Technical Report for

Hydro-Environmental Technology, Inc.
8060.00 Indigo-Desoto Parish, LA

SGS Job Number: LA 49116

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: 160

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.

Client Service contact: Ralph Frye 337-237-4775

Certifications: LDEQ (2048), LDHH (LA 150012), AR (14-045-04), AZ (AZ 0805), FL (E 87657), IL (200082), KY (#31), NC (487), SC (73004001), NJ (LA 007), TX (T 104704186-15-7), WV (257)

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## Sample Summary

**Hydro-Environmental Technology, Inc.**

**8060.00 Indigo-Desoto Parish, LA**

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Collected Date</th>
<th>Time</th>
<th>By</th>
<th>Received Date</th>
<th>Code</th>
<th>Type</th>
<th>Client Sample ID</th>
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<tbody>
<tr>
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<td>10/23/18</td>
<td>11:20</td>
<td>KC/DB</td>
<td>10/25/18</td>
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<td>Water</td>
<td>031-9832Z (BAGLEY RIG SUPPLY WELL)</td>
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<tr>
<td>LA49116-1F</td>
<td>10/23/18</td>
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<td>KC/DB</td>
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<td>031-9832Z (BAGLEY RIG SUPPLY WELL)</td>
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<td>031-9825Z (BILLINGSLEY RELIEF WELL)</td>
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<td>LA49116-3</td>
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<td>KC/DB</td>
<td>10/25/18</td>
<td>AQ</td>
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<td>031-9767Z (LONG 1&amp;2 RIG SUPPLY WELL)</td>
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<td>KC/DB</td>
<td>10/25/18</td>
<td>AQ</td>
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<td>031-9767Z (LONG 1&amp;2 RIG SUPPLY WELL)</td>
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<td>16:35</td>
<td>KC/DB</td>
<td>10/25/18</td>
<td>AQ</td>
<td>Water</td>
<td>031-9768Z (LONG 3&amp;4 RIG SUPPLY WELL)</td>
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<td>KC/DB</td>
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<td>Field Blank Water</td>
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<td>LA49116-7</td>
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<td>Trip Blank Water</td>
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<td>06:45</td>
<td>KC/DB</td>
<td>10/25/18</td>
<td>AQ</td>
<td>Trip Blank Water</td>
<td>TRIP BLANK 2</td>
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</table>
Sample Summary (continued)

Hydro-Environmental Technology, Inc.

Job No: LA49116

8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
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<th>Sample Number</th>
<th>Collected Date</th>
<th>Time</th>
<th>By</th>
<th>Received Date</th>
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<th>Type</th>
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<td>LA49116-9</td>
<td>10/23/18</td>
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<td>10/25/18</td>
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<td>Water</td>
<td>031-802 (DERBONNE RELIEF WELL)</td>
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<td>10/23/18</td>
<td>09:30</td>
<td>KC/DB</td>
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<td>KC/DB</td>
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<td>07:15</td>
<td>KC/DB</td>
<td>10/25/18</td>
<td>AQ</td>
<td>Trip Blank Water</td>
<td>TRIP BLANK 2</td>
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Sample Results

Report of Analysis
Report of Analysis

Client Sample ID: 031-9832Z (BAGLEY RIG SUPPLY WELL)
Lab Sample ID: LA49116-1
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW846 8260B
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

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<th>Run #</th>
<th>File ID</th>
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<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tr>
<td>Run #1</td>
<td>2Q0444634.D</td>
<td>1</td>
<td>10/30/18 14:06</td>
<td>n/a</td>
<td>n/a</td>
<td>V2Q2775</td>
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<tr>
<td>Run #2</td>
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<td></td>
<td></td>
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</table>

Purge Volume
Run #1 5.0 ml
Run #2

VOA RECAP List

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<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>0.050</td>
<td>mg/l</td>
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<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>75-15-0</td>
<td>Carbon Disulfide</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>56-23-5</td>
<td>Carbon Tetrachloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>108-90-7</td>
<td>Chlorobenzene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-00-3</td>
<td>Chloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-66-3</td>
<td>Chloroform</td>
<td>ND</td>
<td>0.0010</td>
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<td>124-48-1</td>
<td>Dibromochloromethane</td>
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<td>541-73-1</td>
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<tr>
<td>95-50-1</td>
<td>o-Dichlorobenzene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<td>106-46-7</td>
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<td>75-34-3</td>
<td>1,1-Dichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>107-06-2</td>
<td>1,2-Dichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-35-4</td>
<td>1,1-Dichloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>156-59-2</td>
<td>cis-1,2-Dichloroethylene</td>
<td>ND</td>
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<tr>
<td>156-60-5</td>
<td>trans-1,2-Dichloroethylene</td>
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<td>540-59-0</td>
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<td>78-87-5</td>
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<td>10061-01-5</td>
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<td>542-75-6</td>
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<td>100-41-4</td>
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<td>78-83-1</td>
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<td>74-83-9</td>
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<tr>
<td>75-09-2</td>
<td>Methylene Chloride</td>
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<td>0.0010</td>
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<tr>
<td>78-93-3</td>
<td>Methyl Ethyl Ketone</td>
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<td>0.013</td>
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<td>108-10-1</td>
<td>4-Methyl-2-pentanone</td>
<td>ND</td>
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<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
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<td>0.0050</td>
<td>mg/l</td>
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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
**Report of Analysis**

**Client Sample ID:** 031-9832Z (BAGLEY RIG SUPPLY WELL)  
**Lab Sample ID:** LA49116-1  
**Date Sampled:** 10/23/18

**Matrix:** AQ - Water  
**Date Received:** 10/25/18

**Method:** SW846 8260B

**Percent Solids:** n/a

**Project:** 8060.00 Indigo-Desoto Parish, LA

### VOA RECAP List

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<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
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<th>Q</th>
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<td>Styrene</td>
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<td>ND</td>
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<td>mg/l</td>
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<td>79-34-5</td>
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<th>Run# 1</th>
<th>Run#2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>100%</td>
<td></td>
<td>84-124%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>99%</td>
<td></td>
<td>83-115%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>99%</td>
<td></td>
<td>89-111%</td>
</tr>
</tbody>
</table>

**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: 031-9832Z (BAGLEY RIG SUPPLY WELL)
Lab Sample ID: LA49116-1
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  | L0022627.D | 1 | 10/31/18 13:16 | JS | 10/29/18 07:00 | OP12645 | EL594
Run #2

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

ABN RECAP LIST

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>105-67-9</td>
<td>2,4-Dimethylphenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>51-28-5</td>
<td>2,4-Dinitrophenol</td>
<td>ND</td>
<td>0.018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>100-02-7</td>
<td>4-Nitrophenol</td>
<td>ND</td>
<td>0.022</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>87-86-5</td>
<td>Pentachlorophenol</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>58-90-2</td>
<td>2,3,4,6-Tetrachlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-95-4</td>
<td>2,4,5-Trichlorophenol a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>88-06-2</td>
<td>2,4,6-Trichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>83-32-9</td>
<td>Aacenaphthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>208-96-8</td>
<td>Aacenaphthylene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>62-53-3</td>
<td>Aniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>120-12-7</td>
<td>Anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>56-55-3</td>
<td>Benzo(a)anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>50-32-8</td>
<td>Benzo(a)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>205-99-2</td>
<td>Benzo(b)fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>207-08-9</td>
<td>Benzo(k)fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>92-52-4</td>
<td>1,1'-Biphenyl</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
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<tr>
<td>85-68-7</td>
<td>Butyl Benzy1 Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>106-47-8</td>
<td>4-Chloroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>111-44-4</td>
<td>bis(2-Chloroethyl)ether</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>108-60-1</td>
<td>2,2'-Oxybis(1-chloropropane)</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>91-58-7</td>
<td>2-Chloronaphthene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>218-01-9</td>
<td>Chrysene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>53-70-3</td>
<td>Dibenzo(a,h)anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>132-64-9</td>
<td>Dibenzo(furan)</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>91-94-1</td>
<td>3,3'-Dichlorobenzidine</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
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<tr>
<td>84-66-2</td>
<td>Diethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>131-11-3</td>
<td>Dimethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>117-84-0</td>
<td>Di-n-octyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>99-65-0</td>
<td>1,3-Dinitrobenzene a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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

Report of Analysis

Client Sample ID: 031-9832Z (BAGLEY RIG SUPPLY WELL)  
Lab Sample ID: LA49116-1  
Matrix: AQ - Water  
Method: SW846 8270D, SW846 3510C  
Date Sampled: 10/23/18  
Date Received: 10/25/18  
Percent Solids: n/a

ABN RECAP LIST

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-14-2</td>
<td>2,4-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>606-20-2</td>
<td>2,6-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>117-81-7</td>
<td>bis(2-Ethylhexyl)phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>206-44-0</td>
<td>Fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>86-73-7</td>
<td>Fluorene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>118-74-1</td>
<td>Hexachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>87-68-3</td>
<td>Hexachlorobutadiene</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>77-47-4</td>
<td>Hexachlorocyclopentadiene</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>193-39-5</td>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>78-59-1</td>
<td>Isophorone</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>91-57-6</td>
<td>2-Methylnaphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>91-20-3</td>
<td>Naphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>88-74-4</td>
<td>2-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>99-09-2</td>
<td>3-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>100-01-6</td>
<td>4-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>98-95-3</td>
<td>Nitrobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>621-64-7</td>
<td>N-Nitroso-di-n-propylamine</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>86-30-6</td>
<td>N-Nitrosodiphenylamine</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>85-01-8</td>
<td>Phenanthrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>129-00-0</td>
<td>Pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>367-12-4</td>
<td>2-Fluorophenol</td>
<td>56%</td>
<td></td>
<td>23-85%</td>
</tr>
<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
<td>46%</td>
<td></td>
<td>10-69%</td>
</tr>
<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
<td>90%</td>
<td></td>
<td>48-138%</td>
</tr>
<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
<td>70%</td>
<td></td>
<td>51-128%</td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>78%</td>
<td></td>
<td>55-122%</td>
</tr>
<tr>
<td>1718-51-0</td>
<td>Terphenyl-d14</td>
<td>92%</td>
<td></td>
<td>43-138%</td>
</tr>
</tbody>
</table>

(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: 031-9832Z (BAGLEY RIG SUPPLY WELL)
Lab Sample ID: LA49116-1
Matrix: AQ - Water
Method: MADEP VPH REV 1.1
Project: 8060.00 Indigo-Desoto Parish, LA

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

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LC381161.D</td>
<td>1</td>
<td>10/27/18 14:21</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
</tbody>
</table>

Purge Volume
Run #1 5.0 ml
Run #2

Volatile Petroleum Hydrocarbons (VPH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>100% a</td>
<td>70-130%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>101% b</td>
<td>70-130%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
**Client Sample ID:** 031-9832Z (BAGLEY RIG SUPPLY WELL)  
**Lab Sample ID:** LA49116-1  
**Date Sampled:** 10/23/18  
**Matrix:** AQ - Water  
**Date Received:** 10/25/18  
**Method:** SW846 8011 SW846 8011  
**Percent Solids:** n/a  
**Project:** 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LK113841.D</td>
<td>1</td>
<td>10/30/18 21:03</td>
<td>JS</td>
<td>10/29/18 03:50</td>
<td>OP12674</td>
<td>GLK739</td>
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</table>

<table>
<thead>
<tr>
<th>Run #2</th>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>36.2 ml</td>
<td>2.0 ml</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>J</td>
<td>0.000019 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**CAS No.** Surrogate Recoveries  
**Run# 1** **Run# 2** **Limits**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>114%</td>
<td>J</td>
<td>55-149%</td>
</tr>
</tbody>
</table>

**ND** = Not detected  
**RL** = Reporting Limit  
**J** = Indicates an estimated value  
**E** = Indicates value exceeds calibration range  
**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: 031-9832Z (BAGLEY RIG SUPPLY WELL)
Lab Sample ID: LA49116-1
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

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #2</td>
<td>Y0005578.D</td>
<td>1</td>
<td>JT</td>
<td>10/26/18 14:00</td>
<td>OP12635</td>
<td>GLB1652</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Run #1</th>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #2</td>
<td>54.6 ml</td>
<td>4.0 ml</td>
</tr>
</tbody>
</table>

Louisiana EPH Ranges

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics &gt; C10-C12 (Unadj.)</td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C12-C16 (Unadj.)</td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C16-C35 (Unadj.)</td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C10-C12 (Unadj.)</td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C12-C16 (Unadj.)</td>
<td>ND</td>
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<table>
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<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
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<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
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<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>74%</td>
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<td>2-Fluorobiphenyl</td>
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<td>40-140%</td>
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(a) Result is from Run# 2

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

Client Sample ID: 031-9832Z (BAGLEY RIG SUPPLY WELL)

Lab Sample ID: LA49116-1

Matrix: AQ - Water

Date Sampled: 10/23/18

Date Received: 10/25/18

Percent Solids: n/a

Project: 8060.00 Indigo-Desoto Parish, LA

## Total Metals Analysis

<table>
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<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
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<tbody>
<tr>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt;0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>SW846 6020A</td>
</tr>
<tr>
<td>Cadmium</td>
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<td>10/26/18</td>
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<td>SW846 6020A</td>
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<tr>
<td>Chromium</td>
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<td>0.010</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tr>
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<td>10/26/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
### General Chemistry

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
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<th>Units</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Method</th>
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<tbody>
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<tr>
<td>Alkalinity, Carbonate (^a)</td>
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<tr>
<td>Alkalinity, Total as CaCO(_3) (^a)</td>
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<td>Bromide (^a)</td>
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<td>Chloride (^a)</td>
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<td>Silica, Dissolved (^a)</td>
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</table>

(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: 031-9832Z (BAGLEY RIG SUPPLY WELL)  
Lab Sample ID: LA49116-1F  
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

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<th>Result</th>
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<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
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</thead>
<tbody>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1 SW846 3010A 3</td>
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<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
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<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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</tr>
<tr>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1 SW846 3010A 3</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1 SW846 3010A 3</td>
</tr>
<tr>
<td>Lead</td>
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<td>RT</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tr>
<tr>
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<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1 SW846 3010A 3</td>
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(1) Instrument QC Batch: MA13786  
(2) Instrument QC Batch: MA13797  
(3) Prep QC Batch: MP13153  
(4) Prep QC Batch: MP13158

RW = Reporting Limit
Client Sample ID: 031-9825Z (BILLINGSLEY RELIEF WELL)
Lab Sample ID: LA49116-2
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW846 8260B
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
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<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
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Purge Volume
- Run #1: 5.0 ml
- Run #2: n/a

VOA RECAP List

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<td>10061-01-5</td>
<td>cis-1,3-Dichloropropene</td>
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<td>10061-02-6</td>
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<tr>
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<td>mg/l</td>
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<td>74-83-9</td>
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<td>74-87-3</td>
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<td>75-09-2</td>
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<tr>
<td>78-93-3</td>
<td>Methyl Ethyl Ketone</td>
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<tr>
<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
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<td>0.0050</td>
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</tbody>
</table>

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

**Client Sample ID:** 031-9825Z (BILLINGSLEY RELIEF WELL)  
**Lab Sample ID:** LA49116-2  
**Date Sampled:** 10/23/18  
**Matrix:** AQ - Water  
**Date Received:** 10/25/18  
**Method:** SW846 8260B  
**Percent Solids:** n/a  
**Project:** 8060.00 Indigo-Desoto Parish, LA

### VOA RECAP List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
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<tbody>
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<tr>
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<td>1,1,1,2-Tetrachloroethane</td>
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<td>108-88-3</td>
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<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
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</tr>
<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
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<td>79-01-6</td>
<td>Trichloroethylene</td>
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<td>75-69-4</td>
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<tr>
<td></td>
<td>m,p-Xylene</td>
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<td>mg/l</td>
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<tr>
<td>95-47-6</td>
<td>o-Xylene</td>
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<td>1330-20-7</td>
<td>Xylene (total)</td>
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### Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>97%</td>
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<td>84-124%</td>
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<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>100%</td>
<td></td>
<td>83-115%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>98%</td>
<td></td>
<td>89-111%</td>
</tr>
</tbody>
</table>

**ND** = Not detected  
**RL** = Reporting Limit  
**J** = Indicates an estimated value  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound
Client Sample ID: 031-9825Z (BILLINGSLEY RELIEF WELL)
Lab Sample ID: LA49116-2
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

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>L0022628.D</td>
<td>1</td>
<td>JS</td>
<td>10/31/18 13:41</td>
<td>10/29/18 07:00</td>
<td>OP12645 EL594</td>
</tr>
</tbody>
</table>

Initial Volume

| Run #1 | 113 ml |
| Run #2 | 1.0 ml |

ABN RECAP LIST

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>105-67-9</td>
<td>2,4-Dimethylphenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>51-28-5</td>
<td>2,4-Dinitrophenol</td>
<td>ND</td>
<td>0.018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>100-02-7</td>
<td>4-Nitrophenol</td>
<td>ND</td>
<td>0.022</td>
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<tr>
<td>87-86-5</td>
<td>Pentachlorophenol</td>
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<td>0.00088</td>
<td>mg/l</td>
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<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>ND</td>
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<td>mg/l</td>
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<tr>
<td>58-90-2</td>
<td>2,3,4,6-Tetrachlorophenol</td>
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<td>83-32-9</td>
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<td>208-96-8</td>
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<tr>
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<tr>
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<tr>
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<tr>
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<tr>
<td>85-68-7</td>
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<tr>
<td>106-47-8</td>
<td>4-Chloroaniline</td>
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<tr>
<td>111-44-4</td>
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<tr>
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<td>132-64-9</td>
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<td>91-94-1</td>
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<td>1,3-Dinitrobenzene a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-9825Z (BILLINGSLEY RELIEF WELL)
Lab Sample ID: LA49116-2
Date Sampled: 10/23/18
Matrix: A Q - Water
Date Received: 10/25/18
Method: SW846 8270D SW846 3510C
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
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<tbody>
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<tr>
<td>206-44-0</td>
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<td>86-73-7</td>
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<td>mg/l</td>
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<td>99-09-2</td>
<td>3-Nitroaniline</td>
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<td>129-00-0</td>
<td>Pyrene</td>
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<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
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<tbody>
<tr>
<td>367-12-4</td>
<td>2-Fluorophenol</td>
<td>59%</td>
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<td>23-85%</td>
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<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
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<td>10-69%</td>
</tr>
<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
<td>92%</td>
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<td>48-138%</td>
</tr>
<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
<td>72%</td>
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<td>51-128%</td>
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<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>78%</td>
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<td>55-122%</td>
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<tr>
<td>1718-51-0</td>
<td>Terphenyl-d14</td>
<td>88%</td>
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<td>43-138%</td>
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</tbody>
</table>

(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
Report of Analysis

Client Sample ID: 031-9825Z (BILLINGSLEY RELIEF WELL)
Lab Sample ID: LA49116-2
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

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LC381162.D</td>
<td>1</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Purge Volume

Run #1: 5.0 ml
Run #2: 5.0 ml

Volatile Petroleum Hydrocarbons (VPH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt;C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt;C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
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</tbody>
</table>

Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>98% a</td>
<td>70-130%</td>
<td></td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>99% b</td>
<td>70-130%</td>
<td></td>
</tr>
</tbody>
</table>

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

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-9825Z (BILLINGSLEY RELIEF WELL)
Lab Sample ID: LA49116-2
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW846 8011 SW846 8011
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LK113842.D</td>
<td>1</td>
<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12674</td>
<td>GLK739</td>
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<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Run #1 Initial Volume 36.9 ml Final Volume 2.0 ml

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>0.000019 mg/l</td>
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</tr>
</tbody>
</table>

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

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

Page 1 of 1

---

SGS North America Inc.
**Report of Analysis**

<table>
<thead>
<tr>
<th>Client Sample ID:</th>
<th>031-9825Z (BILLINGSLEY RELIEF WELL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>LA49116-2</td>
</tr>
<tr>
<td>Matrix:</td>
<td>AQ - Water</td>
</tr>
<tr>
<td>Method:</td>
<td>MADEP EPH REV 1.1 SW846 3511</td>
</tr>
<tr>
<td>Date Sampled:</td>
<td>10/23/18</td>
</tr>
<tr>
<td>Date Received:</td>
<td>10/25/18</td>
</tr>
<tr>
<td>Project:</td>
<td>8060.00 Indigo-Desoto Parish, LA</td>
</tr>
</tbody>
</table>

