

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 8, 2012

Company : Pennsylvania Brine Treatment
Address : 5148 US 322

Franklin, Pennsylvania 16323
Contact: Mr. Sparky DeLong
Project: PA Brine Treatment - Josephine Facility

Client Sample ID: Outfall 001
Sample ID: 291831001
Matrix: Water
Collect Date: 06-DEC-11 21:00
Receive Date: 12-DEC-11
Collector: Client

Project: PABR00211
Client ID: PABR001

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | Method |
|--|-----------|--------|-------|------|-------|----|---------|----------|------|---------|--------|
| Metals Analysis-ICP-MS | | | | | | | | | | | |
| SW846 3005A/6020A Liquid "As Received" | | | | | | | | | | | |
| Uranium | U | ND | 0.670 | 2.00 | ug/L | 10 | SKJ | 01/10/12 | 0937 | 1170396 | 1 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|-------------|-------------------|---------|----------|------|------------|
| SW846 3005A | ICP-MS 3005A PREP | LYHI | 01/09/12 | 1200 | 1170395 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------|------------------|
| 1 | SW846 3005A/6020A | |

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 8, 2012

Company : Pennsylvania Brine Treatment
Address : 5148 US 322

Franklin, Pennsylvania 16323

Contact: Mr. Sparky DeLong
Project: PA Brine Treatment - Josephine Facility

| | |
|-------------------------------|--------------------|
| Client Sample ID: Outfall 001 | Project: PABR00211 |
| Sample ID: 291831001 | Client ID: PABR001 |
| Matrix: Water | |
| Collect Date: 06-DEC-11 21:00 | |
| Receive Date: 12-DEC-11 | |
| Collector: Client | |

| Parameter | Qualifier | Result | Uncertainty | DL | RL | Units | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|--------|-------------|-------|------|-------|----|---------|----------|------|---------|--------|
| Rad Gamma Spec Analysis | | | | | | | | | | | | |
| Gammascpec, Gamma, Liquid (Standard List) "As Received" | | | | | | | | | | | | |
| Radium-228 | U | 15.6 | +/-17.4 | 29.3 | | pCi/L | | KXG3 | 01/04/12 | 1028 | 1172101 | 1 |
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | |
| GFPC, Gross Alpha Liquid "As Received" | | | | | | | | | | | | |
| Alpha | U | 0.132 | +/-0.159 | 0.267 | 5.00 | pCi/L | | DXF3 | 01/05/12 | 1936 | 1174413 | 2 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, liquid "As Received" | | | | | | | | | | | | |
| Radium-226 | | 1.75 | +/-0.640 | 0.665 | 1.00 | pCi/L | | KSD1 | 01/13/12 | 1245 | 1169515 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|----------------------|------------------|
| 1 | EPA 901.1 | |
| 2 | EPA 900.0/SW846 9310 | |
| 3 | EPA 903.1 Modified | |



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample Start Date: 12/6/2011 5:00 PM
Receipt Date: 12/7/2011 10:00 AM
Report Date: 12/15/2011

Sample ID#: 11 49235
Sample Type: Waste Water
Sample Source: Grab
Sampler: CLIENT (Client)
Client Sample ID: 201

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|----------------------|---------|---------------|---------------|---------------|-------|----------------|--------|-----|
| Oil and Grease - HEM | LAW | 12/14 | n/a | 10.6 | mg/l | n/a | 1664A | 5.0 |

Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382

Approved By:

Laboratory Supervisor



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample Start Date: 12/6/2011 3:00 PM
Sample End Date: 12/6/2011 9:00 PM
Receipt Date: 12/7/2011 10:00 AM
Report Date: 12/13/2011

Sample ID#: 11 49236
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 202

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|--------------|---------|---------------|---------------|---------------|-------|----------------|------------|-------|
| Barium - ICP | GJT | 12/12 | n/a | 13.800 | mg/l | D | 200.7/6010 | 0.500 |
| Iron - ICP | GJT | 12/12 | n/a | ND | mg/l | D | 200.7/6010 | 1.000 |

Comments:

