705
Run #2 [a]	1I040655.D	1	10/29/18 17:43	LS	n/a	n/a	V1I1896

	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	ND	0.050	mg/l	
71-43-2	Benzene	ND	0.0050	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	mg/l	
75-25-2	Bromoform	ND	0.0010	mg/l	
75-15-0	Carbon Disulfide	ND	0.0010	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	mg/l	
108-90-7	Chlorobenzene [b]	0.0010	0.0010	mg/l	
75-00-3	Chloroethane	ND	0.0010	mg/l	
67-66-3	Chloroform	ND	0.0010	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0010	mg/l	
541-73-1	m-Dichlorobenzene	ND	0.0010	mg/l	
95-50-1	o-Dichlorobenzene	ND	0.0010	mg/l	
106-46-7	p-Dichlorobenzene	ND	0.0010	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	mg/l	
540-59-0	1,2-Dichloroethene (total)	ND	0.0010	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	mg/l	
542-75-6	1,3-Dichloropropene (total)	ND	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0050	mg/l	
67-72-1	Hexachloroethane	ND	0.0010	mg/l	
78-83-1	Isobutyl Alcohol	ND	0.10	mg/l	
74-83-9	Methyl Bromide	ND	0.0010	mg/l	
74-87-3	Methyl Chloride	ND	0.0010	mg/l	
75-09-2	Methylene Chloride	ND	0.0010	mg/l	
78-93-3	Methyl Ethyl Ketone	ND	0.013	mg/l	
108-10-1	4-Methyl-2-pentanone	ND	0.013	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:	LA49126-4	**Date Sampled:**	10/23/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/25/18
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	ND	0.0050	mg/l	
100-42-5	Styrene	ND	0.0010	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0010	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00050	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0010	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	mg/l	
	m,p-Xylene	ND	0.0050	mg/l	
95-47-6	o-Xylene	ND	0.0050	mg/l	
1330-20-7	Xylene (total)	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	104%	84-124%
2037-26-5	Toluene-D8	98%	99%	83-115%
460-00-4	4-Bromofluorobenzene	103%	94%	89-111%

(a) Confirmation run.
(b) Confirmed by reanalysis.

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:	LA49126-4	**Date Sampled:**	10/23/18
Matrix:	AQ - Trip Blank Water	**Date Received:**	10/25/18
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	LC381180.D	1	10/28/18 04:18	SV	n/a	n/a	GLC1882
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.)	ND	0.15	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% [a]		70-130%
615-59-8	2,5-Dibromotoluene	100% [b]		70-130%

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

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

LA49126

SAMPLE CHAIN-OF-CUSTODY RECORD

Laboratory:	SGS Lafayette		
Project Name:	Indigo	*Collected By:*	LV/EM
Project Number:	8060.00	*Company:*	Hydro-Environmental Technology, Inc.
Project Location:	DeSoto Parish, Louisiana	*Date:*	10/23/2018

	Sample I.D.	Type	Date/Time Sampled		Containers	Analysis Requested/Method	Comments
1	031-8321Z (Nelson-Mason 1Alt Rig Supply)	AQ	10/23/2018	11:25	(4) 40mL Glass HCl (3) 60mL Amber Glass HCl (1) L Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3	SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals
2	031-7776Z (Nelson-Johnson #3 Rig Supply)	AQ	10/23/2018	14:20	(4) 40mL Glass HCl (3) 60mL Amber Glass HCl (1) L Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO4	SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*	4°C Field filtered: Dissolved metals
3	Field Blank	AQ	10/23/2018	7:15	(8) 40mL Glass HCL	VOC 8260, VPH	4°C
4	Trip Blank	AQ	10/23/2018	6:30	(8) 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:	Received By: Ken J. Cobb
Date/Time: 10/24/18 1300	Date/Time: 10/24/18 1300
Relinquished By: Ken J. Cobb	Received By: Walter Newman
Date/Time: 10/25/18 1445	Date/Time: 10.25.18 1445
Analysis Due: Verbal:	Written:

(BW2) (PH2) 45L67 (11A5) 10 CS
(GW3) (DL) WS 2017 (MW) T 2.5 (BV4M)

Page 1 of 1

LA49126: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: LA49126 **Client:** HYDRO ENV **Project:** INDIGO

Date / Time Received: 10/25/2018 2:45:00 PM **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps: #1: (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. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

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: Field Blank and Trip Blank, rec'd 6 vials per ID, coc states 8.

Responded to by: RF Response Date: 10/26/2018

No issue

LA49126: Chain of Custody
Page 2 of 2

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: LA49126
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
V1I1896-MB2	1I040653.D	1	10/29/18	LS	n/a	n/a	V1I1896

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

LA49126-3

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	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: LA49126
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
V1I1896-MB2	1I040653.D	1	10/29/18	LS	n/a	n/a	V1I1896

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

LA49126-3

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	101%	84-124%
2037-26-5	Toluene-D8	99%	83-115%
460-00-4	4-Bromofluorobenzene	94%	89-111%

Method Blank Summary

Job Number: LA49126
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
V2G4705-MB2	2G090283.D	1	10/31/18	LS	n/a	n/a	V2G4705

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

LA49126-4

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	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	0.48	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: LA49126
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
V2G4705-MB2	2G090283.D	1	10/31/18	LS	n/a	n/a	V2G4705

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

LA49126-4

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	101%	84-124%
2037-26-5	Toluene-D8	97%	83-115%
460-00-4	4-Bromofluorobenzene	102%	89-111%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
V1I1896-BS1	1I040647.D	1	10/29/18	LS	n/a	n/a	V1I1896
V1I1896-BSD1	1I040649.D	1	10/29/18	LS	n/a	n/a	V1I1896