### File ID

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>X 0005579.D</td>
<td>1</td>
<td>10/30/18 04:02</td>
<td>JT</td>
<td>10/26/18 14:00</td>
<td>OP12635</td>
<td>GLB1651</td>
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<tr>
<td>Run #2</td>
<td>Y 0005579.D</td>
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<td>10/30/18 04:03</td>
<td>JT</td>
<td>10/26/18 14:00</td>
<td>OP12635</td>
<td>GLB1652</td>
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### Initial Volume

<table>
<thead>
<tr>
<th>Run #1</th>
<th>53.5 ml</th>
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</thead>
<tbody>
<tr>
<td>Run #2</td>
<td>53.5 ml</td>
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</tbody>
</table>

### Final Volume

<table>
<thead>
<tr>
<th>Run #1</th>
<th>4.0 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #2</td>
<td>4.0 ml</td>
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</tbody>
</table>

### Louisiana EPH Ranges

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics &gt; C10-C12 (Unadj.) ND</td>
<td>0.14</td>
<td>mg/l</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C12-C16 (Unadj.) ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C16-C35 (Unadj.) ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C10-C12 (Unadj.) ND</td>
<td>0.14</td>
<td>mg/l</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C12-C16 (Unadj.) ND</td>
<td>0.14</td>
<td>mg/l</td>
<td>0.14</td>
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<tr>
<td></td>
<td>Aromatics &gt; C16-C21 (Unadj.) ND</td>
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<td>mg/l</td>
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<tr>
<td></td>
<td>Aromatics &gt; C21-C35 (Unadj.) ND</td>
<td>0.14</td>
<td>mg/l</td>
<td>0.14</td>
<td></td>
</tr>
</tbody>
</table>

### CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>86%</td>
<td>40-140%</td>
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</tr>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>78%</td>
<td>40-140%</td>
<td></td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>74%</td>
<td>40-140%</td>
<td></td>
</tr>
</tbody>
</table>

(a) Result is from Run# 2

**ND** = Not detected

**RL** = Reporting Limit

**J** = Indicates an estimated value

**B** = Indicates analyte found in associated method blank

**E** = Indicates value exceeds calibration range

**N** = Indicates presumptive evidence of a compound
# Report of Analysis

Client Sample ID: 031-9825Z (BILLINGSLEY RELIEF WELL)
Lab Sample ID: LA49116-2
Matrix: AQ - Water
Date Sampled: 10/23/18
Date Received: 10/25/18
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

## Total Metals Analysis

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>1.20</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Barium</td>
<td>0.0318</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt; 0.0050</td>
<td>0.0050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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<tr>
<td>Calcium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Iron</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Magnesium</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Manganese</td>
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<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt; 0.00020</td>
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<td>mg/l</td>
<td>1</td>
<td>10/29/18</td>
<td>10/29/18</td>
<td>SA</td>
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<tr>
<td>Potassium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Selenium</td>
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<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Silver</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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<td>10/26/18</td>
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<tr>
<td>Strontium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Zinc</td>
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<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
</tbody>
</table>

(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
<table>
<thead>
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<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity, Bicarbonate</td>
<td>385</td>
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<td>ATX</td>
<td>SM 18 2320B</td>
</tr>
<tr>
<td>Alkalinity, Carbonate</td>
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<td>5.0</td>
<td>mg/l</td>
<td>1</td>
<td>10/29/18 16:00</td>
<td>ATX</td>
<td>SM 18 2320B</td>
</tr>
<tr>
<td>Alkalinity, Total as CaCO₃</td>
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<tr>
<td>Bromide</td>
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<tr>
<td>Chloride</td>
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<tr>
<td>Silica, Dissolved</td>
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<td>ATX</td>
<td>SW 846 9056A</td>
</tr>
</tbody>
</table>

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

RL = Reporting Limit
Dissolved Metals Analysis

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tr>
<tr>
<td>Barium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>SW846 6020A</td>
</tr>
<tr>
<td>Cadmium</td>
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<td>0.0050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Calcium</td>
<td>1.20</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Iron</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Magnesium</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tr>
<tr>
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<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt; 0.0020</td>
<td>0.00020</td>
<td>mg/l</td>
<td>1</td>
<td>10/29/18</td>
<td>10/29/18</td>
<td>SA</td>
<td>SW846 7470A</td>
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<tr>
<td>Potassium</td>
<td>1.14</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt; 0.050</td>
<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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<tr>
<td>Silver</td>
<td>&lt; 0.010</td>
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<td>10</td>
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<td>Strontium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
SGS North America Inc.

Report of Analysis

Client Sample ID: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)
Lab Sample ID: LA49116-3
Matrix: AQ - Water
Method: SW 846 8260B
Percent Solids: n/a

Date Sampled: 10/23/18
Date Received: 10/25/18

Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
<td>Run #1</td>
<td>2Q0444638.D</td>
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<td>10/30/18 14:58</td>
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</table>

Purge Volume
Run #1 5.0 ml
Run #2

VOA RECAP List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
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<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
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<td>71-43-2</td>
<td>Benzene</td>
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<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>0.0010</td>
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<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
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<td>75-15-0</td>
<td>Carbon Disulfide</td>
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<td>56-23-5</td>
<td>Carbon Tetrachloride</td>
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<tr>
<td>108-90-7</td>
<td>Chlorobenzene</td>
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<td>75-00-3</td>
<td>Chloroethane</td>
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<tr>
<td>75-34-3</td>
<td>1,1-Dichloroethane</td>
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<tr>
<td>107-06-2</td>
<td>1,2-Dichloroethane</td>
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<td>mg/l</td>
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<tr>
<td>75-35-4</td>
<td>1,1-Dichloroethylene</td>
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<td>156-59-2</td>
<td>cis-1,2-Dichloroethylene</td>
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<td>mg/l</td>
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<tr>
<td>156-60-5</td>
<td>trans-1,2-Dichloroethylene</td>
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<td>0.0010</td>
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<td>540-59-0</td>
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<td>78-87-5</td>
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<td>mg/l</td>
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<td>10061-02-6</td>
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<td>542-75-6</td>
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<td>100-41-4</td>
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<td>67-72-1</td>
<td>Hexachloroethane</td>
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<tr>
<td>78-83-1</td>
<td>Isobutyl Alcohol</td>
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<td>74-83-9</td>
<td>Methyl Bromide</td>
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<tr>
<td>74-87-3</td>
<td>Methyl Chloride</td>
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<tr>
<td>75-09-2</td>
<td>Methylene Chloride</td>
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<td>78-93-3</td>
<td>Methyl Ethyl Ketone</td>
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<td>108-10-1</td>
<td>4-Methyl-2-pentanone</td>
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<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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</tr>
</tbody>
</table>

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RL = Reporting Limit
J = Indicates an estimated value
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E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)
Lab Sample ID: LA49116-3
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW 846 8260B
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

VOA RECAP List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-42-5</td>
<td>Styrene</td>
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<td>0.0010 mg/l</td>
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<tr>
<td>630-20-6</td>
<td>1,1,1,2-Tetrachloroethane</td>
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<td>0.0010 mg/l</td>
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<tr>
<td>79-34-5</td>
<td>1,1,2,2-Tetrachloroethane</td>
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<td>127-18-4</td>
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<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
<td>ND</td>
<td>0.0010 mg/l</td>
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<td>75-01-4</td>
<td>Vinyl Chloride</td>
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<td></td>
<td>m,p-Xylene</td>
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<tr>
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<td>o-Xylene</td>
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<td>1330-20-7</td>
<td>Xylene (total)</td>
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<table>
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<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
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<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
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<td>84-124%</td>
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<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>100%</td>
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<td>83-115%</td>
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<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
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<td>89-111%</td>
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</table>

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N = Indicates presumptive evidence of a compound
Client Sample ID: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)
Lab Sample ID: LA49116-3
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

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<td>10/29/18 07:00 OP12645</td>
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<table>
<thead>
<tr>
<th>Run</th>
<th>Initial Volume</th>
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<tbody>
<tr>
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<td>Run #2</td>
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**ABN RECAP LIST**

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<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
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<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>105-67-9</td>
<td>2,4-Dimethylphenol</td>
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<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>51-28-5</td>
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<td>100-02-7</td>
<td>4-Nitrophenol</td>
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<td>91-58-7</td>
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<td>218-01-9</td>
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<td>53-70-3</td>
<td>Dibenzo(a,h)anthracene</td>
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<td>1,3-Dinitrobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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Lab Sample ID: LA49116-3
Matrix: AQ - Water
Method: SW 846 8270D, SW 846 3510C
Date Sampled: 10/23/18
Date Received: 10/25/18
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

### ABN RECAP LIST

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-14-2</td>
<td>2,4-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>606-20-2</td>
<td>2,6-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>117-81-7</td>
<td>bis(2-Ethylhexyl)phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>206-44-0</td>
<td>Fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>86-73-7</td>
<td>Fluorene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>118-74-1</td>
<td>Hexachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>87-68-3</td>
<td>Hexachlorobutadiene</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>77-47-4</td>
<td>Hexachlorocyclopentadiene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>193-39-5</td>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>78-59-1</td>
<td>Isophorone</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>91-57-6</td>
<td>2-Methylnaphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>91-20-3</td>
<td>Naphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>88-74-4</td>
<td>2-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>99-09-2</td>
<td>3-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>100-01-6</td>
<td>4-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>98-95-3</td>
<td>Nitrobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>621-64-7</td>
<td>N-Nitroso-di-n-propylamine</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>86-30-6</td>
<td>N-Nitrosodiphenylamine</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>85-01-8</td>
<td>Phenanthrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>129-00-0</td>
<td>Pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>367-12-4</td>
<td>2-Fluorophenol</td>
<td>54%</td>
<td>23-85%</td>
<td></td>
</tr>
<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
<td>47%</td>
<td>10-69%</td>
<td></td>
</tr>
<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
<td>86%</td>
<td>48-138%</td>
<td></td>
</tr>
<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
<td>68%</td>
<td>51-128%</td>
<td></td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>74%</td>
<td>55-122%</td>
<td></td>
</tr>
<tr>
<td>1718-51-0</td>
<td>Terphenyl-d14</td>
<td>90%</td>
<td>43-138%</td>
<td></td>
</tr>
</tbody>
</table>

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

**ND** = Not detected  
**RL** = Reporting Limit  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound  
**J** = Indicates an estimated value
Client Sample ID: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)  
Lab Sample ID: LA49116-3  
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

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LC381163.D</td>
<td>1</td>
<td>10/27/18 15:48</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
</tbody>
</table>

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

Volatile Petroleum Hydrocarbons (VPH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>100% a</td>
<td></td>
<td>70-130%</td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>100% b</td>
<td></td>
<td>70-130%</td>
</tr>
</tbody>
</table>

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

ND = Not detected  
RL = Reporting Limit  
J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range  
N = Indicates presumptive evidence of a compound
### Client Sample ID:
031-9767Z (LONG 1&2 RIG SUPPLY WELL)

### Lab Sample ID:
LA49116-3

### Date Sampled:
10/23/18

### Matrix:
AQ - Water

### Method:
SW 846 8011  SW 846 8011

### Percent Solids:
n/a

### Project:
8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LK113866.D</td>
<td>1</td>
<td>JS</td>
<td>10/31/18 04:21</td>
<td>10/29/18 03:50</td>
<td>OP12675</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GLK739</td>
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</table>

<table>
<thead>
<tr>
<th>Run #1</th>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>36.3 ml</td>
<td>2.0 ml</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>96128</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td></td>
<td>0.000019mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348516</td>
<td></td>
<td></td>
<td></td>
<td>55-149%</td>
</tr>
</tbody>
</table>

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

Client Sample ID: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)
Lab Sample ID: LA49116-3
Matrix: AQ - Water
Method: MADEP EPH REV 1.1 SW846 3511
Percent Solids: n/a
Date Sampled: 10/23/18
Date Received: 10/25/18
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>X 0005580.D</td>
<td>1</td>
<td>10/30/18 04:26</td>
<td>JT</td>
<td>10/26/18 14:00</td>
<td>OP12635 GLB1651</td>
</tr>
<tr>
<td>Run #2</td>
<td>Y 0005580.D</td>
<td>1</td>
<td>10/30/18 04:27</td>
<td>JT</td>
<td>10/26/18 14:00</td>
<td>OP12635 GLB1652</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>55.1 ml</td>
</tr>
<tr>
<td>Run #2</td>
<td>55.1 ml</td>
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</tbody>
</table>

Louisiana EPH Ranges

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatics &gt; C10-C12 (Unadj.) ND</td>
<td>0.14 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aliphatics &gt; C12-C16 (Unadj.) ND</td>
<td>0.14 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aliphatics &gt; C16-C35 (Unadj.) ND</td>
<td>0.14 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aromatics &gt; C10-C12 (Unadj.) ND</td>
<td>0.14 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aromatics &gt; C12-C16 (Unadj.) ND</td>
<td>0.14 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aromatics &gt; C16-C21 (Unadj.) ND</td>
<td>0.14 mg/l</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aromatics &gt; C21-C35 (Unadj.) ND</td>
<td>0.14 mg/l</td>
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</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>84%</td>
<td>40-140%</td>
<td></td>
</tr>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>78%</td>
<td>40-140%</td>
<td></td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>77%</td>
<td>40-140%</td>
<td></td>
</tr>
</tbody>
</table>

(a) Result is from Run #2

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
E = Indicates value exceeds calibration range
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: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)  
Lab Sample ID: LA49116-3  
Date Sampled: 10/23/18  
Date Received: 10/25/18  
Matrix: AQ - Water  
Percent Solids: n/a  
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Barium</td>
<td>0.0253</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt; 0.0050</td>
<td>0.0050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Calcium</td>
<td>1.22</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Iron</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Magnesium</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Manganese</td>
<td>&lt; 0.020</td>
<td>0.020</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt; 0.00020</td>
<td>0.00020</td>
<td>mg/l</td>
<td>1</td>
<td>10/29/18</td>
<td>10/29/18</td>
<td>SA</td>
<td>SW846 7470A</td>
</tr>
<tr>
<td>Potassium</td>
<td>1.14</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt; 0.050</td>
<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Silver</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Sodium</td>
<td>201</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Strontium</td>
<td>0.104</td>
<td>0.20</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Zinc</td>
<td>&lt; 0.050</td>
<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
</tbody>
</table>

(1) Instrument QC Batch: MA13786  
(2) Instrument QC Batch: MA13797  
(3) Prep QC Batch: MP13153  
(4) Prep QC Batch: MP13158

RL = Reporting Limit
Client Sample ID: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)  
Lab Sample ID: LA49116-3  
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

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Date Analyzed</th>
<th>By</th>
<th>Method</th>
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<tbody>
<tr>
<td>Alkalinity, Bicarbonate</td>
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<td>1</td>
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<td>SM 18 2320B</td>
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<tr>
<td>Alkalinity, Carbonate</td>
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<td>Alkalinity, Total as CaCO₃</td>
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<td>Bromide</td>
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<td>Chloride</td>
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<td>Silica, Dissolved</td>
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<td>Solids, Total Dissolved</td>
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</table>

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

RL = Reporting Limit
Client Sample ID: 031-9767Z (LONG 1&2 RIG SUPPLY WELL)
Lab Sample ID: LA49116-3F
Date Sampled: 10/23/18
Date Received: 10/25/18
Matrix: AQ - Water Filtered
Percent Solids: n/a
Project: 8060.00 Indigo-DeSoto Parish, LA

Dissolved Metals Analysis

<table>
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<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
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<th>Method</th>
<th>Prep Method</th>
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<tr>
<td>Aluminum</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tr>
<tr>
<td>Arsenic</td>
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<tr>
<td>Chromium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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<tr>
<td>Iron</td>
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<td>10/26/18</td>
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<td>RT</td>
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<tr>
<td>Mercury</td>
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<td>10/29/18</td>
<td>10/29/18</td>
<td>SA</td>
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<td>Potassium</td>
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<td>10/29/18</td>
<td>RT</td>
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<tr>
<td>Selenium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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<td>Silver</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>10/29/18</td>
<td>RT</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
# Report of Analysis

**Client Sample ID:** 031-9768Z (LONG 3&4 RIG SUPPLY WELL)  
**Lab Sample ID:** LA49116-4  
**Matrix:** AQ - Water  
**Method:** SW 846 8260B  
**Date Sampled:** 10/23/18  
**Date Received:** 10/25/18  
**Percent Solids:** n/a  
**Project:** 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
<td>Run #1</td>
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**Purge Volume**  
Run #1: 5.0 ml  
Run #2: n/a

## VOA RECAP List

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<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
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<td>75-27-4</td>
<td>Bromodichloromethane</td>
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<tr>
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<tr>
<td>108-90-7</td>
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</table>

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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
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<th>Units</th>
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<th>CAS No.</th>
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<th>Run# 2</th>
<th>Limits</th>
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<td>2037-26-5</td>
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<td>83-115%</td>
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<td>4-Bromofluorobenzene</td>
<td>94%</td>
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<td>89-111%</td>
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</table>

**Notes:**
- **ND** = Not detected
- **RL** = Reporting Limit
- **Q** = Units
- **J** = Indicates an estimated value
- **B** = Indicates analyte found in associated method blank
- **E** = Indicates value exceeds calibration range
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ABN RECAP LIST

<table>
<thead>
<tr>
<th>CAS No.</th>
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<th>Q</th>
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<td>87-86-5</td>
<td>Pentachlorophenol</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>58-90-2</td>
<td>2,3,4,6-Tetrachlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>95-95-4</td>
<td>2,4,5-Trichlorophenol</td>
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<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>88-06-2</td>
<td>2,4,6-Trichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>83-32-9</td>
<td>Aacenaphthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>208-96-8</td>
<td>Aacenaphthylene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>62-53-3</td>
<td>Aniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>120-12-7</td>
<td>Anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>56-55-3</td>
<td>Benzo(a)anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>50-32-8</td>
<td>Benzo(a)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>205-99-2</td>
<td>Benzo(b)fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>207-08-9</td>
<td>Benzo(k)fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>92-52-4</td>
<td>1,1'-Biphenyl</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>85-68-7</td>
<td>Butyl Benzy1 Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>106-47-8</td>
<td>4-Chloroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>111-44-4</td>
<td>bis(2-Chloroethyl)ether</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-60-1</td>
<td>2,2'-Oxybis(1-chloropropane)</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>91-58-7</td>
<td>2-Chloronaphthalene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>218-01-9</td>
<td>Chrysene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>53-70-3</td>
<td>Dibenzo(a,h)anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>132-64-9</td>
<td>Dibenzofuran</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>91-94-1</td>
<td>3,3'-Dichlorobenzidine</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>84-66-2</td>
<td>Diethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>131-11-3</td>
<td>Dimethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>117-84-0</td>
<td>Di-n-octyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>99-65-0</td>
<td>1,3-Dinitrobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**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
### Client Sample ID:
031-9768Z (LONG 3&4 RIG SUPPLY WELL)

### Lab Sample ID:
LA49116-4

### Date Sampled:
10/23/18

### Matrix:
AQ - Water

### Date Received:
10/25/18

### Method:
SW 846 8270D, SW 846 3510C

### Percent Solids:
n/a

### Project:
8060.00 Indigo-Desoto Parish, LA

### ABN Recap List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-14-2</td>
<td>2,4-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>606-20-2</td>
<td>2,6-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>117-81-7</td>
<td>bis(2-Ethylhexyl)phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>206-44-0</td>
<td>Fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>86-73-7</td>
<td>Fluorene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>118-74-1</td>
<td>Hexachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>87-68-3</td>
<td>Hexachlorobutadiene</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>77-47-4</td>
<td>Hexachlorocyclopentadiene</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>193-39-5</td>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>78-59-1</td>
<td>Isophorone</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>91-57-6</td>
<td>2-Methylnaphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>91-20-3</td>
<td>Naphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>88-74-4</td>
<td>2-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>99-09-2</td>
<td>3-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>100-01-6</td>
<td>4-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>98-95-3</td>
<td>Nitrobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
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</tr>
<tr>
<td>621-64-7</td>
<td>N-Nitroso-di-n-propylamine</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>86-30-6</td>
<td>N-Nitrosodiphenylamine</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>85-01-8</td>
<td>Phenanthrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>129-00-0</td>
<td>Pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

### CAS No. Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>367-12-4</td>
<td>2-Fluorophenol</td>
<td>57%</td>
<td></td>
<td>23-85%</td>
</tr>
<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
<td>46%</td>
<td></td>
<td>10-69%</td>
</tr>
<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
<td>90%</td>
<td></td>
<td>48-138%</td>
</tr>
<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
<td>72%</td>
<td></td>
<td>51-128%</td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>78%</td>
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<td>55-122%</td>
</tr>
<tr>
<td>1718-51-0</td>
<td>Terphenyl-d14</td>
<td>89%</td>
<td></td>
<td>43-138%</td>
</tr>
</tbody>
</table>