ND=Not Detected

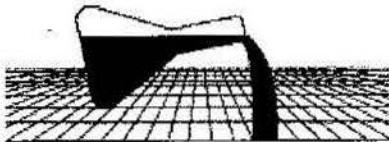
Note:

DEP Certification #s 32-00382

D - Indicates an identified compound in an analysis that has been diluted

Approved By:

Laboratory Supervisor



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323

Sample ID#: 11 49237
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 203

Sample Start Date: 12/6/2011 3:00 PM
Sample End Date: 12/6/2011 9:00 PM
Receipt Date: 12/7/2011 10:00 AM
Report Date: 12/29/2011

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|------------------------------|---------|---------------|---------------|---------------|---------------|----------------|-----------|--------|
| Acidity to pH=8.3 | BH | 12/14 | n/a | ND | mg/l as CaCO3 | n/a | SM2310B | 2 |
| Alkalinity to pH=4.5 | BH | 12/15 | n/a | 197 | mg/l as CaCO3 | n/a | SM2320B | 20 |
| Bromide | AJD | 12/28 | n/a | 1100.00 | mg/l | D | D1246-99 | 100.00 |
| Chloride | BH | 12/21 | n/a | 65412.00 | mg/l | D | SM4500CID | 5.00 |
| Sulfate ASTM | SR | 12/27 | n/a | 1000 | mg/l | D | D516-02 | 250 |
| Osmotic Pressure | LL | 12/13 | n/a | 3340 | mOs/kg | n/a | OSP | 1000 |
| Total Dissolved Solids (TDS) | LMB | 12/07 | n/a | 127400 | mg/l | n/a | SM2540C | 25 |

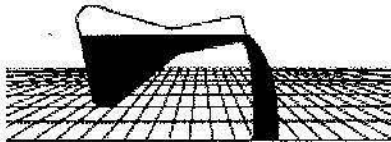
Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382
D - Indicates an identified compound in an analysis that has been diluted

Approved By:

Laboratory Supervisor



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample ID#: 11 49238
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 204

Sample Start Date: 12/6/2011 3:00 PM
Sample End Date: 12/6/2011 9:00 PM
Receipt Date: 12/7/2011 10:00 AM
Report Date: 12/12/2011

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|------------------------|---------|---------------|---------------|---------------|-------|----------------|---------|-----|
| Total Suspended Solids | LMB | 12/07 | n/a | 14 | mg/l | n/a | SM2540D | 5 |

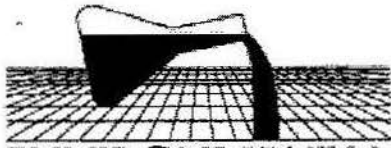
Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382

Approved By:

Laboratory Supervisor



ENVIRONMENTAL
 SERVICE LABORATORIES, INC.
 1803 Philadelphia St., Indiana, PA 15701
 (724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
 5148 US 322
 Franklin, PA 16323

Sample ID#: 11 51155
Sample Type: Soil/Solids/Oil
Sample Source: Grab
Sampler: CLIENT (Client)
Client Sample ID: Sludge Neat

Sample Start Date: 12/15/2011 5:30 PM
Receipt Date: 12/16/2011 9:10 AM
Report Date: 12/30/2011

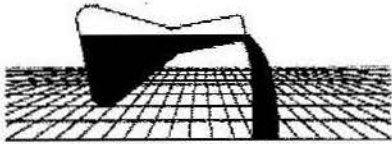
| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|----------------------|---------|---------------|---------------|---------------|-------|----------------|---------|------|
| Percent Total Solids | DMM | 12/19 | n/a | 36.33 | % | n/a | SM2540B | 0.01 |

Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382

Approved By: *[Signature]*
 Laboratory Supervisor



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample ID#: 11 51156
Sample Type: Water
Sample Source: Leachate
Sampler: CLIENT (Client)
Client Sample ID: Sludge TCLP Leach

Sample Start Date: 12/15/2011 5:30 PM
Receipt Date: 12/16/2011 9:10 AM
Report Date: 12/21/2011

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|--------------|---------|---------------|---------------|---------------|-------|----------------|------------|-------|
| Barium - ICP | GJT | 12/21 | n/a | 0.910 | mg/l | D | 200.7/6010 | 0.050 |