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

LA49126-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	43.8	88	44.2	88	1	38-178/30
71-43-2	Benzene	20	19.1	96	19.6	98	3	82-119/30
75-27-4	Bromodichloromethane	20	18.4	92	19.1	96	4	79-120/30
75-25-2	Bromoform	20	15.5	78	15.9	80	3	68-128/30
75-15-0	Carbon Disulfide	20	18.3	92	19.2	96	5	64-133/30
56-23-5	Carbon Tetrachloride	20	17.7	89	18.3	92	3	69-132/30
108-90-7	Chlorobenzene	20	18.5	93	19.0	95	3	85-120/30
75-00-3	Chloroethane	20	18.6	93	19.2	96	3	33-170/30
67-66-3	Chloroform	20	17.8	89	18.6	93	4	80-122/30
124-48-1	Dibromochloromethane	20	17.3	87	17.7	89	2	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	13.6	68	13.8	69	1	67-131/30
541-73-1	m-Dichlorobenzene	20	19.4	97	19.8	99	2	84-121/30
95-50-1	o-Dichlorobenzene	20	19.6	98	20.2	101	3	83-120/30
106-46-7	p-Dichlorobenzene	20	18.9	95	18.7	94	1	83-122/30
75-34-3	1,1-Dichloroethane	20	17.7	89	18.6	93	5	78-124/30
107-06-2	1,2-Dichloroethane	20	18.5	93	19.1	96	3	74-127/30
75-35-4	1,1-Dichloroethylene	20	17.0	85	17.7	89	4	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	19.0	95	19.8	99	4	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	17.0	85	17.6	88	3	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	36.1	90	37.4	94	4	78-123/30
78-87-5	1,2-Dichloropropane	20	18.9	95	19.4	97	3	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	17.4	87	17.7	89	2	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	17.2	86	17.7	89	3	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	34.6	87	35.4	89	2	50-150/30 [a]
100-41-4	Ethylbenzene	20	19.6	98	20.1	101	3	84-117/30
67-72-1	Hexachloroethane	20	14.9	75	15.3	77	3	53-141/30
78-83-1	Isobutyl Alcohol	200	180	90	182	91	1	20-175/30
74-83-9	Methyl Bromide	20	19.1	96	19.4	97	2	37-198/30
74-87-3	Methyl Chloride	20	15.7	79	16.5	83	5	50-136/30
75-09-2	Methylene Chloride	20	18.7	94	19.4	97	4	71-130/30
78-93-3	Methyl Ethyl Ketone	50	48.7	97	50.2	100	3	59-149/30
108-10-1	4-Methyl-2-pentanone	50	42.0	84	43.4	87	3	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	19.5	98	19.2	96	2	70-126/30
100-42-5	Styrene	20	18.7	94	19.1	96	2	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	19.1	96	19.9	100	4	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	19.0	95	19.2	96	1	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
V1I1896-BS1	1I040647.D	1	10/29/18	LS	n/a	n/a	V1I1896
V1I1896-BSD1	1I040649.D	1	10/29/18	LS	n/a	n/a	V1I1896

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

LA49126-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	20	18.3	92	19.1	96	4	75-133/30
108-88-3	Toluene	20	18.4	92	19.0	95	3	80-121/30
71-55-6	1,1,1-Trichloroethane	20	18.1	91	18.8	94	4	74-126/30
79-00-5	1,1,2-Trichloroethane	20	18.9	95	19.5	98	3	80-123/30
79-01-6	Trichloroethylene	20	19.3	97	19.6	98	2	62-125/30
75-69-4	Trichlorofluoromethane	20	15.8	79	16.6	83	5	62-148/30
75-01-4	Vinyl Chloride	20	17.2	86	17.9	90	4	67-130/30
	m,p-Xylene	40	41.4	104	42.6	107	3	82-121/30
95-47-6	o-Xylene	20	18.2	91	18.8	94	3	84-119/30
1330-20-7	Xylene (total)	60	59.5	99	61.4	102	3	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	101%	101%	83-115%
460-00-4	4-Bromofluorobenzene	100%	101%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
V2G4705-BS1	2G090277.D	1	10/31/18	LS	n/a	n/a	V2G4705
V2G4705-BSD1	2G090279.D	1	10/31/18	LS	n/a	n/a	V2G4705

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

LA49126-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	84.1	168	82.0	164	3	38-178/30
71-43-2	Benzene	20	18.7	94	19.5	98	4	82-119/30
75-27-4	Bromodichloromethane	20	21.7	109	22.2	111	2	79-120/30
75-25-2	Bromoform	20	22.9	115	22.5	113	2	68-128/30
75-15-0	Carbon Disulfide	20	18.9	95	19.6	98	4	64-133/30
56-23-5	Carbon Tetrachloride	20	20.8	104	21.4	107	3	69-132/30
108-90-7	Chlorobenzene	20	19.4	97	20.6	103	6	85-120/30
75-00-3	Chloroethane	20	19.7	99	18.6	93	6	33-170/30
67-66-3	Chloroform	20	19.8	99	20.2	101	2	80-122/30
124-48-1	Dibromochloromethane	20	22.1	111	22.6	113	2	73-125/30
96-12-8	1,2-Dibromo-3-chloropropane	20	22.3	112	22.2	111	0	67-131/30
541-73-1	m-Dichlorobenzene	20	19.7	99	20.1	101	2	84-121/30
95-50-1	o-Dichlorobenzene	20	20.2	101	20.5	103	1	83-120/30
106-46-7	p-Dichlorobenzene	20	19.8	99	19.8	99	0	83-122/30
75-34-3	1,1-Dichloroethane	20	19.1	96	19.1	96	0	78-124/30
107-06-2	1,2-Dichloroethane	20	20.2	101	19.9	100	1	74-127/30
75-35-4	1,1-Dichloroethylene	20	18.3	92	18.5	93	1	70-134/30
156-59-2	cis-1,2-Dichloroethylene	20	18.1	91	18.1	91	0	78-122/30
156-60-5	trans-1,2-Dichloroethylene	20	17.7	89	18.2	91	3	75-127/30
540-59-0	1,2-Dichloroethene (total)	40	35.9	90	36.2	91	1	78-123/30
78-87-5	1,2-Dichloropropane	20	18.3	92	18.4	92	1	82-120/30
10061-01-5	cis-1,3-Dichloropropene	20	20.7	104	20.7	104	0	79-122/30
10061-02-6	trans-1,3-Dichloropropene	20	21.5	108	21.9	110	2	78-124/30
542-75-6	1,3-Dichloropropene (total)	40	42.3	106	42.6	107	1	50-150/30 [a]
100-41-4	Ethylbenzene	20	19.6	98	20.3	102	4	84-117/30
67-72-1	Hexachloroethane	20	22.6	113	23.0	115	2	53-141/30
78-83-1	Isobutyl Alcohol	200	196	98	189	95	4	20-175/30
74-83-9	Methyl Bromide	20	17.4	87	20.7	104	17	37-198/30
74-87-3	Methyl Chloride	20	15.3	77	15.3	77	0	50-136/30
75-09-2	Methylene Chloride	20	18.5	93	19.6	98	6	71-130/30
78-93-3	Methyl Ethyl Ketone	50	62.1	124	63.4	127	2	59-149/30
108-10-1	4-Methyl-2-pentanone	50	55.5	111	55.6	111	0	74-131/30
1634-04-4	Methyl Tert Butyl Ether	20	19.7	99	19.6	98	1	70-126/30
100-42-5	Styrene	20	20.2	101	20.9	105	3	79-128/30
630-20-6	1,1,1,2-Tetrachloroethane	20	22.3	112	22.4	112	0	84-120/30
79-34-5	1,1,2,2-Tetrachloroethane	20	18.8	94	19.4	97	3	77-126/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
V2G4705-BS1	2G090277.D	1	10/31/18	LS	n/a	n/a	V2G4705
V2G4705-BSD1	2G090279.D	1	10/31/18	LS	n/a	n/a	V2G4705

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

LA49126-4

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	22.0	110	7	75-133/30
108-88-3	Toluene	20	19.1	96	19.9	100	4	80-121/30
71-55-6	1,1,1-Trichloroethane	20	20.7	104	21.5	108	4	74-126/30
79-00-5	1,1,2-Trichloroethane	20	20.4	102	20.0	100	2	80-123/30
79-01-6	Trichloroethylene	20	20.4	102	21.5	108	5	62-125/30
75-69-4	Trichlorofluoromethane	20	22.3	112	22.3	112	0	62-148/30
75-01-4	Vinyl Chloride	20	18.6	93	19.0	95	2	67-130/30
	m,p-Xylene	40	40.4	101	42.3	106	5	82-121/30
95-47-6	o-Xylene	20	21.2	106	21.9	110	3	84-119/30
1330-20-7	Xylene (total)	60	61.6	103	64.2	107	4	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	99%	84-124%
2037-26-5	Toluene-D8	100%	98%	83-115%
460-00-4	4-Bromofluorobenzene	102%	103%	89-111%

(a) Advisory control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49126
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
LA49176-5MS	1I040713.D	5	10/31/18	LS	n/a	n/a	V1I1896
LA49176-5MSD	1I040715.D	5	10/31/18	LS	n/a	n/a	V1I1896
LA49176-5	1I040659.D	1	10/29/18	LS	n/a	n/a	V1I1896

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

LA49126-3

CAS No.	Compound	LA49176-5 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	ND		250	172	69	250	179	72	4	39-164/27
71-43-2	Benzene	ND		100	99.6	100	100	104	104	4	31-161/15
75-27-4	Bromodichloromethane	ND		100	102	102	100	105	105	3	64-122/36
75-25-2	Bromoform	ND		100	78.0	78	100	82.3	82	5	43-125/37
75-15-0	Carbon Disulfide	ND		100	98.9	99	100	103	103	4	38-138/36
56-23-5	Carbon Tetrachloride	ND		100	97.8	98	100	102	102	4	53-133/36
108-90-7	Chlorobenzene	ND		100	97.2	97	100	98.8	99	2	74-122/34
75-00-3	Chloroethane	ND		100	118	118	100	119	119	1	14-181/43
67-66-3	Chloroform	ND		100	97.9	98	100	101	101	3	65-130/24
124-48-1	Dibromochloromethane	ND		100	88.1	88	100	93.1	93	6	57-121/36
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	63.2	63	100	71.1	71	12	46-135/25
541-73-1	m-Dichlorobenzene	ND		100	101	101	100	102	102	1	70-120/35
95-50-1	o-Dichlorobenzene	ND		100	98.6	99	100	102	102	3	72-120/35
106-46-7	p-Dichlorobenzene	ND		100	95.3	95	100	97.8	98	3	68-120/35
75-34-3	1,1-Dichloroethane	ND		100	98.0	98	100	101	101	3	56-138/32
107-06-2	1,2-Dichloroethane	ND		100	108	108	100	111	111	3	51-141/39
75-35-4	1,1-Dichloroethylene	ND		100	92.9	93	100	95.6	96	3	48-139/37
156-59-2	cis-1,2-Dichloroethylene	ND		100	98.1	98	100	101	101	3	56-133/15
156-60-5	trans-1,2-Dichloroethylene	ND		100	95.5	96	100	96.1	96	1	59-128/37
540-59-0	1,2-Dichloroethene (total)	ND		200	194	97	200	197	99	2	54-134/30
78-87-5	1,2-Dichloropropane	ND		100	98.6	99	100	101	101	2	68-124/32
10061-01-5	cis-1,3-Dichloropropene	ND		100	84.2	84	100	87.1	87	3	62-120/35
10061-02-6	trans-1,3-Dichloropropene	ND		100	90.8	91	100	94.6	95	4	64-119/36
542-75-6	1,3-Dichloropropene (total)	ND		200	175	88	200	182	91	4	50-150/30 [a]
100-41-4	Ethylbenzene	ND		100	105	105	100	107	107	2	47-146/30
67-72-1	Hexachloroethane	ND		100	69.1	69	100	71.5	72	3	32-128/39
78-83-1	Isobutyl Alcohol	ND		1000	855	86	1000	885	89	3	33-142/54
74-83-9	Methyl Bromide	ND		100	104	104	100	107	107	3	1-150/64
74-87-3	Methyl Chloride	ND		100	90.4	90	100	93.4	93	3	16-146/29
75-09-2	Methylene Chloride	ND		100	115	115	100	116	116	1	55-134/36
78-93-3	Methyl Ethyl Ketone	ND		250	230	92	250	235	94	2	54-142/39
108-10-1	4-Methyl-2-pentanone	ND		250	233	93	250	236	94	1	60-140/40
1634-04-4	Methyl Tert Butyl Ether	ND		100	99.0	99	100	99.6	100	1	52-146/32
100-42-5	Styrene	ND		100	96.3	96	100	98.8	99	3	67-128/35
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	104	104	100	106	106	2	67-121/35
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	104	104	100	103	103	1	64-133/38

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49126
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
LA49176-5MS	1I040713.D	5	10/31/18	LS	n/a	n/a	V1I1896
LA49176-5MSD	1I040715.D	5	10/31/18	LS	n/a	n/a	V1I1896
LA49176-5	1I040659.D	1	10/29/18	LS	n/a	n/a	V1I1896

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

LA49126-3

CAS No.	Compound	LA49176-5 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	ND		100	97.4	97	100	101	101	4	58-135/37
108-88-3	Toluene	ND		100	97.0	97	100	99.3	99	2	36-155/17
71-55-6	1,1,1-Trichloroethane	ND		100	101	101	100	103	103	2	63-128/36
79-00-5	1,1,2-Trichloroethane	ND		100	102	102	100	102	102	0	61-138/17
79-01-6	Trichloroethylene	ND		100	98.9	99	100	103	103	4	57-131/36
75-69-4	Trichlorofluoromethane	ND		100	103	103	100	105	105	2	31-156/36
75-01-4	Vinyl Chloride	ND		100	95.7	96	100	97.6	98	2	22-155/49
	m,p-Xylene	ND		200	224	112	200	230	115	3	35-159/31
95-47-6	o-Xylene	ND		100	93.3	93	100	96.6	97	3	50-144/35
1330-20-7	Xylene (total)	ND		300	318	106	300	327	109	3	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA49176-5	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	100%	110%	84-124%
2037-26-5	Toluene-D8	98%	99%	99%	83-115%
460-00-4	4-Bromofluorobenzene	102%	102%	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: LA49126
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
OP12657-MB	C0039827.D	1	10/29/18	IK	10/29/18	OP12657	EC1678

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

LA49126-1, LA49126-2

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: LA49126
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
OP12657-MB	C0039827.D	1	10/29/18	IK	10/29/18	OP12657	EC1678

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

LA49126-1, LA49126-2

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	49%	23-85%
4165-62-2	Phenol-d5	35%	10-69%
118-79-6	2,4,6-Tribromophenol	88%	48-138%
4165-60-0	Nitrobenzene-d5	89%	51-128%
321-60-8	2-Fluorobiphenyl	93%	55-122%
1718-51-0	Terphenyl-d14	91%	43-138%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
OP12657-BS	C0039828.D	1	10/29/18	IK	10/29/18	OP12657	EC1678
OP12657-BSD	C0039829.D	1	10/29/18	IK	10/29/18	OP12657	EC1678

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

LA49126-1, LA49126-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	50	38.7	77	33.7	67	14	63-104/19
120-83-2	2,4-Dichlorophenol	50	44.0	88	37.8	76	15	68-112/19
105-67-9	2,4-Dimethylphenol	50	44.4	89	35.6	71	22* [a]	64-110/20
51-28-5	2,4-Dinitrophenol	50	44.8	90	40.4	81	10	51-121/30
100-02-7	4-Nitrophenol	50	18.4	37	16.0	32	14	20-68/23
87-86-5	Pentachlorophenol	50	43.0	86	35.0	70	21	52-120/29
108-95-2	Phenol	50	18.2	36	16.6	33	9	18-67/20
58-90-2	2,3,4,6-Tetrachlorophenol	50	52.0	104	44.4	89	16	67-121/21
95-95-4	2,4,5-Trichlorophenol	50	52.0	104	44.9	90	15	67-119/21
88-06-2	2,4,6-Trichlorophenol	50	45.6	91	39.2	78	15	67-120/21
83-32-9	Acenaphthene	50	46.0	92	40.5	81	13	67-114/28
208-96-8	Acenaphthylene	50	46.9	94	38.2	76	20	67-119/26
62-53-3	Aniline	50	28.5	57	27.8	56	2	40-114/40
120-12-7	Anthracene	50	42.2	84	37.1	74	13	68-121/24
56-55-3	Benzo(a)anthracene	50	44.1	88	38.5	77	14	69-113/20
50-32-8	Benzo(a)pyrene	50	44.4	89	38.8	78	13	71-124/22
205-99-2	Benzo(b)fluoranthene	50	45.1	90	39.4	79	13	72-120/22
207-08-9	Benzo(k)fluoranthene	50	44.8	90	40.8	82	9	71-124/21
92-52-4	1,1'-Biphenyl	50	47.0	94	40.8	82	14	65-122/29
85-68-7	Butyl Benzyl Phthalate	50	40.5	81	37.1	74	9	73-123/21
106-47-8	4-Chloroaniline	50	43.9	88	40.3	81	9	58-113/51
111-44-4	bis(2-Chloroethyl)ether	50	44.2	88	39.2	78	12	50-118/28
108-60-1	2,2'-Oxybis(1-chloropropane)	50	49.0	98	44.0	88	11	43-138/21
91-58-7	2-Chloronaphthalene	50	45.9	92	40.9	82	12	64-114/30
218-01-9	Chrysene	50	44.4	89	39.0	78	13	70-115/20
53-70-3	Dibenzo(a,h)anthracene	50	46.8	94	41.6	83	12	70-124/21
132-64-9	Dibenzofuran	50	50.3	101	44.2	88	13	67-117/27
91-94-1	3,3'-Dichlorobenzidine	50	41.2	82	36.4	73	12	69-122/38
84-66-2	Diethyl Phthalate	50	48.2	96	42.9	86	12	71-123/21
131-11-3	Dimethyl Phthalate	50	48.1	96	43.4	87	10	69-119/20
117-84-0	Di-n-octyl Phthalate	50	40.3	81	35.6	71	12	66-121/22
99-65-0	1,3-Dinitrobenzene	50	50.4	101	45.9	92	9	71-122/21
121-14-2	2,4-Dinitrotoluene	50	52.0	104	47.1	94	10	73-122/21
606-20-2	2,6-Dinitrotoluene	50	49.5	99	44.2	88	11	72-121/21
117-81-7	bis(2-Ethylhexyl)phthalate	50	39.2	78	34.1	68	14	68-126/21
206-44-0	Fluoranthene	50	43.8	88	38.0	76	14	73-120/21

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
OP12657-BS	C0039828.D	1	10/29/18	IK	10/29/18	OP12657	EC1678
OP12657-BSD	C0039829.D	1	10/29/18	IK	10/29/18	OP12657	EC1678

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

LA49126-1, LA49126-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
86-73-7	Fluorene	50	49.8	100	43.9	88	13	69-118/25
118-74-1	Hexachlorobenzene	50	43.0	86	38.0	76	12	67-117/23
87-68-3	Hexachlorobutadiene	50	41.1	82	36.6	73	12	42-120/35
77-47-4	Hexachlorocyclopentadiene	50	41.0	82	38.0	76	8	35-123/48
193-39-5	Indeno(1,2,3-cd)pyrene	50	43.6	87	38.6	77	12	70-123/21
78-59-1	Isophorone	50	52.6	105	46.3	93	13	70-119/19
91-57-6	2-Methylnaphthalene	50	41.6	83	36.6	73	13	65-113/27
91-20-3	Naphthalene	50	40.9	82	35.6	71	14	63-114/23
88-74-4	2-Nitroaniline	50	46.7	93	42.0	84	11	68-125/21
99-09-2	3-Nitroaniline	50	46.7	93	42.1	84	10	69-117/23
100-01-6	4-Nitroaniline	50	44.7	89	40.2	80	11	67-122/19
98-95-3	Nitrobenzene	50	53.7	107	47.2	94	13	69-116/21
621-64-7	N-Nitroso-di-n-propylamine	50	49.6	99	43.8	88	12	67-120/20
86-30-6	N-Nitrosodiphenylamine	50	39.2	78	34.1	68	14	67-119/25
85-01-8	Phenanthrene	50	43.3	87	38.4	77	12	70-117/23
129-00-0	Pyrene	50	43.7	87	39.0	78	11	70-119/21
95-94-3	1,2,4,5-Tetrachlorobenzene	50	53.9	108	46.2	92	15	55-117/35
120-82-1	1,2,4-Trichlorobenzene	50	41.4	83	36.2	72	13	56-111/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	47%	43%	23-85%
4165-62-2	Phenol-d5	34%	32%	10-69%
118-79-6	2,4,6-Tribromophenol	88%	77%	48-138%
4165-60-0	Nitrobenzene-d5	93%	84%	51-128%
321-60-8	2-Fluorobiphenyl	93%	83%	55-122%
1718-51-0	Terphenyl-d14	88%	81%	43-138%

(a) High RPD. 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: LA49126
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
GLC1882-MB1	LC381160.D	1	10/27/18	SV	n/a	n/a	GLC1882

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

LA49126-1, LA49126-2, LA49126-3, LA49126-4

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	101% [a]	70-130%
615-59-8	2,5-Dibromotoluene	100% [b]	70-130%

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

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
GLC1882-BS1	LC381158.D	1	10/27/18	SV	n/a	n/a	GLC1882
GLC1882-BSD1	LC381159.D	1	10/27/18	SV	n/a	n/a	GLC1882

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

LA49126-1, LA49126-2, LA49126-3, LA49126-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics C6-C8 (Unadj.)	150	123	82	132	88	7	70-130/30
	Aliphatics > C8-C10 (Unadj.)	250	214	86	209	84	2	70-130/30
	Aromatics > C8-C10 (Unadj.)	250	221	88	221	88	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
615-59-8	2,5-Dibromotoluene	105% [a]	103% [a]	70-130%
615-59-8	2,5-Dibromotoluene	106% [b]	114% [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: LA49126
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
LA49116-1MS	LC381164.D	5	10/27/18	SV	n/a	n/a	GLC1882
LA49116-1MSD	LC381165.D	5	10/27/18	SV	n/a	n/a	GLC1882
LA49116-1	LC381161.D	1	10/27/18	SV	n/a	n/a	GLC1882

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

LA49126-1, LA49126-2, LA49126-3, LA49126-4

CAS No.	Compound	LA49116-1 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	769	103	750	721	96	6	70-130/50
	Aliphatics > C8-C10 (Unadj.)	ND		1250	1240	99	1250	1270	102	2	70-130/50
	Aromatics > C8-C10 (Unadj.)	ND		1250	1300	104	1250	1310	105	1	70-130/50

CAS No.	Surrogate Recoveries	MS	MSD	LA49116-1	Limits
615-59-8	2,5-Dibromotoluene	105% [a]	104% [a]	100% [a]	70-130%
615-59-8	2,5-Dibromotoluene	105% [b]	104% [b]	101% [b]	70-130%

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics 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: LA49126
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
OP12635-MB	X0005563.D	1	10/29/18	JT	10/26/18	OP12635	GLB1651

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

LA49126-1, LA49126-2

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	73%	40-140%
321-60-8	2-Fluorobiphenyl	73%	40-140%

Method Blank Summary

Job Number: LA49126
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
OP12635-MB	Y0005563.D	1	10/29/18	JT	10/26/18	OP12635	GLB1652

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

LA49126-1, LA49126-2

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	84%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
OP12635-BS	X0005564.D	1	10/29/18	JT	10/26/18	OP12635	GLB1651
OP12635-BSD	X0005565.D	1	10/29/18	JT	10/26/18	OP12635	GLB1651

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

LA49126-1, LA49126-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aromatics > C10-C12 (Unadj.)	461	340	74	339	73	0	40-140/30
	Aromatics > C12-C16 (Unadj.)	1380	1030	74	1020	73	1	40-140/30
	Aromatics > C16-C21 (Unadj.)	2310	1860	81	1900	82	2	40-140/30
	Aromatics > C21-C35 (Unadj.)	3690	3090	84	3140	85	2	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	75%	75%	40-140%
321-60-8	2-Fluorobiphenyl	76%	76%	40-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49126
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
OP12635-BS	Y0005564.D	1	10/29/18	JT	10/26/18	OP12635	GLB1652
OP12635-BSD	Y0005565.D	1	10/29/18	JT	10/26/18	OP12635	GLB1652

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

LA49126-1, LA49126-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	Aliphatics > C10-C12 (Unadj.)	461	351	76	369	80	5	40-140/30
	Aliphatics > C12-C16 (Unadj.)	923	699	76	741	80	6	40-140/30
	Aliphatics > C16-C35 (Unadj.)	4150	2980	72	3130	75	5	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
3386-33-2	1-Chlorooctadecane	79%	82%	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: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	6.9	9.3	-0.76	<100
Antimony	1.0	.043	.34		
Arsenic	1.0	.062	.26	-0.023	<1.0
Barium	1.0	.033	.46	-0.019	<1.0
Beryllium	1.0	.0077	.28		
Boron	20	1.3	2.9		
Cadmium	0.50	.011	.12	0.034	<0.50
Calcium	100	5.7	20	-14	<100
Cerium	1.0	.0041	.16		
Chromium	1.0	.11	.15	-0.029	<1.0
Cobalt	1.0	.012	.14		
Copper	1.0	.91	.74		
Iron	100	48	16	-20	<100
Lanthanum	1.0	.0038	.41		
Lithium	2.0	.1	.61		
Lead	1.0	.0081	.13	-0.13	<1.0
Magnesium	100	1.6	11	-10	<100
Manganese	2.0	.48	.53	0.011	<2.0
Molybdenum	1.0	.048	.89		
Nickel	1.0	.037	.2		
Potassium	100	3.4	7.6	-9.6	<100
Selenium	5.0	.38	3.1	0.048	<5.0
Silver	1.0	.0047	.13	-0.081	<1.0
Silicon	500	6.6	130		
Sodium	100	24	9.9	-8.7	<100
Strontium	2.0	.12	.27	0.025	<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	-0.32	<5.0

Associated samples MP13152: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

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: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 10/26/18

Metal	LA49127-1 Original	MS	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	249	5540	5100	103.7	75-125
Antimony					
Arsenic	0.0	108	100	108.0	75-125
Barium	111	221	100	110.0	75-125
Beryllium					
Boron					
Cadmium	0.36	108	100	107.6	75-125
Calcium	9960	15700	5000	114.8	75-125
Cerium					
Chromium	1.1	111	100	109.9	75-125
Cobalt					
Copper					
Iron	0.0	5460	5000	109.2	75-125
Lanthanum					
Lithium					
Lead	0.0	103	100	103.0	75-125
Magnesium	3720	9290	5000	111.4	75-125
Manganese	22.5	132	100	109.5	75-125
Molybdenum					
Nickel					
Potassium	2290	7580	5000	105.8	75-125
Selenium	0.0	537	500	107.4	75-125
Silver	0.0	95.5	100	95.5	75-125
Silicon					
Sodium	196000	211000	5000	300.0(a)	75-125
Strontium	680	820	100	140.0(a)	75-125
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	0.0	121	100	121.0	75-125

Associated samples MP13152: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

Metal	LA49127-1 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.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

Metal	LA49127-1 Original	MSD	Spikelot MPICPMS6	% Rec	MSD RPD	QC Limit
Aluminum	249	5230	5100	97.7	5.8	20
Antimony						
Arsenic	0.0	105	100	105.0	2.8	20
Barium	111	210	100	99.0	5.1	20
Beryllium						
Boron						
Cadmium	0.36	99.6	100	99.2	8.1	20
Calcium	9960	14900	5000	98.8	5.2	20
Cerium						
Chromium	1.1	104	100	102.9	6.5	20
Cobalt						
Copper						
Iron	0.0	5170	5000	103.4	5.5	20
Lanthanum						
Lithium						
Lead	0.0	96.6	100	96.6	6.4	20
Magnesium	3720	8860	5000	102.8	4.7	20
Manganese	22.5	126	100	103.5	4.7	20
Molybdenum						
Nickel						
Potassium	2290	7240	5000	99.0	4.6	20
Selenium	0.0	496	500	99.2	7.9	20
Silver	0.0	91.0	100	91.0	4.8	20
Silicon						
Sodium	196000	205000	5000	180.0(a)	2.9	20
Strontium	680	788	100	108.0	4.0	20
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	0.0	128	100	128.0N(b	5.6	20

Associated samples MP13152: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

	LA49127-1	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: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 10/26/18

Metal	BSP Result	Spikelot MPICPMS6	% Rec	QC Limits
Aluminum	5270	5100	103.3	80-120
Antimony				
Arsenic	101	100	101.0	80-120
Barium	107	100	107.0	80-120
Beryllium				
Boron				
Cadmium	101	100	101.0	80-120
Calcium	5430	5000	108.6	80-120
Cerium				
Chromium	106	100	106.0	80-120
Cobalt				
Copper				
Iron	5250	5000	105.0	80-120
Lanthanum				
Lithium				
Lead	103	100	103.0	80-120
Magnesium	5070	5000	101.4	80-120
Manganese	105	100	105.0	80-120
Molybdenum				
Nickel				
Potassium	5350	5000	107.0	80-120
Selenium	493	500	98.6	80-120
Silver	101	100	101.0	80-120
Silicon				
Sodium	4980	5000	99.6	80-120
Strontium	105	100	105.0	80-120
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	98.9	100	98.9	80-120

Associated samples MP13152: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

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: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

Metal	LA49127-1 Original	SDL 10:50%DIF		QC Limits
Aluminum	249	0.00	100.0(a)	0-10
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	111	94.5	15.0*(b)	0-10
Beryllium				
Boron				
Cadmium	0.363	1.93	431.3(a)	0-10
Calcium	9960	7900	20.7*(b)	0-10
Cerium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper				
Iron	0.00	0.00	NC	0-10
Lanthanum				
Lithium				
Lead	0.00	0.00	NC	0-10
Magnesium	3720	3000	19.4*(b)	0-10
Manganese	22.5	0.00	100.0(a)	0-10
Molybdenum				
Nickel				
Potassium	2290	1630	28.6*(b)	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Silicon				
Sodium	196000	183000	7.0	0-10
Strontium	680	634	6.7	0-10
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	0.00	0.00	NC	0-10

Associated samples MP13152: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

	LA49127-1	QC
Metal	Original SDL 10:50%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: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13152 Methods: SW846 6020A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/26/18

Metal	Sample ml	Final ml	LA49127-1 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										
Silicon										
Thallium										
Tin										
Titanium										
Uranium										
Vanadium										
Zinc	0.2	10			104.8	0.1	10	100	104.8	75-125

Associated samples MP13152: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

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: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13160 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/18

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.06	.081	-0.0034	<0.20

Associated samples MP13160: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13160 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/18

Metal	TD29406-3F Original	MS	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	0.0	4.1	5	82.0	75-125

Associated samples MP13160: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13160 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/18

Metal	TD29406-3F Original	MSD	Spikelot HGSPIKE1	% Rec	MSD RPD	QC Limit
Mercury	0.0	4.1	5	82.0	0.0	20

Associated samples MP13160: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13160 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/18

Metal	BSP Result	Spikelot HGSPIKE1	% Rec	QC Limits
Mercury	4.3	5	86.0	80-120

Associated samples MP13160: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: LA49126
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13160 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/29/18

	TD29406-3F			QC
Metal	Original	SDL 1:5	%DIF	Limits
Mercury	0.00	0.00	NC	0-

Associated samples MP13160: LA49126-1, LA49126-2, LA49126-1F, LA49126-2F

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

Cooler 2 — Page 1 of 1 — TX

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 #: LA49126

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): LV/EM Phone:

Project Information

Project Name: 8060.00 (RL) 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	031-8321Z (NELSON-MASON 1 ALT R		10/23/18	11:25:00 AM	LV/EM	AQ										X (1)	
2	031-7776Z (NELSON-JOHNSON #3 RI		10/23/18	2:20:00 PM	LV/EM	AQ										X (1)	

VERIFIED BY:

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 11/5/2018

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

2-500ml bmp

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		10/26/18			10 26 18	
2						
3	Relinquished by Sampler:	Date Time:	Received By: 10-26-18	Relinquished By: 10-26-18	Date Time: 2320	Received By: 10/26/18
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp 2.0

9.1.9

SGS Sample Receipt Summary

Job Number: LA49126 **Client:** SGS **Project:** 8060.00 RL INDIGO

Date / Time Received: **Delivery Method:** **Airbill #'s:**

No. Coolers: 1 **Therm ID:** IR-3; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (2.8/2.8);

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

9.1

9

LA49126: Chain of Custody
Page 2 of 3

Sample Receipt Log

Job #: LA49126 **Date / Time Received:** 10/26/2018 11:20:00 PM **Initials:** DS

Client: SGS

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	LA49126-1	500ml	1	M1A	N/P	Note #2 - Preservative check not applicable.	IR-3	2.8	0	2.8
1	LA49126-2	500ml	1	M1A	N/P	Note #2 - Preservative check not applicable.	IR-3	2.8	0	2.8

LA49126: Chain of Custody
Page 3 of 3

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: LA49126
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	GN93922	5.0	2.0	mg/l				
Alkalinity, Carbonate	GN93923	5.0	0.0	mg/l				
Alkalinity, Total as CaCO3	GN93920	5.0	0.0	mg/l	100	104	104.0	90-100%
Bromide	GP50318/GN94140	0.50	0.0	mg/l	10	10.4	104.0	90-110%
Bromide	GP50320/GN94143	0.50	0.0	mg/l	10	10.6	106.0	90-110%
Chloride	GP50318/GN94140	0.50	0.0	mg/l	10	10.1	101.0	90-110%
Chloride	GP50320/GN94143	0.50	0.0	mg/l	10	10.3	103.0	90-110%
Fluoride	GP50318/GN94140	0.50	0.0	mg/l	10	10.5	105.0	90-110%
Fluoride	GP50320/GN94143	0.50	0.0	mg/l	10	10.8	108.0	90-110%
Nitrogen, Nitrate	GP50318/GN94140	0.50	0.0	mg/l	10	10.0	100.0	90-110%
Nitrogen, Nitrate	GP50320/GN94143	0.50	0.0	mg/l	10	10.3	103.0	90-110%
Nitrogen, Nitrite	GP50318/GN94140	0.50	0.0	mg/l	10	10.4	104.0	90-110%
Nitrogen, Nitrite	GP50320/GN94143	0.50	0.0	mg/l	10	10.7	107.0	90-110%
Silica, Dissolved	GN93969	0.070	0.0	mg/l	1.07	0.97	90.7	80-120%
Solids, Total Dissolved	GN93903	10	0.0	mg/l	500	479	95.8	88-110%
Specific Conductivity	GN93899	1.0	<1.0	umhos/cm				
Sulfate	GP50318/GN94140	0.50	0.0	mg/l	10	10.3	103.0	90-110%
Sulfate	GP50320/GN94143	0.50	0.0	mg/l	10	10.6	106.0	90-110%

Associated Samples:
Batch GN93899: LA49126-1, LA49126-2
Batch GN93903: LA49126-1, LA49126-2
Batch GN93920: LA49126-1, LA49126-2
Batch GN93922: LA49126-1, LA49126-2
Batch GN93923: LA49126-1, LA49126-2
Batch GN93969: LA49126-1, LA49126-2
Batch GP50318: LA49126-2
Batch GP50320: LA49126-1, LA49126-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA49126
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	GN93922	LA49146-1	mg/l	621	621	0.0	0-10%
Alkalinity, Carbonate	GN93923	LA49146-1	mg/l	3.5	3.3	0.0	0-20%
Alkalinity, Total as CaCO3	GN93920	LA49146-1E	mg/l	625	625	0.0	0-10%
Bromide	GP50318/GN94140	LA49114-8	mg/l	0.0	0.0	0.0	0-19%
Bromide	GP50320/GN94143	LA49128-1	mg/l	0.45	0.45	0.0	0-19%
Chloride	GP50318/GN94140	LA49114-8	mg/l	0.0	0.0	0.0	0-13%
Chloride	GP50320/GN94143	LA49128-1	mg/l	46.8	46.7	0.2	0-13%
Fluoride	GP50318/GN94140	LA49114-8	mg/l	0.0	0.0	0.0	0-12%
Nitrogen, Nitrate	GP50318/GN94140	LA49114-8	mg/l	0.0	0.0	0.0	0-14%
Nitrogen, Nitrite	GP50318/GN94140	LA49114-8	mg/l	0.0	0.0	0.0	0-10%
Silica, Dissolved	GN93969	LA49190-5	mg/l	5.6	0.0	0.0	0-20%
Solids, Total Dissolved	GN93903	LA49126-2	mg/l	638	630	1.3	0-5%
Specific Conductivity	GN93899	TD29212-8	umhos/cm	343	343	0.0	0-10%
Sulfate	GP50318/GN94140	LA49114-8	mg/l	0.0	0.0	0.0	0-20%
Sulfate	GP50320/GN94143	LA49128-1	mg/l	0.80	0.82	2.5	0-20%

Associated Samples:
Batch GN93899: LA49126-1, LA49126-2
Batch GN93903: LA49126-1, LA49126-2
Batch GN93920: LA49126-1, LA49126-2
Batch GN93922: LA49126-1, LA49126-2
Batch GN93923: LA49126-1, LA49126-2
Batch GN93969: LA49126-1, LA49126-2
Batch GP50318: LA49126-2
Batch GP50320: LA49126-1, LA49126-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: LA49126
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	GN93920	LA49146-1E	mg/l	625	25	650	100.0	75-117%
Bromide	GP50318/GN94140	LA49114-8	mg/l	0.0	10	10.4	104.0	80-120%
Bromide	GP50320/GN94143	LA49128-1	mg/l	0.45	10	10.8	103.5	80-120%
Chloride	GP50318/GN94140	LA49114-8	mg/l	0.0	10	10.1	101.0	80-120%
Chloride	GP50320/GN94143	LA49128-1	mg/l	46.8	50	104	114.4	80-120%
Fluoride	GP50318/GN94140	LA49114-8	mg/l	0.0	10	10.5	105.0	80-120%
Nitrogen, Nitrate	GP50318/GN94140	LA49114-8	mg/l	0.0	10	10.1	101.0	80-120%
Nitrogen, Nitrite	GP50318/GN94140	LA49114-8	mg/l	0.0	10	10.5	105.0	80-120%
Silica, Dissolved	GN93969	LA49190-5	mg/l	5.6	1.07	0.85	79.0	75-125%
Sulfate	GP50318/GN94140	LA49114-8	mg/l	0.0	10	10.4	104.0	80-120%
Sulfate	GP50320/GN94143	LA49128-1	mg/l	0.80	10	11.3	105.0	80-120%

Associated Samples:
Batch GN93920: LA49126-1, LA49126-2
Batch GN93969: LA49126-1, LA49126-2
Batch GP50318: LA49126-2
Batch GP50320: LA49126-1, LA49126-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits