

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 7, 2011

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: PABR00311

Sample ID: 289648001

Client ID: PABR001

Matrix: Water

Collect Date: 02-NOV-11 13:00

Receive Date: 07-NOV-11

Collector: Client

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	12/07/11	0642	1159086	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	LYHI	12/06/11	1400	1159085

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020A	



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

Report of Analysis

Name: Pennsylvania Brine Treatment INC.
Attn: Mr. Steve Davis
5148 US 322
Franklin, Pa 16323
Sample Start Date: 11/2/2011 9:00 AM
Receipt Date: 11/3/2011 9:10 AM
Report Date: 11/9/2011

Sample ID#: 11 44170
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	11/08	n/a	10.5	mg/l	n/a	1664A	5.0

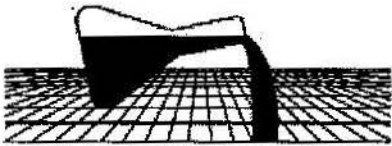
Comments:

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 Treatment INC.
Attn: Mr. Steve Davis
5148 US 322
Franklin, Pa 16323

Sample ID#: 11 44171
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 202

Sample Start Date: 11/2/2011 7:00 AM
Sample End Date: 11/2/2011 1:00 PM
Receipt Date: 11/3/2011 9:10 AM
Report Date: 11/16/2011

Analyte	Analyst	Analysis Date	Analysis Time	Sample Result	Units	Data Qualifier	Method	RPL
Barium - ICP	GJT	11/15	n/a	18.500	mg/l	D	200.7/6010	0.500
Iron - ICP	GJT	11/15	n/a	ND	mg/l	D	200.7/6010	1.000

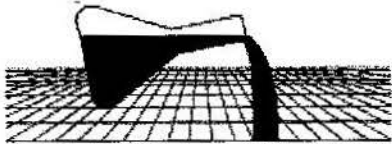
Comments:

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 Treatment INC.
Attn: Mr. Steve Davis
5148 US 322
Franklin, Pa 16323

Sample ID#: 11 44172
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 203

Sample Start Date: 11/2/2011 7:00 AM
Sample End Date: 11/2/2011 1:00 PM
Receipt Date: 11/3/2011 9:10 AM
Report Date: 11/21/2011

Analyte	Analyst	Analysis Date	Analysis Time	Sample Result	Units	Data Qualifier	Method	RPL
Acidity to pH=8.3	BH	11/08	n/a	ND	mg/l as CaCO3	n/a	SM2310B	2
Alkalinity to pH=4.5	BH	11/13	n/a	274	mg/l as CaCO3	n/a	SM2320B	20
Bromide	AJD	11/15	n/a	4620.00	mg/l	D	D1246-99	100.00
Chloride	SR	11/12	n/a	87812.00	mg/l	n/a	SM4500CID	5.00
Sulfate ASTM	ZTR	11/17	n/a	625	mg/l	D	D516-02	125
Osmotic Pressure	AJD	11/16	n/a	4040	mOs/kg	D	OSP	1000
Total Dissolved Solids (TDS)	LMB	11/09	n/a	198400	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 Treatment INC.
 Attn: Mr. Steve Davis
 5148 US 322
 Franklin, Pa 16323
Sample Start Date: 11/2/2011 7:00 AM
Sample End Date: 11/2/2011 1:00 PM
Receipt Date: 11/3/2011 9:10 AM
Report Date: 11/8/2011

Sample ID#: 11 44173
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 204

Analyte	Analyst	Analysis Date	Analysis Time	Sample Result	Units	Data Qualifier	Method	RPL
Total Suspended Solids	LMB	11/03	n/a	15	mg/l	n/a	SM2540D	5

Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382

Approved By: *Michael J. Taylor*
 Laboratory Supervisor

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 15, 2011

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: 290550001
Matrix: Water
Collect Date: 15-NOV-11 15:00
Receive Date: 18-NOV-11
Collector: Client

Project: PABR00311
Client ID: PABR001

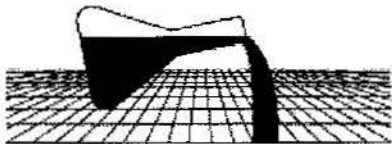
Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS											
SW846 3005A/6020A Liquid "As Received"											
Uranium	U	ND	0.670	2.00	ug/L	10	PRB	12/13/11	0236	1163834	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	BXA1	12/10/11	0815	1163833

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020A	



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 46132
Sample Type: Waste Water
Sample Source: Grab
Sampler: CLIENT (Client)
Client Sample ID: 201

Sample Start Date: 11/15/2011 9:00 AM
Receipt Date: 11/16/2011 9:10 AM
Report Date: 12/1/2011


Analyte	Analyst	Analysis Date	Analysis Time	Sample Result	Units	Data Qualifier	Method	RPL
Oil and Grease - HEM	LAW	11/30	n/a	ND	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 46136
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 202

Sample Start Date: 11/15/2011 9:00 AM
Sample End Date: 11/15/2011 3:00 PM
Receipt Date: 11/16/2011 9:10 AM
Report Date: 12/13/2011

Analyte	Analyst	Analysis Date	Analysis Time	Sample Result	Units	Data Qualifier	Method	RPL
Barium - ICP	GJT	12/12	n/a	8.600	mg/l	D	200.7/6010	0.500
Iron - ICP	GJT	12/12	n/a	ND	mg/l	D	200.7/6010	1.000

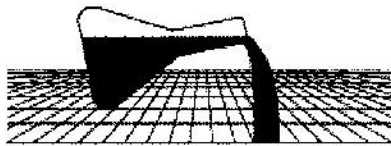
Comments:

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 Start Date: 11/15/2011 9:00 AM
Sample End Date: 11/15/2011 3:00 PM
Receipt Date: 11/16/2011 9:10 AM
Report Date: 12/7/2011

Sample ID#: 11 46138
Sample Type: Waste Water
Sample Source: Composite
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	BF	11/23	n/a	ND	mg/l as CaCO3	n/a	SM2310B	2
Alkalinity to pH=4.5	BH	11/22	n/a	198	mg/l as CaCO3	n/a	SM2320B	20
Bromide	SR	11/30	n/a	1470.00	mg/l	n/a	D1246-99	100.00
Chloride	BH	11/29	n/a	96909.00	mg/l	D	SM4500CID	5.00
Sulfate ASTM	ZTR	12/06	n/a	22	mg/l	n/a	D516-02	5
Osmotic Pressure	LL	11/22	n/a	5180	mOs/kg	D	OSP	1000
Total Dissolved Solids (TDS)	LMB	11/18	n/a	190500	mg/l	n/a	SM2540C	25

Comments:

ND=Not Detected

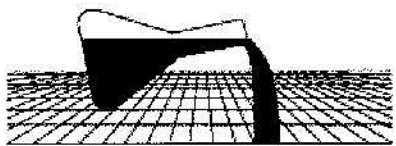
Note:

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 46133
Sample Type: Waste Water
Sample Source: Composite
Sampler: CLIENT (Client)
Client Sample ID: 204

Sample Start Date: 11/15/2011 9:00 AM
Sample End Date: 11/15/2011 3:00 PM
Receipt Date: 11/16/2011 9:10 AM
Report Date: 11/22/2011

Analyte	Analyst	Analysis Date	Analysis Time	Sample Result	Units	Data Qualifier	Method	RPL
Total Suspended Solids	LMB	11/16	n/a	26	mg/l	n/a	SM2540D	5

Comments:

ND=Not Detected

Note: DEP Certification #s 32-00382

Approved By: _____

LMB
Laboratory Supervisor