Comments:

ND=Not Detected

Note:

DEP Certification #s 32-00382

D - Indicates an identified compound in an analysis that has been diluted

Approved By:

Laboratory Supervisor

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 19, 2012

Company : Pennsylvania Brine Treatment
Address : 5148 US 322

Franklin, Pennsylvania 16323
Contact: Mr. Sparky DeLong
Project: PA Brine Treatment - Josephine Facility

Client Sample ID: Outfall 001
Sample ID: 292650001
Matrix: Water
Collect Date: 20-DEC-11 13:30
Receive Date: 23-DEC-11
Collector: Client

Project: PABR00311
Client ID: PABR001

| Parameter | Qualifier | Result | DL | RL | Units | DF | Analyst | Date | Time | Batch | Method |
|--|-----------|--------|-------|------|-------|----|---------|----------|------|---------|--------|
| Metals Analysis-ICP-MS | | | | | | | | | | | |
| SW846 3005A/6020A Liquid "As Received" | | | | | | | | | | | |
| Uranium | U | ND | 0.670 | 2.00 | ug/L | 10 | SKJ | 01/11/12 | 2248 | 1174269 | 1 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|-------------|-------------------|---------|----------|------|------------|
| SW846 3005A | ICP-MS 3005A PREP | BXAJ | 01/10/12 | 1653 | 1174267 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|-------------------|------------------|
| 1 | SW846 3005A/6020A | |

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 19, 2012

Company : Pennsylvania Brine Treatment
 Address : 5148 US 322

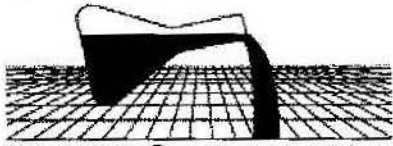
 Franklin, Pennsylvania 16323
 Contact: Mr. Sparky DeLong
 Project: PA Brine Treatment - Josephine Facility
 Client Sample ID: Outfall 001
 Sample ID: 292650001
 Matrix: Water
 Collect Date: 20-DEC-11 13:30
 Receive Date: 23-DEC-11
 Collector: Client

Project: PABR00311
 Client ID: PABR001

| Parameter | Qualifier | Result | Uncertainty | DL | RL | Units | DF | Analyst | Date | Time | Batch | Method |
|---|-----------|--------|-------------|-------|------|-------|----|---------|----------|------|---------|--------|
| Rad Gamma Spec Analysis | | | | | | | | | | | | |
| Gammascpec, Gamma, Liquid (Standard List) "As Received" | | | | | | | | | | | | |
| Radium-228 | U | 8.39 | +/-19.9 | 40.8 | | pCi/L | | KXG3 | 01/13/12 | 1305 | 1177527 | 1 |
| Rad Gas Flow Proportional Counting | | | | | | | | | | | | |
| GFPC, Gross Alpha Liquid "As Received" | | | | | | | | | | | | |
| Alpha | U | -179 | +/-232 | 463 | 5.00 | pCi/L | | DXF3 | 01/12/12 | 1833 | 1173603 | 2 |
| Rad Radium-226 | | | | | | | | | | | | |
| Lucas Cell, Ra226, liquid "As Received" | | | | | | | | | | | | |
| Radium-226 | | 2.23 | +/-0.736 | 0.743 | 1.00 | pCi/L | | KSD1 | 01/06/12 | 1540 | 1173764 | 3 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|--------|----------------------|------------------|
| 1 | EPA 901.1 | |
| 2 | EPA 900.0/SW846 9310 | |
| 3 | EPA 903.1 Modified | |



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample ID#: 11 51919
Sample Type: Waste Water
Sample Source: Grab
Sampler: CLIENT (Client)
Client Sample ID: 201
Sample Start Date: 12/20/2011 11:30 AM
Receipt Date: 12/21/2011 11:25 AM
Report Date: 1/4/2012

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|----------------------|---------|---------------|---------------|---------------|-------|----------------|--------|-----|
| Oil and Grease - HEM | RLG | 01/03 | n/a | 5.5 | mg/l | n/a | 1664A | 5.0 |

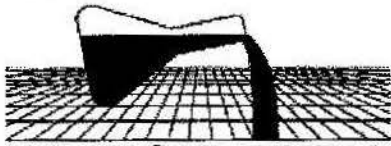
Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382

Approved By:

Laboratory Supervisor



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample ID#: 11 51920
Sample Type: Waste Water
Sample Source: Grab
Sampler: CLIENT (Client)
Client Sample ID: 202
Sample Start Date: 12/20/2011 7:30 AM
Sample End Date: 12/20/2011 1:30 PM
Receipt Date: 12/21/2011 11:25 AM
Report Date: 1/13/2012

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|--------------|---------|---------------|---------------|---------------|-------|----------------|------------|-------|
| Barium - ICP | GJT | 01/12 | n/a | 10.800 | mg/l | D | 200.7/6010 | 0.500 |
| Iron - ICP | GJT | 01/12 | n/a | ND | mg/l | D | 200.7/6010 | 1.000 |

Comments:

ND=Not Detected

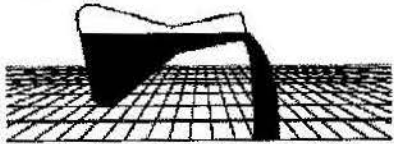
Note:

DEP Certification #s 32-00382

D - Indicates an identified compound in an analysis that has been diluted

Approved By:

Laboratory Supervisor



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample Start Date: 12/20/2011 7:30 AM
Sample End Date: 12/20/2011 1:30 PM
Receipt Date: 12/21/2011 11:25 AM
Report Date: 1/17/2012

Sample ID#: 11 51922
Sample Type: Waste Water
Sample Source: Grab
Sampler: CLIENT (Client)
Client Sample ID: 203

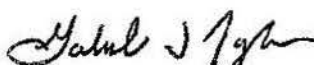
| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|------------------------------|---------|---------------|---------------|---------------|---------------------------|----------------|-----------|--------|
| Acidity to pH=8.3 | RR | 12/27 | n/a | ND | mg/l as CaCO ₃ | n/a | SM2310B | 2 |
| Alkalinity to pH=4.5 | BH | 01/03 | n/a | 172 | mg/l as CaCO ₃ | n/a | SM2320B | 20 |
| Bromide | AJD | 01/16 | n/a | 8290.00 | mg/l | D | D1246-99 | 100.00 |
| Chloride | BF | 01/04 | n/a | 63396.42 | mg/l | n/a | SM4500CID | 5.00 |
| Sulfate ASTM | SR | 01/16 | n/a | 975 | mg/l | D | D516-02 | 125 |
| Osmotic Pressure | LL | 12/27 | n/a | 3080 | mOs/kg | n/a | OSP | 1000 |
| Total Dissolved Solids (TDS) | LMB | 12/21 | n/a | 138700 | mg/l | n/a | SM2540C | 25 |

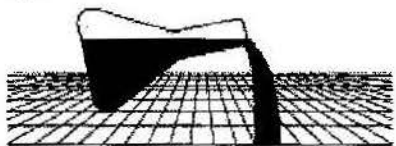
Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382
D - Indicates an identified compound in an analysis that has been diluted

Approved By:


Laboratory Supervisor



ENVIRONMENTAL
SERVICE LABORATORIES, INC.
1803 Philadelphia St., Indiana, PA 15701
(724) 463-TEST (724) 465-4209

Report of Analysis

Name: Pennsylvania Brine - Franklin
5148 US 322
Franklin, PA 16323
Sample ID#: 11 51923
Sample Type: Waste Water
Sample Source: Grab
Sampler: CLIENT (Client)
Client Sample ID: 204
Sample Start Date: 12/20/2011 7:30 AM
Sample End Date: 12/20/2011 1:30 PM
Receipt Date: 12/21/2011 11:25 AM
Report Date: 12/23/2011

| Analyte | Analyst | Analysis Date | Analysis Time | Sample Result | Units | Data Qualifier | Method | RPL |
|------------------------|---------|---------------|---------------|---------------|-------|----------------|---------|-----|
| Total Suspended Solids | LMB | 12/21 | n/a | 32 | mg/l | n/a | SM2540D | 5 |

Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382

Approved By:

Laboratory Supervisor