(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
### Client Sample ID:
031-9768Z (LONG 3&4 RIG SUPPLY WELL)

### Lab Sample ID:
LA49116-4

### 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

<table>
<thead>
<tr>
<th>Run</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LC381170.D</td>
<td>1</td>
<td>10/27/18 20:56</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
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<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### Purge Volume

<table>
<thead>
<tr>
<th>Run</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>5.0 ml</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
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</tbody>
</table>

### Volatile Petroleum Hydrocarbons (VPH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**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 | 101% b | 70-130% |

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

---

**ND** = Not detected  
**RL** = Reporting Limit  
**J** = Indicates an estimated value  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound
Client Sample ID: 031-9768Z (LONG 3&4 RIG SUPPLY WELL)
Lab Sample ID: LA49116-4
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW846 8011  SW846 8011
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LK113867.D</td>
<td>1</td>
<td>JS</td>
<td>10/31/18 04:39</td>
<td>JS</td>
<td>GLK739</td>
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<table>
<thead>
<tr>
<th>Run #2</th>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33.1 ml</td>
<td>2.0 ml</td>
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</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>0.000021mg/l</td>
<td></td>
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</tbody>
</table>

Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>113%</td>
<td>55-149%</td>
<td></td>
</tr>
</tbody>
</table>

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-9768Z (LONG 3&4 RIG SUPPLY WELL)
Lab Sample ID: LA49116-4
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

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1 X0005581.D</td>
<td>1</td>
<td>10/30/18 04:50 JT</td>
<td>10/26/18 14:00</td>
<td>OP12635</td>
<td>GLB1651</td>
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<tr>
<td>Run #2 Y0005581.D</td>
<td>1</td>
<td>10/30/18 04:51 JT</td>
<td>10/26/18 14:00</td>
<td>OP12635</td>
<td>GLB1652</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1 54.8 ml</td>
<td>4.0 ml</td>
</tr>
<tr>
<td>Run #2 54.8 ml</td>
<td>4.0 ml</td>
</tr>
</tbody>
</table>

Louisiana EPH Ranges

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Aliphatics &gt; C10-C12 (Unadj.)</strong></td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Aliphatics &gt; C12-C16 (Unadj.)</strong></td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
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<tr>
<td></td>
<td><strong>Aliphatics &gt; C16-C35 (Unadj.)</strong></td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
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<tr>
<td></td>
<td><strong>Aromatics &gt; C10-C12 (Unadj.)</strong></td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Aromatics &gt; C12-C16 (Unadj.)</strong></td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
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</tr>
<tr>
<td></td>
<td><strong>Aromatics &gt; C16-C21 (Unadj.)</strong></td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
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<tr>
<td></td>
<td><strong>Aromatics &gt; C21-C35 (Unadj.)</strong></td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>77%</td>
<td>40-140%</td>
<td></td>
</tr>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>81%</td>
<td>40-140%</td>
<td></td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>83%</td>
<td>40-140%</td>
<td></td>
</tr>
</tbody>
</table>

(a) Result is from Run# 2

**ND** = Not detected  
**RL** = Reporting Limit  
**J** = Indicates an estimated value  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound
Client Sample ID: 031-9768Z (LONG 3&4 RIG SUPPLY WELL)  
Lab Sample ID: LA49116-4  
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

<table>
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<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
</tr>
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<tbody>
<tr>
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<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
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<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Cadmium</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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</table>

(1) Instrument QC Batch: MA13786  
(2) Instrument QC Batch: MA13797  
(3) Prep QC Batch: MP13153  
(4) Prep QC Batch: MP13158

**RL = Reporting Limit**
### General Chemistry

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<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Method</th>
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<tbody>
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<td>Alkalinity, Total as CaCO₃ (^a)</td>
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</table>

\(^a\) Analysis performed at SGS Houston, TX.

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

**RL** = Reporting Limit
### Report of Analysis

**Client Sample ID:** 031-9768Z (LONG 3&4 RIG SUPPLY WELL)  
**Lab Sample ID:** LA49116-4F  
**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

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<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
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</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt; 1.0</td>
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<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
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<td>mg/l</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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<tr>
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<td>10/29/18</td>
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<td>Cadmium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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<tr>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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<td>10/29/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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<tr>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>SW846 6020A</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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</table>

(1) Instrument QC Batch: MA13786  
(2) Instrument QC Batch: MA13797  
(3) Prep QC Batch: MP13153  
(4) Prep QC Batch: MP13158

**RL = Reporting Limit**
### Client Sample ID: EQUIPMENT BLANK
### Lab Sample ID: LA49116-5
### Date Sampled: 10/23/18
### Matrix: AQ - Equipment Blank
### Date Received: 10/25/18
### Method: SW 846 8260B
### Percent Solids: n/a
### Project: 8060.00 Indigo-Desoto Parish, LA

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<th>Prep Date</th>
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**Purge Volume**

Run #1: 5.0 ml
Run #2: 

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### VOA RECAP List

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<td>75-09-2</td>
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<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>78-93-3</td>
<td>Methyl Ethyl Ketone</td>
<td>ND</td>
<td>0.013</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>108-10-1</td>
<td>4-Methyl-2-pentanone</td>
<td>ND</td>
<td>0.013</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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
**Report of Analysis**

<table>
<thead>
<tr>
<th>Client Sample ID:</th>
<th>EQUIPMENT BLANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>LA49116-5</td>
</tr>
<tr>
<td>Matrix:</td>
<td>AQ - Equipment Blank</td>
</tr>
<tr>
<td>Method:</td>
<td>SW846 8260B</td>
</tr>
<tr>
<td>Project:</td>
<td>8060.00 Indigo-Desoto Parish, LA</td>
</tr>
<tr>
<td>Date Sampled:</td>
<td>10/23/18</td>
</tr>
<tr>
<td>Date Received:</td>
<td>10/25/18</td>
</tr>
</tbody>
</table>

**VOA RECAP List**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-42-5</td>
<td>Styrene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>630-20-6</td>
<td>1,1,1,2-Tetrachloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-34-5</td>
<td>1,1,2,2-Tetrachloroethane</td>
<td>ND</td>
<td>0.0005</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>127-18-4</td>
<td>Tetrachloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-01-6</td>
<td>Trichloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>75-01-4</td>
<td>Vinyl Chloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td></td>
<td>m,p-Xylene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-47-6</td>
<td>o-Xylene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**Surrogate Recoveries**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>102%</td>
<td></td>
<td>84-124%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>97%</td>
<td></td>
<td>83-115%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>95%</td>
<td></td>
<td>89-111%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Client Sample ID:</th>
<th>EQUIPMENT BLANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Sample ID:</td>
<td>LA49116-5</td>
</tr>
<tr>
<td>Date Sampled:</td>
<td>10/23/18</td>
</tr>
<tr>
<td>Matrix:</td>
<td>AQ - Equipment Blank</td>
</tr>
<tr>
<td>Date Received:</td>
<td>10/25/18</td>
</tr>
<tr>
<td>Method:</td>
<td>SW846 8270D SW846 3510C</td>
</tr>
<tr>
<td>Percent Solids:</td>
<td>n/a</td>
</tr>
<tr>
<td>Project:</td>
<td>8060.00 Indigo-Desoto Parish, LA</td>
</tr>
</tbody>
</table>

### Initial Volume and Final Volume
- Run #1: 113 ml, Final Volume: 1.0 ml
- Run #2

### ABN Recap List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>105-67-9</td>
<td>2,4-Dimethylphenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>51-28-5</td>
<td>2,4-Dinitrophenol</td>
<td>ND</td>
<td>0.018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>100-02-7</td>
<td>4-Nitrophenol</td>
<td>ND</td>
<td>0.022</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>87-86-5</td>
<td>Pentachlorophenol</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>58-90-2</td>
<td>2,3,4,6-Tetrachlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-95-4</td>
<td>2,4,5-Trichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>88-06-2</td>
<td>2,4,6-Trichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>83-32-9</td>
<td>Aacenaphthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>208-96-8</td>
<td>Aacenaphthylene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>62-53-3</td>
<td>Aniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>120-12-7</td>
<td>Anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>56-55-3</td>
<td>Benzo(a)anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>50-32-8</td>
<td>Benzo(a)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>205-99-2</td>
<td>Benzo(b)fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>207-08-9</td>
<td>Benzo(k)fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>92-52-4</td>
<td>1,1'-Biphenyl</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>85-68-7</td>
<td>Butyl Benzyl Phthalate a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>106-47-8</td>
<td>4-Chloroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>111-44-4</td>
<td>bis(2-Chloroethyl)ether</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-60-1</td>
<td>2,2'-Oxybis(1-chloropropane)</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>91-58-7</td>
<td>2-Chloronaphthalene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>218-01-9</td>
<td>Chrysene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>53-70-3</td>
<td>Dibenzo(a,h)anthracene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>132-64-9</td>
<td>Dibenzofuran</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>91-94-1</td>
<td>3,3'-Dichlorobenzidine</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>84-66-2</td>
<td>Diethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>131-11-3</td>
<td>Dimethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>117-84-0</td>
<td>Di-n-octyl Phthalate a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>99-65-0</td>
<td>1,3-Dinitrobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**ND** = Not detected

**RL** = Reporting Limit

**Q** = Indicates value exceeds calibration range

**E** = Indicates an estimated value

**J** = Indicates analyte found in associated method blank

**B** = Indicates presumptive evidence of a compound

---

**ABN Recap List**

- **Run #1**
  - Initial Volume: 113 ml
  - Final Volume: 1.0 ml

- **Run #2**
Client Sample ID: EQUIPMENT BLANK
Lab Sample ID: LA49116-5
Matrix: AQ - Equipment Blank
Method: SW846 8270D, SW846 3510C
Percent Solids: n/a
Date Sampled: 10/23/18
Date Received: 10/25/18

Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-14-2</td>
<td>2,4-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>606-20-2</td>
<td>2,6-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>117-81-7</td>
<td>bis(2-Ethylhexyl)phthalate a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>206-44-0</td>
<td>Fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>86-73-7</td>
<td>Fluorene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>118-74-1</td>
<td>Hexachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
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</tr>
<tr>
<td>87-68-3</td>
<td>Hexachlorobutadiene</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>77-47-4</td>
<td>Hexachlorocyclopentadiene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>193-39-5</td>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>78-59-1</td>
<td>Isophorone</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>91-57-6</td>
<td>2-Methylnaphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>91-20-3</td>
<td>Naphthalene b</td>
<td>0.00022</td>
<td></td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>88-74-4</td>
<td>2-Nitroaniline</td>
<td>ND</td>
<td>0.00044</td>
<td></td>
<td></td>
</tr>
<tr>
<td>99-09-2</td>
<td>3-Nitroaniline</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>100-01-6</td>
<td>4-Nitroaniline</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>98-95-3</td>
<td>Nitrobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>621-64-7</td>
<td>N-Nitroso-di-n-propylamine</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>86-30-6</td>
<td>N-Nitrosodiphenylamine</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>85-01-8</td>
<td>Phenantrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>129-00-0</td>
<td>Pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>367-12-4</td>
<td>2-Fluorophenol</td>
<td>48%</td>
<td>23-85%</td>
<td></td>
</tr>
<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
<td>38%</td>
<td>10-69%</td>
<td></td>
</tr>
<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
<td>78%</td>
<td>48-138%</td>
<td></td>
</tr>
<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
<td>66%</td>
<td>51-128%</td>
<td></td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>66%</td>
<td>55-122%</td>
<td></td>
</tr>
<tr>
<td>1718-51-0</td>
<td>Terphenyl-d14</td>
<td>82%</td>
<td>43-138%</td>
<td></td>
</tr>
</tbody>
</table>

(a) Associated CCV outside of control limits high, sample was ND.
(b) Analyte detected in client Equipment Blank. Sample was re-analyzed for confirmation.

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
Client Sample ID: EQUIPMENT BLANK
Lab Sample ID: LA49116-5  Date Sampled: 10/23/18
Matrix: AQ - Equipment Blank  Date Received: 10/25/18
Method: MADEP VPH REV 1.1  Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LC381169.D</td>
<td>1</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
</tbody>
</table>

Purge Volume
Run #1 5.0 ml
Run #2

Volatile Petroleum Hydrocarbons (VPH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt;C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt;C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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 98% b 70-130%

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

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
**Client Sample ID:** EQUIPMENT BLANK  
**Lab Sample ID:** LA49116-5  
**Date Sampled:** 10/23/18  
**Matrix:** AQ - Equipment Blank  
**Date Received:** 10/25/18  
**Method:** SW846 8011 SW846 8011  
**Percent Solids:** n/a  
**Project:** 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LK113869.D</td>
<td>1</td>
<td>10/31/18 05:14</td>
<td>JS</td>
<td>10/29/18 03:50</td>
<td>OP12675</td>
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<table>
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<tr>
<th>Run #2</th>
<th>Initial Volume</th>
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</tr>
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<tbody>
<tr>
<td>Run #1</td>
<td>36.8 ml</td>
<td>2.0 ml</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
</tr>
</tbody>
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**CAS No.**  
**Compound**  
**Result**  
**RL**  
**Units**  
**Q**

<table>
<thead>
<tr>
<th>96-12-8</th>
<th>1,2-Dibromo-3-chloropropane</th>
<th>ND</th>
<th>0.000019 mg/l</th>
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**CAS No.** Surrogate Recoveries  
**Run #**  
**Limits**

<table>
<thead>
<tr>
<th>348-51-6</th>
<th>1-Chloro-2-fluorobenzene</th>
<th>113%</th>
<th>55-149%</th>
</tr>
</thead>
</table>

**ND** = Not detected  
**RL** = Reporting Limit  
**J** = Indicates an estimated value  
**B** = Indicates analyte found in associated method blank  
**E** = Indicates value exceeds calibration range  
**N** = Indicates presumptive evidence of a compound
Client Sample ID: EQUIPMENT BLANK
Lab Sample ID: LA49116-5
Date Sampled: 10/23/18
Matrix: AQ - Equipment Blank
Date Received: 10/25/18
Method: MADEP EPH REV 1.1 SW846 3511
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
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<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>X 0005582.D</td>
<td>1</td>
<td>JT</td>
<td>10/26/18 14:00</td>
<td>OP12635</td>
<td>GLB1651</td>
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<tr>
<td>Run #2</td>
<td>Y 0005582.D</td>
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<table>
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</thead>
<tbody>
<tr>
<td>#1</td>
<td>55.2 ml</td>
<td>4.0 ml</td>
</tr>
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<td>#2</td>
<td>55.2 ml</td>
<td>4.0 ml</td>
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### Louisiana EPH Ranges

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<th>Result</th>
<th>RL</th>
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<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>ND a</td>
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<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>79%</td>
<td>77%</td>
<td>40-140%</td>
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<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>82%</td>
<td>77%</td>
<td>40-140%</td>
<td></td>
</tr>
</tbody>
</table>

(a) Result is from Run #2

**Legend:**
- 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
### Total Metals Analysis

<table>
<thead>
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<th>Analyte</th>
<th>Result</th>
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<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt; 0.10</td>
<td>0.10</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.0010</td>
<td>0.0010</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Barium</td>
<td>&lt; 0.0010</td>
<td>0.0010</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt; 0.00050</td>
<td>0.00050</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Calcium</td>
<td>&lt; 0.10</td>
<td>0.10</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
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</tr>
<tr>
<td>Chromium</td>
<td>&lt; 0.0010</td>
<td>0.0010</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Iron</td>
<td>&lt; 0.10</td>
<td>0.10</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt; 0.0010</td>
<td>0.0010</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
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<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Magnesium</td>
<td>&lt; 0.10</td>
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<td>mg/l</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Manganese</td>
<td>&lt; 0.0020</td>
<td>0.0020</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt; 0.00020</td>
<td>0.00020</td>
<td>mg/l</td>
<td>1</td>
<td>10/29/18</td>
<td>10/29/18</td>
<td>SW846 7470A</td>
<td>2 SW846 7470A</td>
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<tr>
<td>Potassium</td>
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<td>mg/l</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt; 0.0050</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Silver</td>
<td>&lt; 0.0010</td>
<td>0.0010</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Sodium</td>
<td>&lt; 0.10</td>
<td>0.10</td>
<td>mg/l</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
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<td>0.0020</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
</tr>
<tr>
<td>Zinc</td>
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<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>1 SW846 3010A</td>
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</tbody>
</table>

(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
SGS North America Inc.

**Report of Analysis**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity, Bicarbonate (^a)</td>
<td>&lt; 5.0</td>
<td>5.0</td>
<td>mg/l</td>
<td>1</td>
<td>10/29/18 16:00</td>
<td>ATX</td>
<td>SM 18 2320B</td>
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<tr>
<td>Alkalinity, Carbonate (^a)</td>
<td>&lt; 5.0</td>
<td>5.0</td>
<td>mg/l</td>
<td>1</td>
<td>10/29/18 16:00</td>
<td>ATX</td>
<td>SM 18 2320B</td>
</tr>
<tr>
<td>Alkalinity, Total as CaCO(_3) (^a)</td>
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<td>5.0</td>
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<td>ATX</td>
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<tr>
<td>Bromide (^a)</td>
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<tr>
<td>Chloride (^a)</td>
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<td>Silica, Dissolved (^a)</td>
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<td>Solids, Total Dissolved (^a)</td>
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<td>Sulfate (^a)</td>
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<td>mg/l</td>
<td>1</td>
<td>11/06/18 14:33</td>
<td>ATX</td>
<td>SW 846 9056A</td>
</tr>
</tbody>
</table>

\(^a\) Analysis performed at SGS Houston, TX.

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

RL = Reporting Limit
# Report of Analysis

Client Sample ID: EQUIPMENT BLANK  
Lab Sample ID: LA49116-5F  
Matrix: AQ - Equip Blank Filtered  
Date Sampled: 10/23/18  
Date Received: 10/25/18  
Percent Solids: n/a  
Project: 8060.00 Indigo-Desoto Parish, LA

### Dissolved Metals Analysis

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<th>Result</th>
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<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
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<tbody>
<tr>
<td>Aluminum</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.0010</td>
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<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Barium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tr>
<tr>
<td>Cadmium</td>
<td>&lt; 0.00050</td>
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<td>mg/l</td>
<td>1</td>
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<td>10/29/18</td>
<td>RT</td>
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<tr>
<td>Calcium</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Chromium</td>
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<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Iron</td>
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<td>10/29/18</td>
<td>RT</td>
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</tr>
<tr>
<td>Lead</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Manganese</td>
<td>&lt; 0.0020</td>
<td>0.0020</td>
<td>mg/l</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Mercury</td>
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<td>0.00020</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Selenium</td>
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<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
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<td>&lt; 0.0010</td>
<td>0.0010</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
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<tr>
<td>Sodium</td>
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<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Strontium</td>
<td>&lt; 0.0020</td>
<td>0.0020</td>
<td>mg/l</td>
<td>1</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
<tr>
<td>Zinc</td>
<td>&lt; 0.0050</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A</td>
</tr>
</tbody>
</table>

(1) Instrument QC Batch: MA13786  
(2) Instrument QC Batch: MA13797  
(3) Prep QC Batch: MP13153  
(4) Prep QC Batch: MP13158

RL = Reporting Limit
SGS North America Inc.

Report of Analysis

Client Sample ID: FIELD BLANK
Lab Sample ID: LA49116-6
Date Sampled: 10/23/18
Matrix: AQ - Field Blank Water
Date Received: 10/25/18
Method: SW 846 8260B
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>1I040691.D</td>
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<td>LS</td>
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<td>V1I1896</td>
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<tr>
<td>Run #2</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Purge Volume
Run #1 5.0 ml
Run #2

VOA RECAP List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
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<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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<tr>
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<tr>
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<tr>
<td>156-59-2</td>
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<tr>
<td>156-60-5</td>
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<tr>
<td>540-59-0</td>
<td>1,2-Dichloroethene (total)</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>78-87-5</td>
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<tr>
<td>10061-01-5</td>
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<td>Methyl Chloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<td>75-09-2</td>
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<td>mg/l</td>
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<tr>
<td>78-93-3</td>
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<td>mg/l</td>
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<td>4-Methyl-2-pentanone</td>
<td>ND</td>
<td>0.013</td>
<td>mg/l</td>
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<tr>
<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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
Client Sample ID: **FIELD BLANK**  
Lab Sample ID: **LA49116-6**  
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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-42-5</td>
<td><strong>Styrene</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>630-20-6</td>
<td><strong>1,1,1,2-Tetrachloroethane</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-34-5</td>
<td><strong>1,1,2,2-Tetrachloroethane</strong></td>
<td>ND</td>
<td>0.0005</td>
<td>mg/l</td>
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<tr>
<td>127-18-4</td>
<td><strong>Tetrachloroethylene</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td><strong>Toluene</strong></td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>71-55-6</td>
<td><strong>1,1,1-Trichloroethane</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-00-5</td>
<td><strong>1,1,2-Trichloroethane</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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</tr>
<tr>
<td>79-01-6</td>
<td><strong>Trichloroethylene</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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</tr>
<tr>
<td>75-69-4</td>
<td><strong>Trichlorofluoromethane</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>75-01-4</td>
<td><strong>Vinyl Chloride</strong></td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>m,p-Xylene</strong></td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-47-6</td>
<td><strong>o-Xylene</strong></td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>1330-20-7</td>
<td><strong>Xylene (total)</strong></td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>100%</td>
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<td>84-124%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>97%</td>
<td></td>
<td>83-115%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>92%</td>
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<td>89-111%</td>
</tr>
</tbody>
</table>

**ND** = Not detected  
**RL** = Reporting Limit  
**Q** = Indicates an estimated value  
**R** = Indicates analyte found in associated method blank  
**N** = Indicates presumptive evidence of a compound
Client Sample ID: TRIP BLANK 1  
Lab Sample ID: LA49116-7  
Date Sampled: 10/23/18  
Matrix: AQ - Trip Blank Water  
Date Received: 10/25/18  
Method: SW 846 8260B  
Percent Solids: n/a  
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
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<td>11040693.D</td>
<td>1</td>
<td>10/30/18 02:35 LS</td>
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<td>n/a</td>
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</table>

Run #1  
Purge Volume  
5.0 ml

Run #2

VOA RECAP List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
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<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>0.05mg/l</td>
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<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.005mg/l</td>
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</tr>
<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>0.001mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
<td>0.001mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75-15-0</td>
<td>Carbon Disulfide</td>
<td>ND</td>
<td>0.001mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56-23-5</td>
<td>Carbon Tetrachloride</td>
<td>ND</td>
<td>0.001mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>108-90-7</td>
<td>Chlorobenzene</td>
<td>ND</td>
<td>0.001mg/l</td>
<td></td>
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<tr>
<td>75-00-3</td>
<td>Chloroethane</td>
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<td>0.001mg/l</td>
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<td>p-Dichlorobenzene</td>
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<td>cis-1,3-Dichloropropene</td>
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<td>0.001mg/l</td>
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<td>78-83-1</td>
<td>Isobutyl Alcohol</td>
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<tr>
<td>75-09-2</td>
<td>Methylene Chloride</td>
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<td>0.001mg/l</td>
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<tr>
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<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
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<td>0.005mg/l</td>
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</table>

ND = Not detected  
RL = Reporting Limit  
E = Indicates value exceeds calibration range  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound  
J = Indicates an estimated value
**Client Sample ID:** TRIP BLANK 1  
**Lab Sample ID:** LA49116-7  
**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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-42-5</td>
<td>Styrene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>630-20-6</td>
<td>1,1,1,2-Tetrachloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-34-5</td>
<td>1,1,2,2-Tetrachloroethane</td>
<td>ND</td>
<td>0.00050</td>
<td>mg/l</td>
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</tr>
<tr>
<td>127-18-4</td>
<td>Tetrachloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>79-01-6</td>
<td>Trichloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-01-4</td>
<td>Vinyl Chloride</td>
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<td>mg/l</td>
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<tr>
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<td>m,p-Xylene</td>
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<td>mg/l</td>
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</tr>
<tr>
<td>95-47-6</td>
<td>o-Xylene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>ND</td>
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<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>106%</td>
<td>84-124%</td>
<td></td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>98%</td>
<td>83-115%</td>
<td></td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>94%</td>
<td>89-111%</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- ND = Not detected
- RL = Reporting Limit
- J = Indicates an estimated value
- E = Indicates value exceeds calibration range
- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound
Client Sample ID: TRIP BLANK 2
Lab Sample ID: LA49116-8
Matrix: AQ - Trip Blank Water
Method: SW 846 8260B
Percent Solids: n/a
Date Sampled: 10/23/18
Date Received: 10/25/18
Project: 8060.00 Indigo-Desoto Parish, LA

Run #1
File ID: 2I040658.D
DF: 1
Prep Date: 10/29/18 18:24
Prep Batch: LS
Analytical Batch: n/a

Run #2
File ID: V211896
DF: 2
Prep Date: 10/29/18 18:24
Prep Batch: LS
Analytical Batch: n/a

Purge Volume
Run #1: 5.0 ml
Run #2: n/a

**VOA RECAP List**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>0.050</td>
<td>mg/l</td>
<td></td>
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<td>106-46-7</td>
<td>p-Dichlorobenzene</td>
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<td>mg/l</td>
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<td>mg/l</td>
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<td>78-83-1</td>
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<td>mg/l</td>
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<td>74-83-1</td>
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<td>mg/l</td>
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<tr>
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<tr>
<td>75-09-2</td>
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<td>0.013</td>
<td>mg/l</td>
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</tbody>
</table>

**Legend**

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
Client Sample ID: TRIP BLANK 2  
Lab Sample ID: LA49116-8  
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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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<td>100-42-5</td>
<td>Styrene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>630-20-6</td>
<td>1,1,1,2-Tetrachloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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</tr>
<tr>
<td>79-34-5</td>
<td>1,1,2,2-Tetrachloroethane</td>
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<td>mg/l</td>
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<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>79-01-6</td>
<td>Trichloroethylene</td>
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<td>mg/l</td>
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<tr>
<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-01-4</td>
<td>Vinyl Chloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>95-47-6</td>
<td>o-Xylene</td>
<td>ND</td>
<td>0.0050</td>
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<tr>
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<td>Xylene (total)</td>
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### Surrogate Recoveries

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<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
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<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
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<td>2037-26-5</td>
<td>Toluene-D8</td>
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<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>91%</td>
<td></td>
<td>89-111%</td>
</tr>
</tbody>
</table>

ND = Not detected  
RL = Reporting Limit  
J = Indicates an estimated value  
E = Indicates value exceeds calibration range  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-802 (DERBONNE RELIEF WELL)  
Lab Sample ID: LA49116-9  
Date Sampled: 10/23/18  
Matrix: AQ - Water  
Date Received: 10/25/18  
Method: SW 846 8260B  
Percent Solids: n/a  
Project: 8060.00 Indigo-Desoto Parish, LA  

<table>
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<tr>
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<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
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<td>10/30/18 15:50</td>
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<td></td>
<td></td>
<td></td>
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</tbody>
</table>

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

VOA RECAP List

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<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
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<tbody>
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<td>Benzene</td>
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<td>0.0050</td>
<td>mg/l</td>
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<td>75-27-4</td>
<td>Bromodichloromethane</td>
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<td>mg/l</td>
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<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>75-15-0</td>
<td>Carbon Disulfide</td>
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<tr>
<td>56-23-5</td>
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<td>mg/l</td>
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<tr>
<td>108-90-7</td>
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<td>106-46-7</td>
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<td>mg/l</td>
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<tr>
<td>108-10-1</td>
<td>4-Methyl-2-pentanone</td>
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<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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

Client Sample ID: 031-802 (DERBONNE RELIEF WELL)
Lab Sample ID: LA49116-9
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW846 8260B
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

VOA RECAP List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
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<tbody>
<tr>
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<td>Styrene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>630-20-6</td>
<td>1,1,1,2-Tetrachloroethane</td>
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<td>0.0010</td>
<td>mg/l</td>
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<td>127-18-4</td>
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<td>mg/l</td>
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</tr>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
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<td>mg/l</td>
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<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
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<td>mg/l</td>
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<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>100%</td>
<td></td>
<td>84-124%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>96%</td>
<td></td>
<td>83-115%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>100%</td>
<td></td>
<td>89-111%</td>
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</tbody>
</table>

ND = Not detected
J = Indicates an estimated value
RL = Reporting Limit
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>105-67-9</td>
<td>2,4-Dimethylphenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>51-28-5</td>
<td>2,4-Dinitrophenol</td>
<td>ND</td>
<td>0.018</td>
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<tr>
<td>100-02-7</td>
<td>4-Nitrophenol</td>
<td>ND</td>
<td>0.022</td>
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<tr>
<td>87-86-5</td>
<td>Pentachlorophenol</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
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<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>ND</td>
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<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>58-90-2</td>
<td>2,3,4,6-Tetrachlorophenol</td>
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<tr>
<td>95-95-4</td>
<td>2,4,5-Trichlorophenol a</td>
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<tr>
<td>83-32-9</td>
<td>Aacenaphthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>208-96-8</td>
<td>Aacenaphthylene</td>
<td>ND</td>
<td>0.00018</td>
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<tr>
<td>62-53-3</td>
<td>Aniline</td>
<td>ND</td>
<td>0.0044</td>
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<tr>
<td>120-12-7</td>
<td>Anthracene</td>
<td>ND</td>
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<tr>
<td>56-55-3</td>
<td>Benzo(a)anthracene</td>
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<tr>
<td>50-32-8</td>
<td>Benzo(a)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>205-99-2</td>
<td>Benzo(b)fluoranthene</td>
<td>ND</td>
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<td>mg/l</td>
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<tr>
<td>207-08-9</td>
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<tr>
<td>92-52-4</td>
<td>1,1'-Biphenyl</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>85-68-7</td>
<td>Butyl Benzyll Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>106-47-8</td>
<td>4-Chloroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>111-44-4</td>
<td>bis(2-Chloroethyl)ether</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>108-60-1</td>
<td>2,2'-Oxybis(1-chloropropane)</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>91-58-7</td>
<td>2-Chloronaphthalene</td>
<td>ND</td>
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<tr>
<td>218-01-9</td>
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<tr>
<td>53-70-3</td>
<td>Dibenzo(a,h)anthracene</td>
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<td>mg/l</td>
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<tr>
<td>132-64-9</td>
<td>Dibenzo[furan]</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>91-94-1</td>
<td>3,3'-Dichlorobenzidine</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
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<tr>
<td>84-66-2</td>
<td>Diethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>131-11-3</td>
<td>Dimethyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>117-84-0</td>
<td>Di-n-octyl Phthalate</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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</tr>
<tr>
<td>99-65-0</td>
<td>1,3-Dinitrobenzene a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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

Report of Analysis

Client Sample ID: 031-802 (DERBONNE RELIEF WELL)
Lab Sample ID: LA49116-9  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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>121-14-2</td>
<td>2,4-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>606-20-2</td>
<td>2,6-Dinitrotoluene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>117-81-7</td>
<td>Bis(2-Ethylhexyl)phthalate</td>
<td>0.0082</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>206-44-0</td>
<td>Fluoranthene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>86-73-7</td>
<td>Fluorene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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</tr>
<tr>
<td>118-74-1</td>
<td>Hexachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
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</tr>
<tr>
<td>87-68-3</td>
<td>Hexachlorobutadiene</td>
<td>ND</td>
<td>0.00044</td>
<td>mg/l</td>
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<tr>
<td>77-47-4</td>
<td>Hexachlorocyclopentadiene</td>
<td>ND</td>
<td>0.0088</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>193-39-5</td>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>78-59-1</td>
<td>Isophorone</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>91-57-6</td>
<td>2-Methylnaphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>91-20-3</td>
<td>Naphthalene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
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<tr>
<td>88-74-4</td>
<td>2-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>99-09-2</td>
<td>3-Nitroaniline</td>
<td>ND</td>
<td>0.0044</td>
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<td>100-01-6</td>
<td>4-Nitroaniline</td>
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<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>98-95-3</td>
<td>Nitrobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
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<tr>
<td>621-64-7</td>
<td>N-Nitroso-di-n-propylamine</td>
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<td>0.0044</td>
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<tr>
<td>86-30-6</td>
<td>N-Nitrosodiphenylamine</td>
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<tr>
<td>85-01-8</td>
<td>Phenanthrene</td>
<td>ND</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>129-00-0</td>
<td>Pyrene</td>
<td>0.00020</td>
<td>0.00018</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>367-12-4</td>
<td>2-Fluorophenol</td>
<td>53%</td>
<td>23-85%</td>
<td></td>
</tr>
<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
<td>43%</td>
<td>10-69%</td>
<td></td>
</tr>
<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
<td>98%</td>
<td>48-138%</td>
<td></td>
</tr>
<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
<td>75%</td>
<td>51-128%</td>
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<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>79%</td>
<td>55-122%</td>
<td></td>
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<tr>
<td>1718-51-0</td>
<td>Terphenyl-d14</td>
<td>80%</td>
<td>43-138%</td>
<td></td>
</tr>
</tbody>
</table>

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

ND = Not detected  J = Indicates an estimated value
RL = Reporting Limit  B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range  N = Indicates presumptive evidence of a compound
Client Sample ID: 031-802 (DERBONNE RELIEF WELL)
Lab Sample ID: LA49116-9
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

<table>
<thead>
<tr>
<th>Run</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>LC381171.D</td>
<td>1</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
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<tr>
<td>#2</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Purge Volume
Run #1: 5.0 ml
Run #2: 2.14 ml

Volatile Petroleum Hydrocarbons (VPH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
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</tr>
<tr>
<td></td>
<td>Aromatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
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</table>

Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Run#1</th>
<th>Run#2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>106%</td>
<td>a</td>
<td>70-130%</td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>104%</td>
<td>b</td>
<td>70-130%</td>
</tr>
</tbody>
</table>

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

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-802 (DERBONNE RELIEF WELL)
Lab Sample ID: LA49116-9
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW846 8011, SW846 8011
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>LK113870.D</td>
<td>1</td>
<td>10/31/18 05:31</td>
<td>JS</td>
<td>10/29/18 03:50</td>
<td>OP12675</td>
<td>GLK739</td>
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<td>Run #2</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>36.8 ml</td>
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<tr>
<td>Run #2</td>
<td>2.0 ml</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>0.000019</td>
<td>mg/l</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run # 1</th>
<th>Run # 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>112%</td>
<td>55-149%</td>
<td></td>
</tr>
</tbody>
</table>

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
Report of Analysis

Client Sample ID: 031-802 (DERBONNE RELIEF WELL)
Lab Sample ID: LA49116-9
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

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>X0005605.D</td>
<td>1</td>
<td>11/01/18 13:25</td>
<td>JT</td>
<td>10/30/18 07:00</td>
<td>OP12664</td>
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<td>Run #2</td>
<td>Y0005605.D</td>
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<td>JT</td>
<td>10/30/18 07:00</td>
<td>OP12664</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>55.3 ml</td>
</tr>
<tr>
<td>Run #2</td>
<td>55.3 ml</td>
</tr>
</tbody>
</table>

Louisiana EPH Ranges

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics &gt; C10-C12 (Unadj.)</td>
<td>ND  a</td>
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<td>mg/l</td>
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<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
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<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
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<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>82%</td>
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<td>2-Fluorobiphenyl</td>
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(a) Result is from Run# 2
(b) Result confirmed by re-extraction and reanalysis.

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
E = Indicates value exceeds calibration range
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-802 (DERBONNE RELIEF WELL)
Lab Sample ID: LA49116-9
Matrix: AQ - Water
Date Sampled: 10/23/18
Date Received: 10/25/18
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

Total Metals Analysis

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<th>RL</th>
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<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>SW846 6020A</td>
</tr>
<tr>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>SW846 6020A</td>
</tr>
<tr>
<td>Cadmium</td>
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<td>SW846 6020A</td>
</tr>
<tr>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
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</tbody>
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(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
### General Chemistry

<table>
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<tr>
<th>Analyte</th>
<th>Result</th>
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<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Method</th>
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<td>SW 846 9056A</td>
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</table>

(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: 031-802 (DERBONNE RELIEF WELL)
Lab Sample ID: LA49116-9F
Matrix: AQ - Water Filtered

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

Project: 8060.00 Indigo-Desoto Parish, LA

Dissolved Metals Analysis

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<th>Result</th>
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<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
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<td>SW846 6020A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
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<td>mg/l</td>
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<td>10/26/18</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/29/18</td>
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<td>10/26/18</td>
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(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
Client Sample ID: 031-9807Z (GAMBLE RIG SUPPLY WELL)
Lab Sample ID: LA49116-10
Date Sampled: 10/23/18
Matrix: AQ - Water
Date Received: 10/25/18
Method: SW846 8260B
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

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<th>Prep Date</th>
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<th>Analytical Batch</th>
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Purge Volume
Run #1: 5.0 ml
Run #2: 2.16

VOA RECAP List

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<tr>
<td>78-87-5</td>
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<td>542-75-6</td>
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<td>mg/l</td>
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<td>75-09-2</td>
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<td>1634-04-4</td>
<td>Methyl tert Butyl Ether</td>
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<td>0.0050</td>
<td>mg/l</td>
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</tr>
</tbody>
</table>

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
Client Sample ID: 031-9807Z (Gamble Rig Supply Well)  
Lab Sample ID: LA49116-10  
Date Sampled: 10/23/18  
Matrix: AQ - Water  
Date Received: 10/25/18  
Method: SW846 8260B  
Percent Solids: n/a  
Project: 8060.00 Indigo-Desoto Parish, LA

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<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
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<th>Q</th>
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<tr>
<td>79-34-5</td>
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<td>127-18-4</td>
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<td>108-88-3</td>
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<td>1,1,2-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>79-01-6</td>
<td>Trichloroethylene</td>
<td>ND</td>
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<td>mg/l</td>
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<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
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<td>mg/l</td>
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<td>75-01-4</td>
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<tr>
<td></td>
<td>m,p-Xylene</td>
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<td>95-47-6</td>
<td>o-Xylene</td>
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<td>1330-20-7</td>
<td>Xylene (total)</td>
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<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
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<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>102%</td>
<td>84-124%</td>
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<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>98%</td>
<td>83-115%</td>
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<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>98%</td>
<td>89-111%</td>
<td></td>
</tr>
</tbody>
</table>

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

**Client Sample ID:** 031-9807Z (GAMBLE RIG SUPPLY WELL)  
**Lab Sample ID:** LA49116-10  
**Matrix:** AQ - Water  
**Date Sampled:** 10/23/18  
**Method:** SW 846 8270D, SW 846 3510C  
**Date Received:** 10/25/18  
**Percent Solids:** n/a  
**Project:** 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tr>
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<td>L0022632.D</td>
<td>1</td>
<td>10/31/18 15:21 JS</td>
<td>10/29/18 07:00</td>
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<td>#2</td>
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<td></td>
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</tbody>
</table>

**Initial Volume:** 113 ml  
**Final Volume:** 1.0 ml

### ABN Recap List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>105-67-9</td>
<td>2,4-Dimethylphenol</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
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<tr>
<td>51-28-5</td>
<td>2,4-Dinitrophenol</td>
<td>ND</td>
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<tr>
<td>100-02-7</td>
<td>4-Nitrophenol</td>
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<tr>
<td>87-86-5</td>
<td>Pentachlorophenol</td>
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<tr>
<td>108-95-2</td>
<td>Phenol</td>
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<td>58-90-2</td>
<td>2,3,4,6-Tetrachlorophenol</td>
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<tr>
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<tr>
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<tr>
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<td>Anthracene</td>
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<tr>
<td>56-55-3</td>
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<tr>
<td>50-32-8</td>
<td>Benz(a)pyrene</td>
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<tr>
<td>205-99-2</td>
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<tr>
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<tr>
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<tr>
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<td>4-Chloroaniline</td>
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<tr>
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<td>1,3-Dinitrobenzene a</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**RL = Reporting Limit**  
**ND = Not detected**  
**Q = Indicates an estimated value**  
**B = Indicates analyte found in associated method blank**  
**E = Indicates value exceeds calibration range**  
**N = Indicates presumptive evidence of a compound**
Client Sample ID: 031-9807Z (GAMBLE RIG SUPPLY WELL)  
Lab Sample ID: LA49116-10  
Date Sampled: 10/23/18  
Matrix: AQ - Water  
Date Received: 10/25/18  
Method: SW 846 8270D, SW 846 3510C  
Percent Solids: n/a  
Project: 8060.00 Indigo-Desoto Parish, LA

### ABN Recap List

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<thead>
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<th>CAS No.</th>
<th>Compound</th>
<th>Result (RL)</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
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<td>mg/l</td>
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<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
<td>0.00088</td>
<td>mg/l</td>
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</tr>
<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>0.0044</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
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<tbody>
<tr>
<td>367-12-4</td>
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<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
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<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
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<td>48-138%</td>
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<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
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<td>Terphenyl-d14</td>
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<td>43-138%</td>
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(a) Associated CCV outside of control limits high, sample was ND.

**ND = Not detected**  
**RL = Reporting Limit**  
**J = Indicates an estimated value**  
**B = Indicates analyte found in associated method blank**  
**E = Indicates value exceeds calibration range**  
**N = Indicates presumptive evidence of a compound**
Client Sample ID: 031-9807Z (GAMBLE RIG SUPPLY WELL)
Lab Sample ID: LA49116-10
Matrix: AQ - Water
Method: MADEP VPH REV 1.1
Date Sampled: 10/23/18
Date Received: 10/25/18
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Run #1</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LC381172.D</td>
<td>1</td>
<td>10/27/18 22:25</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
<tr>
<td>Run #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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

Volatile Petroleum Hydrocarbons (VPH)

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C8-C10 (Unadj.)</td>
<td>ND</td>
<td>0.15</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries Run# 1 Run# 2 Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene 105% a 70-130%</td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene 103% b 70-130%</td>
</tr>
</tbody>
</table>

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

ND = Not detected
RL = Reporting Limit
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range
N = Indicates presumptive evidence of a compound
Client Sample ID: 031-9807Z (Gamble Rig Supply Well)  
Lab Sample ID: LA49116-10  
Date Sampled: 10/23/18  
Matrix: AQ - Water  
Date Received: 10/25/18  
Method: SW846 8011 SW846 8011  
Percent Solids: n/a  
Project: 8060.00 Indigo-Desoto Parish, LA  

<table>
<thead>
<tr>
<th>Run</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>LK113871.D</td>
<td>1</td>
<td>10/31/18 05:49</td>
<td>JS</td>
<td>10/29/18 03:50</td>
<td>OP12675</td>
<td>GLK739</td>
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<td>#2</td>
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</table>

<table>
<thead>
<tr>
<th>Run</th>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>36.4 ml</td>
<td>2.0 ml</td>
</tr>
<tr>
<td>#2</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound Description</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td></td>
<td>0.000019mg/l</td>
<td></td>
</tr>
</tbody>
</table>

Surrogate Recoveries:
- CAS No.: 348-51-6 (1-Chloro-2-fluorobenzene)
  - Run# 1: 107%
  - Run# 2: 55-149%

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

**Client Sample ID:** 031-9807Z (GAMBLE RIG SUPPLY WELL)  
**Lab Sample ID:** LA49116-10  
**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

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>Date/Time</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>X</td>
<td>0005566.D</td>
<td>1</td>
<td>10/29/18</td>
<td>22:43</td>
<td>JT</td>
</tr>
<tr>
<td>Run #2</td>
<td>Y</td>
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<td>1</td>
<td>10/29/18</td>
<td>22:44</td>
<td>JT</td>
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<table>
<thead>
<tr>
<th>Initial Volume</th>
<th>Final Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run #1</td>
<td>55.0 ml</td>
</tr>
<tr>
<td>Run #2</td>
<td>55.0 ml</td>
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</tbody>
</table>

#### Louisiana EPH Ranges

<table>
<thead>
<tr>
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<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics &gt; C10-C12 (Unadj.)</td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C12-C16 (Unadj.)</td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
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</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C16-C35 (Unadj.)</td>
<td>ND a</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C10-C12 (Unadj.)</td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C12-C16 (Unadj.)</td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C16-C21 (Unadj.)</td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C21-C35 (Unadj.)</td>
<td>ND</td>
<td>0.14</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>85%</td>
<td>87%</td>
<td>40-140%</td>
</tr>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td></td>
<td></td>
<td>40-140%</td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>84%</td>
<td></td>
<td>40-140%</td>
</tr>
</tbody>
</table>

(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
### Total Metals Analysis

<table>
<thead>
<tr>
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<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Barium</td>
<td>0.0245</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt; 0.0050</td>
<td>0.0050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Calcium</td>
<td>1.23</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Iron</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Magnesium</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Manganese</td>
<td>&lt; 0.020</td>
<td>0.020</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt; 0.00020</td>
<td>0.00020</td>
<td>mg/l</td>
<td>1</td>
<td>10/29/18</td>
<td>10/29/18</td>
<td>SA</td>
<td>SW846 7470A 2</td>
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<tr>
<td>Potassium</td>
<td>1.24</td>
<td>1.0</td>
<td>mg/l</td>
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<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt; 0.050</td>
<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Silver</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Sodium</td>
<td>358</td>
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<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Strontium</td>
<td>0.108</td>
<td>0.020</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
<tr>
<td>Zinc</td>
<td>&lt; 0.050</td>
<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>RT</td>
<td>SW846 6020A 1</td>
</tr>
</tbody>
</table>

(1) Instrument QC Batch: MA13786  
(2) Instrument QC Batch: MA13797  
(3) Prep QC Batch: MP13153  
(4) Prep QC Batch: MP13158

**RL = Reporting Limit**
### General Chemistry

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity, Bicarbonate (^a)</td>
<td>495</td>
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<td>mg/l</td>
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<td>10/29/18 16:00</td>
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<td>SM 18 2320B</td>
</tr>
<tr>
<td>Alkalinity, Carbonate (^a)</td>
<td>19.9</td>
<td>5.0</td>
<td>mg/l</td>
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<td>10/29/18 16:00</td>
<td>ATX</td>
<td>SM 18 2320B</td>
</tr>
<tr>
<td>Alkalinity, Total as CaCO(_3) (^a)</td>
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<td>1</td>
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<td>SM 2320B-2011</td>
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<tr>
<td>Bromide (^a)</td>
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<td>0.50</td>
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<td>1</td>
<td>11/06/18 23:35</td>
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<td>SW 846 9056A</td>
</tr>
<tr>
<td>Chloride (^a)</td>
<td>102</td>
<td>5.0</td>
<td>mg/l</td>
<td>10</td>
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</tr>
<tr>
<td>Silica, Dissolved (^a)</td>
<td>7.4</td>
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<td>11/01/18</td>
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<tr>
<td>Solids, Total Dissolved (^a)</td>
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<td>1</td>
<td>10/30/18</td>
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</tr>
<tr>
<td>Specific Conductivity (^b)</td>
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<td>Sulfate (^a)</td>
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<td>1</td>
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<td>ATX</td>
<td>SW 846 9056A</td>
</tr>
</tbody>
</table>

\(^a\) 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: 031-9807Z (GAMBLE RIG SUPPLY WELL)

Lab Sample ID: LA49116-10

Matrix: AQ - Water

Date Sampled: 10/23/18

Date Received: 10/25/18

Percent Solids: n/a

Project: 8060.00 Indigo-Desoto Parish, LA
Client Sample ID: 031-9807Z (GAMBLE RIG SUPPLY WELL)
Lab Sample ID: LA49116-10F
Date Sampled: 10/23/18
Date Received: 10/25/18
Matrix: AQ - Water Filtered
Percent Solids: n/a

Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>DF</th>
<th>Prep</th>
<th>Analyzed By</th>
<th>Method</th>
<th>Prep Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Barium</td>
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<td>SW846 3010A</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt; 0.0050</td>
<td>0.0050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Calcium</td>
<td>1.30</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Chromium</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Iron</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt; 0.010</td>
<td>0.010</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Magnesium</td>
<td>&lt; 1.0</td>
<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Manganese</td>
<td>&lt; 0.020</td>
<td>0.020</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Mercury</td>
<td>&lt; 0.0020</td>
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<td>1</td>
<td>10/29/18</td>
<td>10/29/18</td>
<td>SW846 7470A</td>
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<tr>
<td>Potassium</td>
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<td>1.0</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt; 0.050</td>
<td>0.050</td>
<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
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<tr>
<td>Silver</td>
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<td>mg/l</td>
<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
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<td>SW846 3010A</td>
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<td>10/26/18</td>
<td>10/29/18</td>
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<td>SW846 3010A</td>
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<td>Strontium</td>
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<td>10/29/18</td>
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<td>SW846 3010A</td>
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<tr>
<td>Zinc</td>
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<td>10</td>
<td>10/26/18</td>
<td>10/29/18</td>
<td>SW846 6020A</td>
<td>SW846 3010A</td>
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(1) Instrument QC Batch: MA13786
(2) Instrument QC Batch: MA13797
(3) Prep QC Batch: MP13153
(4) Prep QC Batch: MP13158

RL = Reporting Limit
Client Sample ID: **FIELD BLANK2**
Lab Sample ID: **LA49116-11**
Date Sampled: 10/23/18
Date Received: 10/25/18
Matrix: AQ - Field Blank Water
Method: SW 846 8260B
Percent Solids: n/a
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<td>Run #1</td>
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Purge Volume
Run #1 5.0 ml
Run #2

**VOA RECAP List**

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<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
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<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>0.050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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</tr>
<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>75-15-0</td>
<td>Carbon Disulfide</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>56-23-5</td>
<td>Carbon Tetrachloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>108-90-7</td>
<td>Chlorobenzene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-00-3</td>
<td>Chloroethane</td>
<td>ND</td>
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<td>mg/l</td>
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<td>67-66-3</td>
<td>Chloroform</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<td>96-12-8</td>
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<td>95-50-1</td>
<td>o-Dichlorobenzene</td>
<td>ND</td>
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<td>mg/l</td>
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<tr>
<td>106-46-7</td>
<td>p-Dichlorobenzene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-34-3</td>
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<td>mg/l</td>
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<tr>
<td>107-06-2</td>
<td>1,2-Dichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>75-35-4</td>
<td>1,1-Dichloroethylene</td>
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<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>156-59-2</td>
<td>cis-1,2-Dichloroethylene</td>
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<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>156-60-5</td>
<td>trans-1,2-Dichloroethylene</td>
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<tr>
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<td>1,2-Dichloethene (total)</td>
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<tr>
<td>78-87-5</td>
<td>1,2-Dichloropropane</td>
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<td>mg/l</td>
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<td>10061-01-5</td>
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<tr>
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<tr>
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<tr>
<td>78-83-1</td>
<td>Isobutyl Alcohol</td>
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<td>74-83-9</td>
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<td>Methylene Chloride</td>
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<td>78-93-3</td>
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<td>4-Methyl-2-pentanone</td>
<td>ND</td>
<td>0.013</td>
<td>mg/l</td>
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</tr>
</tbody>
</table>

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

Report of Analysis

Client Sample ID: FIELD BLANK2
Lab Sample ID: LA49116-11
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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
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<td>630-20-6</td>
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<tr>
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CAS No.  | Surrogate Recoveries       | Run# 1 | Run# 2 | Limits            |
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<td>17060-07-0</td>
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<td>2037-26-5</td>
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<td>4-Bromofluorobenzene</td>
<td>97%</td>
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<td>89-111%</td>
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</tbody>
</table>

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
Client Sample ID: TRIP BLANK 2
Lab Sample ID: LA49116-12
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

<table>
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<tr>
<th>Run #</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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</table>

Purge Volume
Run #1: 5.0 ml
Run #2: n/a

VOA RECAP List

<table>
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<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>0.050</td>
<td>mg/l</td>
<td></td>
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<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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</tr>
<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
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<tr>
<td>75-15-0</td>
<td>Carbon Disulfide</td>
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<td>0.0010</td>
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<tr>
<td>56-23-5</td>
<td>Carbon Tetrachloride</td>
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<td>mg/l</td>
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<td>108-90-7</td>
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<tr>
<td>75-00-3</td>
<td>Chloroethane</td>
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<td>mg/l</td>
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<td>67-66-3</td>
<td>Chloroform</td>
<td>ND</td>
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<td>mg/l</td>
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<td>124-48-1</td>
<td>Dibromochloromethane</td>
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<td>0.0010</td>
<td>mg/l</td>
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<td>96-12-8</td>
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<td>541-73-1</td>
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<td>mg/l</td>
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<tr>
<td>156-59-2</td>
<td>cis-1,2-Dichloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<td>mg/l</td>
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<td>10061-02-6</td>
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<td>mg/l</td>
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<tr>
<td>74-87-3</td>
<td>Methyl Chloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>75-09-2</td>
<td>Methylene Chloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>78-93-3</td>
<td>Methyl Ethyl Ketone</td>
<td>ND</td>
<td>0.013</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-10-1</td>
<td>4-Methyl-2-pentanone</td>
<td>ND</td>
<td>0.013</td>
<td>mg/l</td>
<td></td>
</tr>
</tbody>
</table>

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
Client Sample ID: TRIP BLANK 2
Lab Sample ID: LA49116-12
Matrix: AQ - Trip Blank Water
Method: SW 846 8260B
Project: 8060.00 Indigo-Desoto Parish, LA

Date Sampled: 10/23/18
Date Received: 10/25/18

VOA RECAP List

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>1634-04-4</td>
<td>Methyl Tert Butyl Ether</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>100-42-5</td>
<td>Styrene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>630-20-6</td>
<td>1,1,1,2-Tetrachloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-34-5</td>
<td>1,1,2,2-Tetrachloroethane</td>
<td>ND</td>
<td>0.00050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>127-18-4</td>
<td>Tetrachloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>79-01-6</td>
<td>Trichloroethylene</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
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<tr>
<td>75-01-4</td>
<td>Vinyl Chloride</td>
<td>ND</td>
<td>0.0010</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>75-01-6</td>
<td>m,p-Xylene</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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</tr>
<tr>
<td>95-47-6</td>
<td>o-Xylene</td>
<td>ND</td>
<td>0.0050</td>
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<tr>
<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>ND</td>
<td>0.0050</td>
<td>mg/l</td>
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<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Run# 1</th>
<th>Run# 2</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>105%</td>
<td></td>
<td>84-124%</td>
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<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>100%</td>
<td></td>
<td>83-115%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>91%</td>
<td></td>
<td>89-111%</td>
</tr>
</tbody>
</table>

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

SGS North America Inc.
Report of Analysis
Page 2 of 2
Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
## Sample Chain-of-Custody Record

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Type</th>
<th>Date/Time Sampled</th>
<th>Containers</th>
<th>Analysis Requested/Method</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>031-973Z</td>
<td>AQ</td>
<td>10/23/2018 11:20</td>
<td>(7) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO3</td>
<td>VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations&quot;, Anions&quot;, Total Metals&quot;, Dissolved Metals&quot;</td>
<td>4°C Field filtered: Dissolved metals</td>
</tr>
<tr>
<td>031-9625Z</td>
<td>AQ</td>
<td>10/23/2018 15:45</td>
<td>(7) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO4</td>
<td>VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations&quot;, Anions&quot;, Total Metals&quot;, Dissolved Metals&quot;</td>
<td>4°C Field filtered: Dissolved metals</td>
</tr>
<tr>
<td>031-9765Z</td>
<td>AQ</td>
<td>10/23/2018 17:20</td>
<td>(7) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO5</td>
<td>VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations&quot;, Anions&quot;, Total Metals&quot;, Dissolved Metals&quot;</td>
<td>4°C Field filtered: Dissolved metals</td>
</tr>
<tr>
<td>031-9765Z</td>
<td>AQ</td>
<td>10/23/2018 16:35</td>
<td>(7) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO6</td>
<td>VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations&quot;, Anions&quot;, Total Metals&quot;, Dissolved Metals&quot;</td>
<td>4°C Field filtered: Dissolved metals</td>
</tr>
<tr>
<td>Equipment Blank</td>
<td>AQ</td>
<td>10/23/2018 13:00</td>
<td>(7) 40mL Glass HCl (3) 60mL Amber Glass HCl (2) 4oz Amber Glass (1) 500mL Plastic (2) 250mL Plastic HNO7</td>
<td>VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations&quot;, Anions&quot;, Total Metals&quot;, Dissolved Metals&quot;</td>
<td>4°C Field filtered: Dissolved metals</td>
</tr>
</tbody>
</table>

*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
## SAMPLE CHAIN-OF-CUSTODY RECORD

<table>
<thead>
<tr>
<th>Sample Id.</th>
<th>Type</th>
<th>Date/Time Sampled</th>
<th>Containers</th>
<th>Analysis Requested/Method</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Bank</td>
<td>AQ</td>
<td>10/23/2018 10:55</td>
<td>5 x 40mL Glass HCl</td>
<td>VOC 8260</td>
<td>4°C</td>
</tr>
<tr>
<td>Trip Blank 1</td>
<td>AQ</td>
<td>10/23/2018 6:45</td>
<td>5 x 40mL Glass HCl</td>
<td>VOC 8261</td>
<td>4°C</td>
</tr>
<tr>
<td>Trip Blank 2</td>
<td>AQ</td>
<td>10/23/2018 6:45</td>
<td>5 x 40mL Glass HCl</td>
<td>VOC 8262</td>
<td>4°C</td>
</tr>
<tr>
<td>031-402 (Derbonne Relief Well)</td>
<td>AQ</td>
<td>10/24/2018 9:30</td>
<td>7 x 40mL Glass HCl, 3 x 60mL Amber Glass HCl, 2 x 4oz Amber Glass, 1 x 500mL Plastic, 2 x 250mL Plastic</td>
<td>VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*</td>
<td>4°C Field filtered: Dissolved metals</td>
</tr>
<tr>
<td>031-98072 (Gambe Rig Supply Well)</td>
<td>AQ</td>
<td>10/24/2018 13:15</td>
<td>7 x 40mL Glass HCl, 3 x 60mL Amber Glass HCl, 2 x 4oz Amber Glass, 1 x 600mL Plastic, 2 x 250mL Plastic</td>
<td>VOC 8260, SVOC 8270, VPH, EPH, Chlorides, TDS, Specific Conductance, Silica, Cations*, Anions*, Total Metals*, Dissolved Metals*</td>
<td>4°C Field filtered: Dissolved metals</td>
</tr>
</tbody>
</table>

*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

**Temp:** 25.4°F<br>**WV:** 439

Reinlquished By: Date/Time: 10-26-2018 1445

Written: Date/Time: 10-25-19 1415

Page 2 of 4
<table>
<thead>
<tr>
<th>Sample I.D.</th>
<th>Type</th>
<th>Date/Time Sampled</th>
<th>Containers</th>
<th>Analysis Requested/Method</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>AQ</td>
<td>10/24/2018 8:30</td>
<td>(5) 40mL Glass HCl</td>
<td>VOC 8260</td>
<td>4°C</td>
</tr>
<tr>
<td>12</td>
<td>AQ</td>
<td>10/24/2018 7:15</td>
<td>(5) 40mL Glass HCl</td>
<td>VOC 8260</td>
<td>4°C</td>
</tr>
</tbody>
</table>

*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

Temp: 25.4.1 5.8 189
Relinquished By: Deneil Brown
Date/Time: 10-25-2018 14:45

Relinquished By: Walter Newman
Date/Time: 10-25-2018 14:45
### SGS Sample Receipt Summary

**Job Number:** LA49116  
**Client:** HYDRO ENVIRONMENTAL  
**Project:** INDIGO

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

**Cooler Temps (Initial/Adjusted):**  
#1: (2.5/2.5); #2: (4.1/4.1); #3: (5.8/5.8);

<table>
<thead>
<tr>
<th>Cooler Security</th>
<th>Y or N</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Custody Seals Present:</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>2. Custody Seals Intact:</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>3. Coc Present:</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>4. Smpl Dates/Time OK:</td>
<td>☑</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cooler Temperature</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Temp criteria achieved:</td>
<td>☑</td>
</tr>
<tr>
<td>2. Thermometer ID:</td>
<td>DV439;</td>
</tr>
<tr>
<td>3. Cooler media:</td>
<td>Ice (direct contact)</td>
</tr>
<tr>
<td>4. No. Coolers:</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quality Control/Preservation</th>
<th>Y or N</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trip Blank present / cooler:</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>2. Trip Blank listed on COC:</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>3. Samples preserved properly:</td>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>4. VOCs headspace free:</td>
<td>☑</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Integrity - Documentation</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sample labels present on bottles:</td>
<td>☑</td>
</tr>
<tr>
<td>2. Container labeling complete:</td>
<td>☑</td>
</tr>
<tr>
<td>3. Sample container label / COC agree:</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Integrity - Condition</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sample recvd within HT:</td>
<td>☑</td>
</tr>
<tr>
<td>2. All containers accounted for:</td>
<td>☑</td>
</tr>
<tr>
<td>3. Condition of sample:</td>
<td>Intact</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample Integrity - Instructions</th>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analysis requested is clear:</td>
<td>☑</td>
</tr>
<tr>
<td>2. Bottles received for unspecified tests</td>
<td>☑</td>
</tr>
<tr>
<td>3. Sufficient volume recvd for analysis:</td>
<td>☑</td>
</tr>
<tr>
<td>4. Compositing instructions clear:</td>
<td>☑</td>
</tr>
<tr>
<td>5. Filtering instructions clear:</td>
<td>☑</td>
</tr>
</tbody>
</table>

**Comments:**

**Cooler Temps (Initial/Adjusted):**

#1: (2.5/2.5); #2: (4.1/4.1); #3: (5.8/5.8);
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: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2I1896-MB2</td>
<td>1</td>
<td>10/29/18</td>
<td>LS</td>
<td>n/a</td>
<td>n/a</td>
<td>V2I1896</td>
</tr>
</tbody>
</table>

The QC reported here applies to the following samples:

Method: SW846 8260B

LA49116-8, LA49116-12

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>ND</td>
<td>25</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>71-43-2</td>
<td>Benzene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-27-4</td>
<td>Bromodichloromethane</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-25-2</td>
<td>Bromoform</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-15-0</td>
<td>Carbon Disulfide</td>
<td>ND</td>
<td>1.00</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>56-23-5</td>
<td>Carbon Tetrachloride</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>108-90-7</td>
<td>Chlorobenzene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-00-3</td>
<td>Chloroethane</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>67-66-3</td>
<td>Chloroform</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>124-48-1</td>
<td>Dibromochloromethane</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>541-73-1</td>
<td>m-Dichlorobenzene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>95-50-1</td>
<td>o-Dichlorobenzene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>106-46-7</td>
<td>p-Dichlorobenzene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-34-3</td>
<td>1,1-Dichloroethane</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>107-06-2</td>
<td>1,2-Dichloroethane</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>75-35-4</td>
<td>1,1-Dichloroethylene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>156-59-2</td>
<td>cis-1,2-Dichloroethylene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>156-60-5</td>
<td>trans-1,2-Dichloroethylene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>540-59-0</td>
<td>1,2-Dichloroethene (total)</td>
<td>ND</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>78-87-5</td>
<td>1,2-Dichloropropane</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>10061-01-5</td>
<td>cis-1,3-Dichloropropene</td>
<td>ND</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>10061-02-6</td>
<td>trans-1,3-Dichloropropene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
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<tr>
<td>542-75-6</td>
<td>1,3-Dichloropropene (total)</td>
<td>ND</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>100-41-4</td>
<td>Ethylbenzene</td>
<td>ND</td>
<td>0.50</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>67-72-1</td>
<td>Hexachloroethane</td>
<td>ND</td>
<td>1.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>78-83-1</td>
<td>Isobutyl Alcohol</td>
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<td>75-09-2</td>
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<td>100-42-5</td>
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<tr>
<td>630-20-6</td>
<td>1,1,1,2-Tetrachloroethane</td>
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Method Blank Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

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<th>Prep Date</th>
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The QC reported here applies to the following samples: Method: SW846 8260B

LA49116-8, LA49116-12

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<th>RL</th>
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<td>Tetrachloroethylene</td>
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<td>ug/l</td>
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<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
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<td>ug/l</td>
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<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
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<td>ug/l</td>
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<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
<td>ND</td>
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<td>ug/l</td>
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<tr>
<td>79-01-6</td>
<td>Trichloroethylene</td>
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<td>ug/l</td>
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<tr>
<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
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<td>ug/l</td>
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<td>75-01-4</td>
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<td>1330-20-7</td>
<td>Xylene (total)</td>
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<table>
<thead>
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<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
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<tr>
<td>17060-07-0</td>
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<td>100%</td>
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<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>99%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>94%</td>
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<th>Est. Conc.</th>
<th>Units</th>
<th>Q</th>
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The QC reported here applies to the following samples:  

**Method:** SW846 8260B  

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<th>RL</th>
<th>Units</th>
<th>Q</th>
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<td>ug/l</td>
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<td>ug/l</td>
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<tr>
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<td>ug/l</td>
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<td>ug/l</td>
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<td>ug/l</td>
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<tr>
<td>630-20-6</td>
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Method Blank Summary

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The QC reported here applies to the following samples:

Method: SW846 8260B

LA49116-5, LA49116-6, LA49116-7

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<th>Units</th>
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<td>ug/l</td>
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<td>1,1,2-Trichloroethane</td>
<td>ND</td>
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<td>ug/l</td>
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<td>75-01-4</td>
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<td>2037-26-5</td>
<td>Toluene-D8</td>
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<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
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# Method Blank Summary

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-Desoto Parish, LA

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

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<th>Units</th>
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<td>ug/l</td>
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<td>ug/l</td>
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The QC reported here applies to the following samples: Method: SW846 8260B
LA 49116-1, LA 49116-2, LA 49116-3, LA 49116-4, LA 49116-9, LA 49116-10, LA 49116-11

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<th>Units</th>
<th>Q</th>
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<tr>
<td>79-01-6</td>
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<td>Xylene (total)</td>
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<table>
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<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
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<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethylene-D4</td>
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<td>2037-26-5</td>
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<td>4-Bromofluorobenzene</td>
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(a) Compound not detected in samples at less than 10 times the hit in the blank.
The QC reported here applies to the following samples:

**Method:** SW846 8260B

**LA49116-8, LA49116-12**

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<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Limits</th>
<th>Rec/RPD</th>
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* = Outside of Control Limits.
Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
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<th>Analyzed By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
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The QC reported here applies to the following samples:

LA49116-8, LA49116-12

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<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
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<td>97</td>
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<td>20.0</td>
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<td>80-121/30</td>
</tr>
<tr>
<td>71-55-6</td>
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<td>20</td>
<td>19.4</td>
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<table>
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<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>BSP</th>
<th>BSD</th>
<th>Limits</th>
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<td>89%</td>
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<td>100%</td>
<td>102%</td>
<td>83-115%</td>
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<tr>
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<td>4-Bromofluorobenzene</td>
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<td>89-111%</td>
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</table>

(a) Advisory control limits.

* = Outside of Control Limits.
The QC reported here applies to the following samples:

**Method:**  
**SW846 8260B**

**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 | 93 | 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 | 92 | 2 | 73-125/30  
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  
10061-01-5 | cis-1,3-Dichloropropene | 20 | 17.4 | 87 | 17.7 | 92 | 2 | 79-122/30  
10061-02-6 | trans-1,3-Dichloropropene | 20 | 17.2 | 86 | 17.7 | 93 | 2 | 78-124/30  
540-59-0 | 1,2-Dichloroethene (total) | 40 | 36.1 | 90 | 37.4 | 94 | 4 | 75-127/30  
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 | 92 | 2 | 79-122/30  
10061-02-6 | trans-1,3-Dichloropropene | 20 | 17.2 | 86 | 17.7 | 93 | 3 | 78-124/30  
542-75-6 | 1,3-Dichloropropene (total) | 40 | 34.6 | 87 | 35.4 | 89 | 2 | 75-127/30  
100-41-4 | Ethylbenzene | 20 | 19.6 | 98 | 20.1 | 101 | 4 | 84-117/30  
67-72-1 | Hexachloroethane | 20 | 14.9 | 75 | 15.3 | 77 | 3 | 53-141/30  
78-83-1 | Isobuty alcohol | 200 | 180 | 90 | 182 | 91 | 1 | 20-175/30  
74-83-9 | M ethyl Bromide | 20 | 19.1 | 96 | 19.4 | 97 | 2 | 37-198/30  
74-87-3 | M ethyl Chloride | 20 | 15.7 | 79 | 16.5 | 83 | 5 | 50-136/30  
75-09-2 | M ethylene Chloride | 20 | 18.7 | 94 | 19.4 | 97 | 4 | 71-130/30  
78-93-3 | M ethyl Ethyl Ketone | 50 | 48.7 | 97 | 50.2 | 100 | 3 | 59-149/30  
108-10-1 | 4-M ethyl-2-pentanone | 50 | 42.0 | 84 | 43.4 | 87 | 3 | 74-131/30  
1634-04-4 | M ethyl 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 | 3 | 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  
127-18-4 | Tetrachloroethylene | 20 | 18.3 | 92 | 19.1 | 96 | 4 | 75-133/30  

* = Outside of Control Limits.
### Sample File ID

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<th>By</th>
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The QC reported here applies to the following samples:

Method: SW846 8260B

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<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Rec/RPD</th>
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<td>94</td>
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### CAS No. Surrogate Recoveries

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<td>Toluene-D8</td>
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<td>4-Bromofluorobenzene</td>
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(a) Advisory control limits.

* = Outside of Control Limits.
<table>
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<th>CAS No.</th>
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<th>BSP ug/l</th>
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<th>BSD ug/l</th>
<th>BSD %</th>
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* = Outside of Control Limits.
## Blank Spike/Blank Spike Duplicate Summary

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-Desoto Parish, LA

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

LA 49116-1, LA 49116-2, LA 49116-3, LA 49116-4, LA 49116-9, LA 49116-10, LA 49116-11

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<th>Compound</th>
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<th>BSP ug/l</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Rec/RPD</th>
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(a) Advisory control limits.

* = Outside of Control Limits.
Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
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<th>File ID</th>
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<th>By</th>
<th>Prep Date</th>
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The QC reported here applies to the following samples:

LA 49116-8, LA 49116-12

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* = Outside of Control Limits.
Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
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<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
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The QC reported here applies to the following samples:

LA49116-8, LA49116-12

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<th>Spike ug/l</th>
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<td>12000000</td>
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<td>118</td>
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</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>MS</th>
<th>MSD</th>
<th>LA49009-4A Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>96%</td>
<td>99%</td>
<td>116%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>99%</td>
<td>100%</td>
<td>97%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>102%</td>
<td>101%</td>
<td>90%</td>
</tr>
</tbody>
</table>

(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:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-D esoto Parish, LA

### Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch | Limits
---|---|---|---|---|---|---|---|---
LA49127-3MS | 2Q0444648.D | 5 | 10/30/18 | NN | n/a | n/a | V2Q2275 | 
LA49127-3MD | 2Q0444650.D | 5 | 10/30/18 | NN | n/a | n/a | V2Q2275 | 
LA49127-3 | 2Q0444646.D | 1 | 10/30/18 | NN | n/a | n/a | V2Q2275 | 

---

The QC reported here applies to the following samples: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-9, LA49116-10, LA49116-11

### CAS No. | Compound | LA49127-3 | Spike | MS | Spike | MSD | MSD | RPD | Rec/RPD
---|---|---|---|---|---|---|---|---|---
67-64-1 | Acetone | ND | 250 | 268 | 107 | 250 | 249 | 100 | 7 | 39-164/27
71-43-2 | Benzene | ND | 100 | 94.3 | 94 | 100 | 88.0 | 88 | 7 | 31-161/15
75-27-4 | Bromodichloromethane | 23.7 | 100 | 105 | 81 | 100 | 107 | 83 | 2 | 64-122/36
75-25-2 | Bromoform | 4.9 | 100 | 95.5 | 91 | 100 | 87.4 | 83 | 9 | 43-125/37
75-15-0 | Carbon Disulfide | ND | 100 | 93.8 | 94 | 100 | 85.4 | 85 | 9 | 38-138/36
56-23-5 | Carbon Tetrachloride | ND | 100 | 95.1 | 95 | 100 | 90.3 | 90 | 5 | 53-133/36
108-90-7 | Chlorobenzene | ND | 100 | 95.9 | 96 | 100 | 89.9 | 90 | 6 | 74-122/34
75-00-3 | Chloroethene | ND | 100 | 102 | 102 | 100 | 96.1 | 96 | 6 | 14-181/33
67-66-3 | Chloroform | 17.6 | 100 | 106 | 88 | 100 | 103 | 85 | 3 | 65-130/24
124-48-1 | Dibromochloromethane | 24.2 | 100 | 116 | 92 | 100 | 111 | 87 | 4 | 57-121/36
96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 100 | 95.1 | 94 | 100 | 92.5 | 93 | 8 | 46-135/25
541-73-1 | m-Dichlorobenzene | ND | 100 | 93.5 | 94 | 100 | 92.3 | 92 | 1 | 70-120/35
95-50-1 | o-Dichlorobenzene | ND | 100 | 91.6 | 92 | 100 | 89.9 | 90 | 2 | 72-120/35
106-46-7 | p-Dichlorobenzene | ND | 100 | 94.5 | 95 | 100 | 90.3 | 90 | 5 | 68-120/35
75-34-3 | 1,1-Dichloroethane | ND | 100 | 89.1 | 89 | 100 | 86.2 | 86 | 3 | 56-138/32
107-06-2 | 1,2-Dichloroethane | ND | 100 | 93.5 | 94 | 100 | 93.2 | 93 | 0 | 51-141/39
75-35-4 | 1,1-Dichloroethylene | ND | 100 | 93.5 | 94 | 100 | 85.5 | 86 | 9 | 48-139/37
156-59-2 | cis-1,2-Dichloroethylene | ND | 100 | 92.3 | 92 | 100 | 87.5 | 88 | 5 | 56-133/15
156-60-5 | trans-1,2-Dichloroethylene | ND | 100 | 98.7 | 99 | 100 | 92.1 | 92 | 7 | 59-128/37
540-59-0 | 1,2-Dichloroethene (total) | ND | 200 | 191 | 96 | 200 | 180 | 90 | 6 | 54-134/30
78-87-5 | 1,2-Dichloropropane | ND | 100 | 83.3 | 83 | 100 | 85.5 | 86 | 3 | 68-124/32
10061-01-5 | cis-1,3-Dichloropropene | ND | 100 | 94.3 | 94 | 100 | 93.9 | 94 | 0 | 62-120/35
10061-02-6 | trans-1,3-Dichloropropene | ND | 100 | 95.1 | 95 | 100 | 89.0 | 89 | 7 | 64-119/36
542-75-6 | 1,3-Dichloropropane (total) | ND | 200 | 189 | 95 | 200 | 183 | 92 | 3 | 50-150/30 a
100-41-4 | Ethylbenzene | ND | 100 | 97.5 | 98 | 100 | 90.0 | 90 | 8 | 47-146/30
67-72-1 | Hexachloroethane | ND | 100 | 73.6 | 74 | 100 | 67.2 | 67 | 9 | 32-128/39
78-83-1 | Isobutyl Alcohol | ND | 1000 | 1050 | 105 | 1000 | 1050 | 105 | 0 | 33-142/54
74-83-9 | M ethyl Bromide | ND | 100 | 90.2 | 90 | 100 | 89.0 | 89 | 1 | 1-500/64
74-87-3 | M ethyl Chloride | ND | 100 | 80.0 | 80 | 100 | 74.9 | 75 | 7 | 16-146/29
75-09-2 | M ethylene Chloride | 0.45 | 100 | 97.7 | 97 | 100 | 94.4 | 94 | 3 | 55-134/36
78-19-3 | M ethyl Ethyl Ketone | ND | 100 | 250 | 260 | 104 | 250 | 255 | 102 | 2 | 54-142/39
108-10-1 | 4-Methyl-2-pentanone | ND | 250 | 248 | 99 | 250 | 241 | 96 | 3 | 60-140/40
1634-04-4 | M ethyl Tert Butyl Ether | ND | 100 | 93.2 | 93 | 100 | 89.8 | 90 | 4 | 52-146/32
100-42-5 | Styrene | ND | 100 | 85.0 | 85 | 100 | 81.0 | 81 | 5 | 67-128/35
630-20-6 | 1,1,2-Tetrachloroethane | ND | 100 | 99.8 | 100 | 100 | 93.0 | 93 | 7 | 67-121/35
79-34-5 | 1,1,2-Tetrachloroethane | ND | 100 | 99.8 | 100 | 100 | 99.0 | 99 | 1 | 64-133/38

* = Outside of Control Limits.
Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
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<td>2Q0444648.D</td>
<td>5</td>
<td>10/30/18</td>
<td>NN</td>
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<td>n/a</td>
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<td>10/30/18</td>
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<td>V2Q2275</td>
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<td>NN</td>
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<td>n/a</td>
<td>V2Q2275</td>
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The QC reported here applies to the following samples:

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-9, LA49116-10, LA49116-11

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<th>Compound</th>
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<th>Spike</th>
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<th>Spike</th>
<th>MSD</th>
<th>MSD</th>
<th>RPD</th>
<th>Rec/RPD</th>
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<td>58-135/37</td>
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<td>108-88-3</td>
<td>Toluene</td>
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<td>100</td>
<td>89.1</td>
<td>89</td>
<td>7</td>
<td>36-155/17</td>
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<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
<td>100</td>
<td>94.5</td>
<td>95</td>
<td>100</td>
<td>91.7</td>
<td>92</td>
<td>3</td>
<td>63-128/36</td>
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<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
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<td>92</td>
<td>100</td>
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<td>4</td>
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<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
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<tr>
<td>75-01-4</td>
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<td>86.4</td>
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<td>95-47-6</td>
<td>o-Xylene</td>
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<td>50-144/35</td>
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<td>1330-20-7</td>
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<td>272</td>
<td>91</td>
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<td>41-154/29</td>
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</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>MS</th>
<th>MSD</th>
<th>LA49127-3</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>106%</td>
<td>105%</td>
<td>100%</td>
<td>84-124%</td>
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<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>99%</td>
<td>100%</td>
<td>98%</td>
<td>83-115%</td>
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<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>100%</td>
<td>98%</td>
<td>100%</td>
<td>89-111%</td>
</tr>
</tbody>
</table>

(a) Advisory control limits.

* = Outside of Control Limits.
### Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-D esoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
<td>LA49176-5M S</td>
<td>11040713.D</td>
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<td>10/31/18</td>
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The QC reported here applies to the following samples:  
**Method:** SW846 8260B

**LA49116-5, LA49116-6, LA49116-7**

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<th>Compound</th>
<th>LA49176-5</th>
<th>Spike</th>
</tr>
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<tbody>
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<tr>
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<td>75-27-4</td>
<td>Bromodichloromethane</td>
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</tr>
<tr>
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<td>Bromoform</td>
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<td>Carbon Disulfide</td>
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<td>Dibromochloromethane</td>
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<td>67-128/35</td>
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<td>67-121/35</td>
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<tr>
<td>64-133/38</td>
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<td>58-135/37</td>
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* = Outside of Control Limits.
Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
<td>LA49176-5MS</td>
<td>1I040713.D</td>
<td>5</td>
<td>10/31/18</td>
<td>LS</td>
<td>n/a</td>
<td>n/a</td>
<td>V111896</td>
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<td>LA49176-5MSD</td>
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<td>5</td>
<td>10/31/18</td>
<td>LS</td>
<td>n/a</td>
<td>n/a</td>
<td>V111896</td>
</tr>
<tr>
<td>LA49176-5</td>
<td>1I040659.D</td>
<td>1</td>
<td>10/29/18</td>
<td>LS</td>
<td>n/a</td>
<td>n/a</td>
<td>V111896</td>
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The QC reported here applies to the following samples:

LA49116-5, LA49116-6, LA49116-7

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<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>LA49176-5 Q ug/l</th>
<th>Spike ug/l</th>
<th>MS ug/l</th>
<th>%</th>
<th>Spike ug/l</th>
<th>MSD ug/l</th>
<th>%</th>
<th>RPD</th>
<th>Rec/RPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3</td>
<td>Toluene</td>
<td>ND</td>
<td>100</td>
<td>97.0</td>
<td>97</td>
<td>100</td>
<td>99.3</td>
<td>99</td>
<td>2</td>
<td>36-155/17</td>
</tr>
<tr>
<td>71-55-6</td>
<td>1,1,1-Trichloroethane</td>
<td>ND</td>
<td>100</td>
<td>101</td>
<td>101</td>
<td>100</td>
<td>103</td>
<td>103</td>
<td>2</td>
<td>63-128/36</td>
</tr>
<tr>
<td>79-00-5</td>
<td>1,1,2-Trichloroethane</td>
<td>ND</td>
<td>100</td>
<td>102</td>
<td>102</td>
<td>100</td>
<td>102</td>
<td>102</td>
<td>2</td>
<td>61-138/17</td>
</tr>
<tr>
<td>79-01-6</td>
<td>Trichloroethylene</td>
<td>ND</td>
<td>100</td>
<td>98.9</td>
<td>99</td>
<td>100</td>
<td>103</td>
<td>103</td>
<td>4</td>
<td>57-131/36</td>
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<tr>
<td>75-69-4</td>
<td>Trichlorofluoromethane</td>
<td>ND</td>
<td>100</td>
<td>103</td>
<td>103</td>
<td>100</td>
<td>105</td>
<td>105</td>
<td>2</td>
<td>31-156/36</td>
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<tr>
<td>75-01-4</td>
<td>Vinyl Chloride</td>
<td>ND</td>
<td>100</td>
<td>95.7</td>
<td>96</td>
<td>100</td>
<td>97.6</td>
<td>98</td>
<td>2</td>
<td>22-155/49</td>
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<tr>
<td>95-47-6</td>
<td>m,p-Xylene</td>
<td>ND</td>
<td>200</td>
<td>224</td>
<td>112</td>
<td>200</td>
<td>230</td>
<td>115</td>
<td>3</td>
<td>35-159/31</td>
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<tr>
<td>1330-20-7</td>
<td>Xylene (total)</td>
<td>ND</td>
<td>300</td>
<td>318</td>
<td>106</td>
<td>300</td>
<td>327</td>
<td>109</td>
<td>3</td>
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<table>
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<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>MS</th>
<th>MSD</th>
<th>LA49176-5</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>17060-07-0</td>
<td>1,2-Dichloroethane-D4</td>
<td>100%</td>
<td>100%</td>
<td>110%</td>
<td>84-124%</td>
</tr>
<tr>
<td>2037-26-5</td>
<td>Toluene-D8</td>
<td>98%</td>
<td>99%</td>
<td>99%</td>
<td>83-115%</td>
</tr>
<tr>
<td>460-00-4</td>
<td>4-Bromofluorobenzene</td>
<td>102%</td>
<td>102%</td>
<td>94%</td>
<td>89-111%</td>
</tr>
</tbody>
</table>

(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:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<td>OP12645-MB</td>
<td>L0022586.D</td>
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<td>JS</td>
<td>10/29/18</td>
<td>OP12645</td>
<td>EL593</td>
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The QC reported here applies to the following samples:  

**Method:** SW846 8270D

**Samples:** LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>105-67-9</td>
<td>2,4-Dimethylphenol</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>51-28-5</td>
<td>2,4-Dinitrophenol</td>
<td>ND</td>
<td>20</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>100-02-7</td>
<td>4-Nitrophenol</td>
<td>ND</td>
<td>25</td>
<td>ug/l</td>
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<tr>
<td>87-86-5</td>
<td>Pentachlorophenol</td>
<td>ND</td>
<td>10</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>58-90-2</td>
<td>2,3,4,6-Tetrachlorophenol</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>95-95-4</td>
<td>2,4,5-Trichlorophenol</td>
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<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>88-06-2</td>
<td>2,4,6-Trichlorophenol</td>
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<tr>
<td>83-32-9</td>
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<td>0.20</td>
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<tr>
<td>208-96-8</td>
<td>Aacenaphthylen</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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</tr>
<tr>
<td>62-53-3</td>
<td>Aniline</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>120-12-7</td>
<td>Anthracene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>56-55-3</td>
<td>Benzo(a)anthracene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>50-32-8</td>
<td>Benzo(a)pyrene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>205-99-2</td>
<td>Benzo(b)fluoranthene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>207-08-9</td>
<td>Benzo(k)fluoranthene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>92-52-4</td>
<td>1,1'-Biphenyl</td>
<td>ND</td>
<td>10</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>85-68-7</td>
<td>Butyl Benzyl Phthalate</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>106-47-8</td>
<td>4-Chloroaniline</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>111-44-4</td>
<td>bis(2-Chloroethyl)ether</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>108-60-1</td>
<td>2,2'-Oxybis(1-chloropropane)</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>91-58-7</td>
<td>2-Chloronaphthalene</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>218-01-9</td>
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<tr>
<td>53-70-3</td>
<td>Dibenzo(a,h)anthracene</td>
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<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>132-64-9</td>
<td>Dibenzo[1,2-a:4,5-a']dibenzofuran</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>91-94-1</td>
<td>3,3'-Dichlorobenzidine</td>
<td>ND</td>
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<td>ug/l</td>
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<tr>
<td>84-66-2</td>
<td>Diethyl Phthalate</td>
<td>ND</td>
<td>0.049</td>
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<td>ug/l</td>
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<td>131-11-3</td>
<td>Dimethyl Phthalate</td>
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<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>117-84-0</td>
<td>Di-n-octyl Phthalate</td>
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<td>ug/l</td>
<td></td>
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<tr>
<td>99-65-0</td>
<td>1,3-Dinitrobenzene</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>121-14-2</td>
<td>2,4-Dinitrotoluene</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>606-20-2</td>
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<td>ND</td>
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<td>ug/l</td>
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</tr>
<tr>
<td>117-81-7</td>
<td>bis(2-Ethylhexyl)phthalate</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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</tr>
<tr>
<td>206-44-0</td>
<td>Fluoranthene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
<td></td>
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</table>
The QC reported here applies to the following samples:

**Method:** SW846 8270D

**Samples:** LA 49116-1, LA 49116-2, LA 49116-3, LA 49116-4, LA 49116-5, LA 49116-9, LA 49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>86-73-7</td>
<td>Fluorene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>118-74-1</td>
<td>Hexachlorobenzene</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>87-68-3</td>
<td>Hexachlorobutadiene</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>77-47-4</td>
<td>Hexachlorocyclopentadiene</td>
<td>ND</td>
<td>10</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>193-39-5</td>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>ND</td>
<td>0.20</td>
<td>ug/l</td>
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<tr>
<td>78-59-1</td>
<td>Isophorone</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>91-57-6</td>
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<td>ND</td>
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<td>Naphthalene</td>
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<td>0.20</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>88-74-4</td>
<td>2-Nitroaniline</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
<td></td>
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<tr>
<td>99-09-2</td>
<td>3-Nitroaniline</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>100-01-6</td>
<td>4-Nitroaniline</td>
<td>ND</td>
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<tr>
<td>98-95-3</td>
<td>Nitrobenzene</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<td>621-64-7</td>
<td>N-Nitroso-di-n-propylamine</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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<tr>
<td>86-30-6</td>
<td>N-Nitrosodiphenylamine</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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</tr>
<tr>
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<td>Phenanthrene</td>
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<td>ug/l</td>
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<tr>
<td>129-00-0</td>
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<td>0.20</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td>95-94-3</td>
<td>1,2,4,5-Tetrachlorobenzene</td>
<td>ND</td>
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<td>ug/l</td>
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<tr>
<td>120-82-1</td>
<td>1,2,4-Trichlorobenzene</td>
<td>ND</td>
<td>5.0</td>
<td>ug/l</td>
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</tbody>
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<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>367-12-4</td>
<td>2-Fluorophenol</td>
<td>55%</td>
</tr>
<tr>
<td>4165-62-2</td>
<td>Phenol-d5</td>
<td>45%</td>
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<tr>
<td>118-79-6</td>
<td>2,4,6-Tribromophenol</td>
<td>77%</td>
</tr>
<tr>
<td>4165-60-0</td>
<td>Nitrobenzene-d5</td>
<td>72%</td>
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<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>76%</td>
</tr>
<tr>
<td>1718-51-0</td>
<td>Terphenyl-d14</td>
<td>82%</td>
</tr>
</tbody>
</table>
Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
<td>OP12645-BS</td>
<td>L0022587.D</td>
<td>1</td>
<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12645</td>
<td>EL593</td>
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<td>OP12645-BSD</td>
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<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12645</td>
<td>EL593</td>
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The QC reported here applies to the following samples:

*Method: SW846 8270D*

LA 49116-1, LA 49116-2, LA 49116-3, LA 49116-4, LA 49116-5, LA 49116-9, LA 49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Rec/RPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>95-57-8</td>
<td>2-Chlorophenol</td>
<td>5</td>
<td>4.2</td>
<td>84</td>
<td>4.6</td>
<td>92</td>
<td>9</td>
<td>63-104/19</td>
</tr>
<tr>
<td>120-83-2</td>
<td>2,4-Dichlorophenol</td>
<td>5</td>
<td>4.4</td>
<td>88</td>
<td>4.8</td>
<td>96</td>
<td>9</td>
<td>68-112/19</td>
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* = Outside of Control Limits.
## Blank Spike/Blank Spike Duplicate Summary

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-Desoto Parish, LA

### Sample File ID

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<th>Prep Date</th>
<th>Prep Batch</th>
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The QC reported here applies to the following samples:

**Method:** SW846 8270D

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

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(a) Recovery of this analyte marginally exceeded lower statistical control limits.  
(b) Analytical precision exceeds laboratory control limits.

* = Outside of Control Limits.
## Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-D esoto Parish, LA

### Sample Information

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The QC reported here applies to the following samples: 

- LA 49116-1, LA 49116-2, LA 49116-3, LA 49116-4, LA 49116-5, LA 49116-9, LA 49116-10

### Method

**Method:** SW846 8270D

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* = Outside of Control Limits.
### Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-D esoto Parish, LA

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The QC reported here applies to the following samples:

- LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

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**(a) Outside control limits due to matrix interference. The BS/BSD met criteria.*

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* = 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
The QC reported here applies to the following samples:

Method: **MADEP VPH REV 1.1**

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

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<td>2,5-Dibromotoluene</td>
<td>101% a</td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>100% b</td>
</tr>
</tbody>
</table>

(a) Recovery from Aromatics fraction.
(b) Recovery from Aliphatics fraction.
The QC reported here applies to the following samples:

**Method:** SW846 8011

LA49116-1, LA49116-2

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>0.020</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>115% 55-149%</td>
</tr>
</tbody>
</table>

**Sample** | **File ID** | **DF** | **Analyzed** | **By** | **Prep Date** | **Prep Batch** | **Analytical Batch**
---|-------------|-------|--------------|--------|--------------|---------------|-----------------|
OP12674-MB | LK113836.D  | 1     | 10/30/18     | JS     | 10/29/18     | OP12674       | GLK739          |
Method Blank Summary

Job Number: LA 49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample File ID</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12675-MB</td>
<td>10/31/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12675</td>
<td>GLK739</td>
</tr>
</tbody>
</table>

The QC reported here applies to the following samples:

Method: SW 846 8011

LA 49116-3, LA 49116-4, LA 49116-5, LA 49116-9, LA 49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>0.020</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>111% 55-149%</td>
</tr>
</tbody>
</table>
Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLC1882-BS1</td>
<td>LC381158.D</td>
<td>1</td>
<td>10/27/18</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
<tr>
<td>GLC1882-BSD1</td>
<td>LC381159.D</td>
<td>1</td>
<td>10/27/18</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
</tbody>
</table>

The QC reported here applies to the following samples:

Method: MADEP VPH REV 1.1

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>150</td>
<td>123</td>
<td>82</td>
<td>132</td>
<td>88</td>
<td>7</td>
<td>70-130/30</td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C8-C10 (Unadj.)</td>
<td>250</td>
<td>214</td>
<td>86</td>
<td>209</td>
<td>84</td>
<td>2</td>
<td>70-130/30</td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C8-C10 (Unadj.)</td>
<td>250</td>
<td>221</td>
<td>88</td>
<td>221</td>
<td>88</td>
<td>0</td>
<td>70-130/30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>BSP</th>
<th>BSD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>105% a</td>
<td>103% a</td>
<td>70-130%</td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>106% b</td>
<td>114% b</td>
<td>70-130%</td>
</tr>
</tbody>
</table>

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

* = Outside of Control Limits.
## Blank Spike/Blank Spike Duplicate Summary

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample File ID</th>
<th>Analyzed</th>
<th>Preparator</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12674-BS</td>
<td>LK113837.D</td>
<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12674</td>
</tr>
<tr>
<td>OP12674-BSD</td>
<td>LK113838.D</td>
<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12674</td>
</tr>
</tbody>
</table>

The QC reported here applies to the following samples: 

**Method:** SW846 8011

**LA49116-1, LA49116-2**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Rec/RPD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>0.251</td>
<td>0.28</td>
<td>111</td>
<td>0.26</td>
<td>103</td>
<td>7</td>
<td>60-148/18</td>
<td></td>
</tr>
</tbody>
</table>

**Surrogate Recoveries**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>BSP %</th>
<th>BSD %</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>117</td>
<td>115</td>
<td>55-149%</td>
</tr>
</tbody>
</table>

* = Outside of Control Limits.
Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12675-BS</td>
<td>LK113864.D</td>
<td>1</td>
<td>10/31/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12675</td>
<td>GLK739</td>
</tr>
<tr>
<td>OP12675-BSD</td>
<td>LK113865.D</td>
<td>1</td>
<td>10/31/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12675</td>
<td>GLK739</td>
</tr>
</tbody>
</table>

The QC reported here applies to the following samples:

LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l</th>
<th>Spike %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Rec/RPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>0.251</td>
<td>0.27</td>
<td>107</td>
<td>0.27</td>
<td>107</td>
<td>0</td>
<td>60-148/18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>BSP</th>
<th>BSD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>109%</td>
<td>110%</td>
<td>55-149%</td>
</tr>
</tbody>
</table>

* = Outside of Control Limits.
Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA49116-1MS</td>
<td>LC381164.D</td>
<td>5</td>
<td>10/27/18</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
<tr>
<td>LA49116-1M SD</td>
<td>LC381165.D</td>
<td>5</td>
<td>10/27/18</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
<tr>
<td>LA49116-1</td>
<td>LC381161.D</td>
<td>1</td>
<td>10/27/18</td>
<td>SV</td>
<td>n/a</td>
<td>n/a</td>
<td>GLC1882</td>
</tr>
</tbody>
</table>

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

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>LA49116-1 Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics C6-C8 (Unadj.)</td>
<td>70-130/50</td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C8-C10 (Unadj.)</td>
<td>70-130/50</td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C8-C10 (Unadj.)</td>
<td>70-130/50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>MS</th>
<th>MSD</th>
<th>LA49116-1 Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>105% a</td>
<td>104% a</td>
<td>70-130%</td>
</tr>
<tr>
<td>615-59-8</td>
<td>2,5-Dibromotoluene</td>
<td>105% b</td>
<td>104% b</td>
<td>70-130%</td>
</tr>
</tbody>
</table>

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

* = Outside of Control Limits.
Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12674-MS</td>
<td>LK113839.D</td>
<td>1</td>
<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12674</td>
<td>GLK739</td>
</tr>
<tr>
<td>OP12674-MSD</td>
<td>LK113840.D</td>
<td>1</td>
<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12674</td>
<td>GLK739</td>
</tr>
<tr>
<td>LA49151-2</td>
<td>LK113843.D</td>
<td>1</td>
<td>10/30/18</td>
<td>JS</td>
<td>10/29/18</td>
<td>OP12674</td>
<td>GLK739</td>
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The QC reported here applies to the following samples:

LA49116-1, LA49116-2

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<th>LA49151-2</th>
<th>Spike</th>
<th>MS</th>
<th>Spike</th>
<th>MSD</th>
<th>MSD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-12-8</td>
<td>1,2-Dibromo-3-chloropropane</td>
<td>ND</td>
<td>0.241</td>
<td>0.23</td>
<td>95</td>
<td>0.23</td>
<td>95</td>
<td>60-151/32</td>
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CAS No. Surrogate Recoveries

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>348-51-6</td>
<td>1-Chloro-2-fluorobenzene</td>
<td>111%</td>
</tr>
</tbody>
</table>

* = 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: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12635-MB</td>
<td>X0005563.D</td>
<td>1</td>
<td>10/29/18</td>
<td>JT</td>
<td>10/26/18</td>
<td>OP12635</td>
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The QC reported here applies to the following samples:

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aromatics &gt; C10-C12 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C12-C16 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C16-C21 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C21-C35 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>73%</td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>73%</td>
</tr>
</tbody>
</table>
Method Blank Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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<tbody>
<tr>
<td>OP12635-MB Y0005563.D</td>
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<td>JT</td>
<td>10/26/18</td>
<td>OP12635</td>
<td>GL1652</td>
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</table>

The QC reported here applies to the following samples:

Method: MADEP EPH REV 1.1

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL.</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatics &gt; C10-C12 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aliphatics &gt; C12-C16 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aliphatics &gt; C16-C35 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>84%</td>
</tr>
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</table>
The QC reported here applies to the following samples:

**LA49116-9**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aromatics &gt; C10-C12 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C12-C16 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C16-C21 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aromatics &gt; C21-C35 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
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**CAS No. Surrogate Recoveries Limits**

<table>
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<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>68%</td>
<td>40-140%</td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>83%</td>
<td>40-140%</td>
</tr>
</tbody>
</table>
Method Blank Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12664-MB</td>
<td>Y0005596.D</td>
<td>1</td>
<td>11/01/18</td>
<td>JT</td>
<td>10/30/18</td>
<td>OP12664</td>
<td>GLB1654</td>
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</table>

The QC reported here applies to the following samples:

**Method:** MADEP EPH REV 1.1

LA49116-9

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Result</th>
<th>RL</th>
<th>Units</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics &gt; C10-C12 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C12-C16 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C16-C35 (Unadj.)</td>
<td>ND</td>
<td>140</td>
<td>ug/l</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>75% 40-140%</td>
</tr>
</tbody>
</table>
Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12635-BS</td>
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<td>JT</td>
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</tr>
<tr>
<td>OP12635-BSD</td>
<td>X0005565.D</td>
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<td>10/29/18</td>
<td>JT</td>
<td>10/26/18</td>
<td>OP12635</td>
<td>GLB1651</td>
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The QC reported here applies to the following samples:

LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-10

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<thead>
<tr>
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<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Rec/RPD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>340</td>
<td>74</td>
<td>339</td>
<td>73</td>
<td>0</td>
<td>40-140/30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>1030</td>
<td>74</td>
<td>1020</td>
<td>73</td>
<td>1</td>
<td>40-140/30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1380</td>
<td>Aromatics &gt; C12-C16 (Unadj.)</td>
<td>1860</td>
<td>81</td>
<td>1900</td>
<td>82</td>
<td>2</td>
<td>40-140/30</td>
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<td></td>
</tr>
<tr>
<td>2310</td>
<td>Aromatics &gt; C16-C21 (Unadj.)</td>
<td>3090</td>
<td>84</td>
<td>3140</td>
<td>85</td>
<td>2</td>
<td>40-140/30</td>
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</table>

* = Outside of Control Limits.
**Blank Spike/Blank Spike Duplicate Summary**

**Job Number:** LA49116  
**Account:** HETILAL Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
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<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
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</thead>
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<tr>
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<td>10/29/18</td>
<td>JT</td>
<td>10/26/18</td>
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<td>Y0005565.D</td>
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<td>10/29/18</td>
<td>JT</td>
<td>10/26/18</td>
<td>OP12635</td>
<td>GLB1652</td>
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The QC reported here applies to the following samples:  
**Method:** MADEP EPH REV 1.1  
LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-10

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Rec/RPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatics &gt; C10-C12 (Unadj.) 461</td>
<td>351</td>
<td>76</td>
<td>369</td>
<td>80</td>
<td>5</td>
<td>40-140/30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aliphatics &gt; C12-C16 (Unadj.) 923</td>
<td>699</td>
<td>76</td>
<td>741</td>
<td>80</td>
<td>6</td>
<td>40-140/30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aliphatics &gt; C16-C35 (Unadj.) 4150</td>
<td>2980</td>
<td>72</td>
<td>3130</td>
<td>75</td>
<td>5</td>
<td>40-140/30</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>BSP</th>
<th>BSD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>79%</td>
<td>82%</td>
<td>40-140%</td>
</tr>
</tbody>
</table>

* = Outside of Control Limits.
The QC reported here applies to the following samples:

Method: MADEP EPH REV 1.1

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l</th>
<th>BSP %</th>
<th>BSD ug/l</th>
<th>BSD %</th>
<th>RPD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aromatics &gt; C10-C12 (Unadj.)</td>
<td>466</td>
<td>301</td>
<td>65</td>
<td>304</td>
<td>65</td>
<td>1</td>
<td>40-140/30</td>
<td></td>
</tr>
<tr>
<td>Aromatics &gt; C12-C16 (Unadj.)</td>
<td>1400</td>
<td>892</td>
<td>64</td>
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<td>64</td>
<td>1</td>
<td>40-140/30</td>
<td></td>
</tr>
<tr>
<td>Aromatics &gt; C16-C21 (Unadj.)</td>
<td>2330</td>
<td>1620</td>
<td>70</td>
<td>1630</td>
<td>70</td>
<td>1</td>
<td>40-140/30</td>
<td></td>
</tr>
<tr>
<td>Aromatics &gt; C21-C35 (Unadj.)</td>
<td>3720</td>
<td>2280</td>
<td>61</td>
<td>2270</td>
<td>61</td>
<td>0</td>
<td>40-140/30</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>BSP %</th>
<th>BSD %</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-15-1</td>
<td>o-Terphenyl</td>
<td>67%</td>
<td>67%</td>
<td>40-140%</td>
</tr>
<tr>
<td>321-60-8</td>
<td>2-Fluorobiphenyl</td>
<td>69%</td>
<td>69%</td>
<td>40-140%</td>
</tr>
</tbody>
</table>

* = Outside of Control Limits.
Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49116
Account: HETILAL Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Sample</th>
<th>File ID</th>
<th>DF</th>
<th>Analyzed</th>
<th>By</th>
<th>Prep Date</th>
<th>Prep Batch</th>
<th>Analytical Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP12664-BS</td>
<td>Y0005673.D</td>
<td>1</td>
<td>11/05/18</td>
<td>JT</td>
<td>10/30/18</td>
<td>OP12664</td>
<td>GLB1658</td>
</tr>
<tr>
<td>OP12664-BSD</td>
<td>Y0005674.D</td>
<td>1</td>
<td>11/05/18</td>
<td>JT</td>
<td>10/30/18</td>
<td>OP12664</td>
<td>GLB1658</td>
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</table>

The QC reported here applies to the following samples:

Method: MADEP EPH REV 1.1

LA49116-9

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Compound</th>
<th>Spike ug/l</th>
<th>BSP ug/l %</th>
<th>BSD ug/l %</th>
<th>RPD</th>
<th>Rec/RPD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aliphatics &gt; C10-C12 (Unadj.) 466</td>
<td>276</td>
<td>59</td>
<td>277</td>
<td>60</td>
<td>0</td>
<td>40-140/30</td>
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<tr>
<td></td>
<td>Aliphatics &gt; C12-C16 (Unadj.) 931</td>
<td>531</td>
<td>57</td>
<td>534</td>
<td>57</td>
<td>1</td>
<td>40-140/30</td>
</tr>
<tr>
<td></td>
<td>Aliphatics &gt; C16-C35 (Unadj.) 4190</td>
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<td>53</td>
<td>2230</td>
<td>53</td>
<td>0</td>
<td>40-140/30</td>
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<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Surrogate Recoveries</th>
<th>BSP</th>
<th>BSD</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3386-33-2</td>
<td>1-Chlorooctadecane</td>
<td>55%</td>
<td>56%</td>
<td>40-140%</td>
</tr>
</tbody>
</table>

* = 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:** LA49116  
**Account:** HETILAL - Hydro-Environmental Technology, Inc.  
**Project:** 8060.00 Indigo-Desoto Parish, LA  
**QC Batch ID:** MP13153  
**Matrix Type:** AQUEOUS  
**Methods:** SW846 6020A  
**Units:** ug/l  
**Prep Date:** 10/26/18

<table>
<thead>
<tr>
<th>Metal</th>
<th>RL</th>
<th>IDL</th>
<th>MDL</th>
<th>raw</th>
<th>final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>100</td>
<td>6.9</td>
<td>9.3</td>
<td>-1.7</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Antimony</td>
<td>1.0</td>
<td>.043</td>
<td>.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.0</td>
<td>.062</td>
<td>.26</td>
<td>-0.021</td>
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</tr>
<tr>
<td>Barium</td>
<td>1.0</td>
<td>.033</td>
<td>.46</td>
<td>-0.035</td>
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</tr>
<tr>
<td>Beryllium</td>
<td>1.0</td>
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<td>.28</td>
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<td>Boron</td>
<td>20</td>
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<td>2.9</td>
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<tr>
<td>Cadmium</td>
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<td>0.032</td>
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<td>-15</td>
<td>&lt;100</td>
</tr>
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<td>Cerium</td>
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<td>.16</td>
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<tr>
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<td>.11</td>
<td>.15</td>
<td>-0.028</td>
<td>&lt;1.0</td>
</tr>
<tr>
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<td>.14</td>
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<td>Copper</td>
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<td>.74</td>
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<td>16</td>
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<td>.41</td>
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<td>11</td>
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<td>&lt;100</td>
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<td>.53</td>
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<td>&lt;100</td>
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<td>Selenium</td>
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<td>3.1</td>
<td>0.18</td>
<td>&lt;5.0</td>
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<td>Silver</td>
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<td>.12</td>
<td>.27</td>
<td>0.027</td>
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<td>.86</td>
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<td>.034</td>
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<tr>
<td>Titanium</td>
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<td>Vanadium</td>
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<td>.1</td>
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<td>Zinc</td>
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<td>1.5</td>
<td>1.1</td>
<td>-0.37</td>
<td>&lt;5.0</td>
</tr>
</tbody>
</table>

# BLANK RESULTS SUMMARY

**Part 2 - Method Blanks**

Login Number: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13153  
Matrix Type: AQUEOUS  
Methods: SW846 6020A  
Units: ug/l

**Prep Date:** 10/26/18

<table>
<thead>
<tr>
<th>Metal</th>
<th>RL</th>
<th>IDL</th>
<th>MDL</th>
<th>MB</th>
<th>raw</th>
<th>final</th>
</tr>
</thead>
</table>

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: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13153  
Matrix Type: AQUEOUS  
Prep Date: 10/26/18  
Methods: SW846 6020A  
Units: ug/l

<table>
<thead>
<tr>
<th>Metal</th>
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<th>Spikelot MS</th>
<th>MPICPMS6 % Rec</th>
<th>QC Limits</th>
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<td>12200</td>
<td>18100</td>
<td>5100</td>
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<tr>
<td>Antimony</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
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<td>122</td>
<td>100</td>
<td>118.3</td>
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<tr>
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<td>239</td>
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<tr>
<td>Beryllium</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Boron</td>
<td></td>
<td></td>
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MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: LA49116
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13153
Matrix Type: AQUEOUS
Prep Date: 10/26/18
Methods: SW846 6020A
Units: ug/l

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Results < IDL are shown as zero for calculation purposes
(*): Outside of QC limits
(N): Matrix Spike Rec. outside of QC limits
(anr): Analyte not requested
(a): Spike 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: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13153  
Methods: SW846 6020A  
Matrix Type: AQUEOUS  
Units: ug/l  
Prep Date: 10/26/18

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**MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY**

Login Number: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA

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Prep Date: 10/26/18

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Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference or sample non-homogeneity.

(b) Outside control limits due to matrix interference.

(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
## SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA  

QC Batch ID: MP13153  
Methods: SW846 6020A  
Matrix Type: AQUEOUS  
Units: ug/l  

Prep Date: 10/26/18

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Login Number: LA49116
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13153  Methods: SW846 6020A
Matrix Type: AQUEOUS  Units: ug/l
Prep Date: 10/26/18

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

Login Number: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA  
QC Batch ID: MP13153  
Methods: SW846 6020A  
Matrix Type: AQUEOUS  
Units: ug/l  
Prep Date: 10/26/18

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SERIAL DILUTION RESULTS SUMMARY

Login Number: LA49116
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13153
Matrix Type: AQUEOUS
Methods: SW846 6020A
Units: ug/l
Prep Date: 10/26/18

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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: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA  
QC Batch ID: MP13153  
Methods: SW846 6020A  
Matrix Type: AQUEOUS  
Units: ug/l  
Prep Date: 10/26/18

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<th>Sample</th>
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</table>


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

(a) Spike recovery indicates possible matrix interference or sample non-homogeneity.
BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: LA49116
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13158
Matrix Type: AQUEOUS
Methods: SW846 7470A
Units: ug/l
Prep Date: 10/29/18

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<th>final</th>
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<td>.081</td>
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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: LA49116
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13158
Matrix Type: AQUEOUS
Methods: SW846 7470A
Units: ug/l
Prep Date: 10/29/18

<table>
<thead>
<tr>
<th>Metal</th>
<th>Original MS</th>
<th>Spikelot</th>
<th>QC</th>
<th>% Rec</th>
<th>Limits</th>
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<td>5</td>
<td>94.0</td>
<td>75-125</td>
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Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
**MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY**

Login Number: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA

QC Batch ID: MP13158  
Methods: SW846 7470A  
Matrix Type: AQUEOUS  
Units: ug/l

Prep Date: 10/29/18

<table>
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<th>Metal</th>
<th>Original MSD</th>
<th>HGSPIKE1 % Rec</th>
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Results < IDL are shown as zero for calculation purposes  
(*) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits  
(anr) Analyte not requested
SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: LA49116
Account: HETILAL - Hydro-Environmental Technology, Inc.
Project: 8060.00 Indigo - Desoto Parish, LA

QC Batch ID: MP13158
Matrix Type: AQUEOUS
Prep Date: 10/29/18

Methods: SW846 7470A
Units: ug/l

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<th>Metal</th>
<th>Result</th>
<th>HGSPIKE1 % Rec</th>
<th>Limits</th>
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<tbody>
<tr>
<td>Mercury</td>
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Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
### SERIAL DILUTION RESULTS SUMMARY

Login Number: LA49116  
Account: HETILAL - Hydro-Environmental Technology, Inc.  
Project: 8060.00 Indigo-Desoto Parish, LA  

QC Batch ID: MP13158  
Matrix Type: AQUEOUS  
Methods: SW846 7470A  
Units: ug/l  
Prep Date: 10/29/18

<table>
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<td>Mercury</td>
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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

500 Ambassador Caffery Parkway, Suite A, Lafayette, LA 70503

Phone: 800-364-0527 Fax: 337-233-7826

LA49116: Chain of Custody

Page 1 of 3

SGS Houston, TX
## SGS Sample Receipt Summary

**Job Number:** LA49116  
**Client:** SGS  
**Date / Time Received:**  
**Delivery Method:**  
**Airbill #s:**  
**No. Coolers:** 1  
**Therm ID:** IR9;  
**Temp Adjustment Factor:** 0;  
**Cooler Temps (Initial/Adjusted):** #1: (1/1);  

### Cooler Security

<table>
<thead>
<tr>
<th>Y or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Custody Seals Present:</td>
</tr>
<tr>
<td>2. Custody Seals Intact:</td>
</tr>
<tr>
<td>3. COC Present:</td>
</tr>
<tr>
<td>4. Smpl Dates/Time OK</td>
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</tbody>
</table>

### Cooler Temperature

<table>
<thead>
<tr>
<th>Y or N</th>
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</thead>
<tbody>
<tr>
<td>1. Temp criteria achieved:</td>
</tr>
<tr>
<td>2. Cooler temp verification:</td>
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<tr>
<td>3. Cooler media:</td>
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### Quality Control Preservation

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<th>N/A</th>
<th>WTB</th>
<th>STB</th>
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</thead>
<tbody>
<tr>
<td>1. Trip Blank present / cooler:</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>2. Trip Blank listed on COC:</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>3. Samples preserved properly:</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
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<tr>
<td>4. VOCs headspace free:</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
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</table>

### Sample Integrity - Documentation

<table>
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<tbody>
<tr>
<td>1. Sample labels present on bottles:</td>
</tr>
<tr>
<td>2. Container labeling complete:</td>
</tr>
<tr>
<td>3. Sample container label / COC agree:</td>
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</tbody>
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### Sample Integrity - Condition

<table>
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<tbody>
<tr>
<td>1. Sample recvd within HT:</td>
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<tr>
<td>2. All containers accounted for:</td>
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<tr>
<td>3. Condition of sample:</td>
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### Sample Integrity - Instructions

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<tbody>
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<td>1. Analysis requested is clear:</td>
<td>☑</td>
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<tr>
<td>2. Bottles received for unspecified tests</td>
<td>☑</td>
</tr>
<tr>
<td>3. Sufficient volume recvd for analysis:</td>
<td>☑</td>
</tr>
<tr>
<td>4. Compositing instructions clear:</td>
<td>☑</td>
</tr>
<tr>
<td>5. Filtering instructions clear:</td>
<td>☑</td>
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</table>

### Comments

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**LA49116: Chain of Custody**  
**Page 2 of 3**
### Sample Receipt Log

**Job #:** LA49116  
**Date / Time Received:** 10/26/2018 11:20:00 PM  
**Initials:** DS

**Client:** SGS

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<th>Cooler #</th>
<th>Sample ID</th>
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<th>Bot #</th>
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<th>Pres</th>
<th>pH</th>
<th>Therm ID</th>
<th>Initial Temp</th>
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<th>Corrected Temp</th>
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<td>M1A</td>
<td>N/P</td>
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Note #2 - Preservative check not applicable.
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

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<tr>
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<th>Batch ID</th>
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<th>MB Result</th>
<th>Units</th>
<th>Spike</th>
<th>BSP Amount</th>
<th>BSP Result</th>
<th>QC %Recov</th>
<th>Limits</th>
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<td>0.0</td>
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<td>90-110%</td>
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<td>0.0</td>
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<td>&lt;1.0</td>
<td>umhos/cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>GP50319/GN94143</td>
<td>0.50</td>
<td>0.0</td>
<td>mg/l</td>
<td>10</td>
<td>10.6</td>
<td>106.0</td>
<td>90-110%</td>
<td></td>
</tr>
<tr>
<td>Sulfate</td>
<td>GP50320/GN94143</td>
<td>0.50</td>
<td>0.0</td>
<td>mg/l</td>
<td>10</td>
<td>10.6</td>
<td>106.0</td>
<td>90-110%</td>
<td></td>
</tr>
</tbody>
</table>

**Associated Samples:**
- Batch GN93896: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5
- Batch GN93897: LA49116-9, LA49116-10
- Batch GN93915: LA49116-1, LA49116-2, LA49116-3
- Batch GN93916: LA49116-1, LA49116-2, LA49116-3
- Batch GN93917: LA49116-1, LA49116-2, LA49116-3
- Batch GN93920: LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93922: LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93923: LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93934: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93969: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GP50319: LA49116-1, LA49116-2
- Batch GP50320: LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

(*) Outside of QC limits
## DUPLICATE RESULTS SUMMARY
### GENERAL CHEMISTRY

**Login Number:** LA49116  
**Account:** ALLA - SGS Scott, LA  
**Project:** HETILAL: 8060.00 Indigo-Desoto Parish, LA

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Batch ID</th>
<th>Sample</th>
<th>Units</th>
<th>Original Result</th>
<th>QC Result</th>
<th>RPD %</th>
<th>QC Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity, Bicarbonate</td>
<td>GN93922</td>
<td>LA49146-1</td>
<td>mg/l</td>
<td>621</td>
<td>621</td>
<td>0.0</td>
<td>0-10%</td>
</tr>
<tr>
<td>Alkalinity, Carbonate</td>
<td>GN93923</td>
<td>LA49146-1</td>
<td>mg/l</td>
<td>3.5</td>
<td>3.3</td>
<td>0.0</td>
<td>0-20%</td>
</tr>
<tr>
<td>Alkalinity, Total as CaCO3</td>
<td>GN93915</td>
<td>TD29437-2A</td>
<td>mg/l</td>
<td>265</td>
<td>265</td>
<td>0.0</td>
<td>0-10%</td>
</tr>
<tr>
<td>Alkalinity, Total as CaCO3</td>
<td>GN93920</td>
<td>LA49146-1E</td>
<td>mg/l</td>
<td>625</td>
<td>625</td>
<td>0.0</td>
<td>0-10%</td>
</tr>
<tr>
<td>Bromide</td>
<td>GP50319/84143</td>
<td>LA49115-2</td>
<td>mg/l</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0-19%</td>
</tr>
<tr>
<td>Bromide</td>
<td>GP50320/84143</td>
<td>LA49128-1</td>
<td>mg/l</td>
<td>0.45</td>
<td>0.45</td>
<td>0.0</td>
<td>0-19%</td>
</tr>
<tr>
<td>Chloride</td>
<td>GP50319/84143</td>
<td>LA49115-2</td>
<td>mg/l</td>
<td>27.6</td>
<td>27.6</td>
<td>0.0</td>
<td>0-13%</td>
</tr>
<tr>
<td>Chloride</td>
<td>GP50320/84143</td>
<td>LA49128-1</td>
<td>mg/l</td>
<td>46.8</td>
<td>46.7</td>
<td>0.2</td>
<td>0-13%</td>
</tr>
<tr>
<td>Silica, Dissolved</td>
<td>GN93969</td>
<td>LA49190-5</td>
<td>mg/l</td>
<td>5.6</td>
<td>0.0</td>
<td>0.0</td>
<td>0-20%</td>
</tr>
<tr>
<td>Solids, Total Dissolved</td>
<td>GN93935</td>
<td>LA49116-1</td>
<td>mg/l</td>
<td>347</td>
<td>351</td>
<td>1.1</td>
<td>0-5%</td>
</tr>
<tr>
<td>Specific Conductivity</td>
<td>GN93896</td>
<td>TD29368-1</td>
<td>umhos/cm</td>
<td>201</td>
<td>201</td>
<td>0.0</td>
<td>0-10%</td>
</tr>
<tr>
<td>Sulfate</td>
<td>GP50319/84143</td>
<td>LA49115-2</td>
<td>mg/l</td>
<td>27.2</td>
<td>27.1</td>
<td>0.4</td>
<td>0-20%</td>
</tr>
<tr>
<td>Sulfate</td>
<td>GP50320/84143</td>
<td>LA49128-1</td>
<td>mg/l</td>
<td>0.80</td>
<td>0.82</td>
<td>2.5</td>
<td>0-20%</td>
</tr>
</tbody>
</table>

**Associated Samples:**
- Batch GN93896: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5
- Batch GN93897: LA49116-9, LA49116-10
- Batch GN93915: LA49116-1, LA49116-2, LA49116-3
- Batch GN93920: LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93922: LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93923: LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93934: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93969: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GP50319: LA49116-1, LA49116-2
- Batch GP50320: LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

(*) Outside of QC limits
<table>
<thead>
<tr>
<th>Analyte</th>
<th>Batch ID</th>
<th>QC Sample</th>
<th>Units</th>
<th>Original Result</th>
<th>Spike Amount</th>
<th>MS Result</th>
<th>%Rec</th>
<th>QC Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkalinity, Total as CaCO3</td>
<td>GN93915</td>
<td>TD29437-2A</td>
<td>mg/l</td>
<td>265</td>
<td>25</td>
<td>290</td>
<td>100.0</td>
<td>75-117%</td>
</tr>
<tr>
<td>Alkalinity, Total as CaCO3</td>
<td>GN93920</td>
<td>LA49116-1E</td>
<td>mg/l</td>
<td>625</td>
<td>25</td>
<td>650</td>
<td>100.0</td>
<td>75-117%</td>
</tr>
<tr>
<td>Bromide</td>
<td>GP50319/GN94143</td>
<td>LA49115-2</td>
<td>mg/l</td>
<td>0.0</td>
<td>10</td>
<td>10.8</td>
<td>108.0</td>
<td>75-125%</td>
</tr>
<tr>
<td>Bromide</td>
<td>GP50320/GN94143</td>
<td>LA49128-1</td>
<td>mg/l</td>
<td>0.45</td>
<td>10</td>
<td>10.8</td>
<td>103.5</td>
<td>80-120%</td>
</tr>
<tr>
<td>Chloride</td>
<td>GP50319/GN94143</td>
<td>LA49115-2</td>
<td>mg/l</td>
<td>27.6</td>
<td>20</td>
<td>51.4</td>
<td>119.0</td>
<td>80-120%</td>
</tr>
<tr>
<td>Chloride</td>
<td>GP50320/GN94143</td>
<td>LA49128-1</td>
<td>mg/l</td>
<td>46.8</td>
<td>50</td>
<td>104</td>
<td>114.4</td>
<td>80-120%</td>
</tr>
<tr>
<td>Silica, Dissolved</td>
<td>GN93969</td>
<td>LA49190-5</td>
<td>mg/l</td>
<td>5.6</td>
<td>1.07</td>
<td>0.85</td>
<td>79.0</td>
<td>75-125%</td>
</tr>
<tr>
<td>Sulfate</td>
<td>GP50319/GN94143</td>
<td>LA49115-2</td>
<td>mg/l</td>
<td>27.2</td>
<td>20</td>
<td>48.5</td>
<td>106.5</td>
<td>80-120%</td>
</tr>
<tr>
<td>Sulfate</td>
<td>GP50320/GN94143</td>
<td>LA49128-1</td>
<td>mg/l</td>
<td>0.80</td>
<td>10</td>
<td>11.3</td>
<td>105.0</td>
<td>80-120%</td>
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</tbody>
</table>

Associated Samples:
- Batch GN93915: LA49116-1, LA49116-2, LA49116-3
- Batch GN93920: LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GN93969: LA49116-1, LA49116-2, LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10
- Batch GP50319: LA49116-1, LA49116-2
- Batch GP50320: LA49116-3, LA49116-4, LA49116-5, LA49116-9, LA49116-10

(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits