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

Project:

Client ID:

Certificate of Analysis

Report Date: August 12, 2011

PABR00211

PABR001

Company:

Pennsylvania Brine Treatment

Address:

5148 US 322

Franklin, Pennsylvania 16323

Contact:

Mr. Sparky DeLong

Project:

PA Brine Treatment - Franklin Facility

Client Sample ID: Sample ID:

Outfall 001

282401001

Matrix:

Water

Collect Date:

18-JUL-11 15:00

Receive Date:

20-JUL-11

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	DF A	nalyst Date	Time	Batch	Method
Metals Analysis-I	CP-MS									
SW846 3005A/60	20A Liquid "As Re	eceived"								
Uranium	Ū	ND	0,670	2.00	ug/L	10 SI	KJ 08/03/11	2206 1	124207	1
The following Pre	p Methods were pe	erformed:								
Method	Description	1		nalyst	Date	Time	Prep Batc	h	80	
SW846 3005A	ICP-MS 3005	A PREP	A	XG2	08/03/11	0720	1124206			
The following Ar	nalytical Methods v	vere performed:								
Method	Description				An	alyst Conu	ments			
1	SW846 3005A	/6020A								

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Certificate of Analysis

Project:

Client ID:

Report Date: August 12, 2011

PABR00211

PABR001

Company:

Pennsylvania Brine Treatment

Address:

5148 US 322

Franklin, Pennsylvania 16323

Contact:

Mr. Sparky DeLong

Project:

PA Brine Treatment - Franklin Facility

Sample ID:

Client Sample ID: Outfall 001

282401001

Matrix:

Water

Collect Date:

18-JUL-11 15:00

Receive Date:

20-JUL-11

Collector:

Client

EPA 903.1 Modified

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF Anal	yst Date	Time	e Batch	Method
Rad Gamma Spe	c Analysis					V					
Gammaspec, Gar	mma, Liquid (Standa	ard List) '	'As Received"								
Radium-228	U	0.222	+/-12.4	20.5		pCi/L	KXG	3 07/31/11	1211	1126675	1
Rad Gas Flow Pr	roportional Counting	g.									
GFPC, Gross Al	pha Liquid "As Rece	eived"									
Aipha	U	74.2	+/-71.3	112	5.00	pCi/L	DXF	07/31/11	1944	1124296	2
Rad Radium-226	5										
Lucas Cell, Ra22	26, liquid "As Receiv	ved"									
Radium-226		2.76	+/-0.532	0.306	1.00	pCi/L	KSD	08/08/11	1205	1124172	3
The following A	nalytical Methods v	vere perfo	ormed:								
Method	Description					An	alyst Comme	nts			
1	EPA 901.1				-3			8 70001			
2	EPA 900.0/SV	V846 9310									



Microbac Laboratories, Inc.

Erie Division

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CERTIFICATE OF ANALYSIS

Work Order Number: 11G3003

Pennsylvania Brine Treatment Attn: Elton Delong, Jr. (Sparky) 5148 Us 322 Franklin, PA 16323

Date Reported

08/09/2011

Date Received

07/19/2011

Order Number

11G3003

Account Number

000000016369



Purchase Order:

SMP

Subject: Weekly Wastewater Sample

TEST

ANALYSIS DATE TIME TECH

Action Constitution	1201	METHOD	ILLOUDA	CITALS	DAIL	TATATE	LECH	HOLE
Same of the same	Composite Sample Sample Date: 07/18	[2] 《西西·西·西·西·西·西·西·西·西·西·西·西·西·西·西·西·西·西·西	• Time: 14:	30				
Acidity		SM 2310 B		mg/L	07/20/1	1 13:10	0 CMF	
Alkalinity A	As CaCO3	SM 2320B		mg CaCO3/L				
Chloride		ASTM D512-89A	44000	mg/L	07/20/1	1 15:4	0 CMF	
Solids, Dis	solved	SM 2540C	100000	mg/L	07/20/1	1 14:0	0 CMF	
Solids, Sus	spended	SM 2540 D	10	mg/L	07/19/1	1 16:1	0 MAD	
Sulfate		SM 4500-SO4 D	1500	mg/L	07/20/1	1 10:0	0 CMF	

02 Grab Sample

LITTE CENTER DEPOSITE DESCRIPTION OF STREET

Oil & Grease

Bromide

Sample Date: 07/18/2011

EPA 1664A

SAFERE TELLIGIES DE LE VIDE DE LE COMPANIE DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DE LA PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIPA DEL PRINCIPA DE LA PRINCIPA DEL PRINCIP

EPA 300.0

METHOD

SM 4500-SO4 D

Sample Time: 12:00

Sample Time: 14:30

< 5 mg/L

460 mg/L

1500 mg/L

RESHIT INTES

07/29/11 8:30

07/26/11 19:19

07/20/11 10:00

03 Composite Sample				
Sample Date: 07/18/2011 Barium	EPA 200.7	mple Time: 14:30	07/26/11 11:37	MWR
Copper	EPA 200.7	< 0.100 mg/L	07/26/11 11:40	MWR
Iron, Total	EPA 200.7	< 0.500 mg/L	07/26/11 11:37	MWR
Silver	EPA 200.7	< 0.100 mg/L	07/26/11 11:40	MWR
Strontium	EPA 200.7	540 mg/L	08/02/11 16:35	MWR
170400000000000000000000000000000000000				

Order Notes

Sample Date: 07/18/2011

04 Composite Sample

The technician intials "OST" (Outside Testing) indicate that the Bromide analysis was sub-contracted to Microbac Laboratories, Inc./New York Division. PA DEP ID#68-01385. (W.O. 1107457).

All samples received in proper condition and results conform to ISO 17025 unless otherwise noted

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

Certificate of Analysis

Project:

Client ID:

PABR00211

PABR001

Report Date: **********

Company:

Pennsylvania Brine Treatment

Address:

5148 US 322

Franklin, Pennsylvania 16323

Contact:

Mr. Sparky DeLong

Project:

PA Brine Treatment - Franklin Facility

Client Sample ID: Sample ID:

Outfall 001

283352001

Matrix:

Water

Collect Date:

02-AUG-11 15:30

Receive Date:

04-AUG-11

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	DF An	alyst Date	Time 1	Batch	Method
Metals Analysis-I	CP-MS	38								
SW846 3005A/60	20A Liquid "As Re	ceived"								
Uranium	U	ND	1.34	4.00	ug/L	20 PR	B 08/17/11	1559 113	29214	1
The following Pre	p Methods were pe	rformed:								
Method	Description		A	nalyst	Date	Time	Prep Batch	1		A
SW846 3005A	ICP-MS 3005.	A PREP	ı	YHI	08/10/11	1338	1129213	122	10 077	2 10 10
The following Ar	alytical Methods w	ere performed:								
Method	Description				An	alyst Comn	nents			

Method Description

SW846 3005A/6020A

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Certificate of Analysis

Project:

Client ID:

PABR00211

PABR001

Report Date: **********

Company:

Pennsylvania Brine Treatment

Address:

5148 US 322

Franklin, Pennsylvania 16323

Contact:

Mr. Sparky DeLong

Project:

PA Brine Treatment - Franklin Facility

Sample ID:

Client Sample ID: Outfall 001 283352001

Matrix:

Water

Collect Date:

02-AUG-11 15:30

Receive Date:

04-AUG-11

Collector:

Client

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analys	t Date	Time	Batch	Method
Rad Gamma Spe	c Analysis									-		
Gammaspec, Gar	mma, Liquid (Standa	ard List)	"As Received"									
Radium-228	U	0.213	+/-16.3	21.0		pCi/L		KXG3	08/25/11	2029	1132154	1
Rad Gas Flow Pr	roportional Counting											
GFPC, Gross Al	pha Liquid "As Rece	ived"										
Alpha	Ü	-56	+/-76.7	158	5.00	pCi/L		DXF3	08/30/11	1928	1137568	2
Rad Radium-226	j											
Lucas Cell, Ra22	26, liquid "As Receiv	red"										
Radium-226	€ *	4.30	+/-0.621	0.317	1.00	pCi/L		KSD1	08/22/11	1430	1129803	3
The following A	nalytical Methods w	vere perfo	ormed:									
Method	Description					An	alyst Co	omment	3			
i	EPA 901.1					300	The same of the sa		500	2		
2	EPA 900.0/SW	V846 9310										

EPA 903.1 Modified



Microbac Laboratories, Inc.

Erie Division

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CERTIFICATE OF ANALYSIS

Work Order Number: 11H1804

Pennsylvania Brine Treatment Attn: Elton Delong, Jr. (Sparky) 5148 Us 322 Franklin, PA 16323

Date Reported

09/09/2011

Date Received

08/09/2011

Order Number

11H1804

Account Number

000000016369



Purchase Order.

Subject: Monthly Wastewater Samples

ANALYSIS

SMP	TEST	METHOD	RESULT UNITS	DATE TIME TECH	NOTES
01	Composite Sample Sample Date: 08/02/20	и1	Sample Time: 15:30		
Chloride	s by Titration, Water	ASTM D512-89A	37000 mg/L	08/11/11 13:45 CMF	esemble of the second
Solids, S	Suspended, Water	SM 2540 D	Ours 10 39.0 mg/L	08/10/11 15:00 CMF	0-04
Sulfate,	Water	SM 4500-SO4 D	1410 mg/L	08/10/11 9:45 CMF	
	Grab Sample Sample Date: 08/02/20 ease, Water	111 EPA 1664A	Sample Time: 11:00 <5.00 mg/L	08/11/11 7:00 CAP	
	Composite Sample Sample Date: 08/02/20 in mg/L by EPA 200.7	P11 > EPA 200.7	Sample Time: 15:30 <0.100 mg/L	08/11/11 20:08 ICP	
	ng/L by EPA 200.7	EPA 200.7	<0.500 mg/L	08/11/11 20:08 ICP	
	mg/L by EPA 200.7	EPA 200.7	< 0.100 mg/L	08/11/11 9:11 MWI	₹
04	Composite Sample Sample Date: 08/02/20	111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sample Time: 15:30		
Bromide	e, Water	EPA 300.0	364 mg/L	08/11/11 19:07 OST	Market Control of Property and

Order Notes

Sample was received in laboratory past hold time for total suspended solids. CMF

The technician intials "OST" (Outside Testing) indicate that the Bromide analysis was sub-contracted to Microbac Laboratories, Inc./New York Division. PA DEP ID#68-01385. (W.O. 1108296)

All samples received in proper condition and results conform to ISO 17025 unless otherwise noted

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ATHA accredited for Environmental Lead. Visit our website to view our current ATHA LAP,LLC accreditation.



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Certificate of Analysis

Project:

Client ID:

PABR00211

PABR001

Report Date: September 20, 2011

Company:

Pennsylvania Brine Treatment

Address:

5148 US 322

Franklin, Pennsylvania 16323

Contact:

Mr. Sparky DeLong

Project:

PA Brine Treatment - Franklin Facility

Client Sample ID: Outfall 001

Sample ID:

284404001

Matrix:

Water

Collect Date:

15-AUG-11 18:00

Receive Date:

19-AUG-11

Collector:

Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-IC	CP-MS										
SW846 3005A/602	20A Liquid "As Re	eceived"									
Uranium	U	ND	0.670	2.00	ug/L	10	SKJ 0	9/01/11	2025 1	134411	I
The following Pre	Methods were pe	erformed:									
Method	Description	1	1	Analyst	Date	Tim	e Pre	p Batcl	1		
SW846 3005A	ICP-MS 3005	A PREP		YHI	08/23/11	0930	1134	1410			
The following An	alytical Methods v	vere performed:	44								

Analyst Comments Method Description SW846 3005A/6020A

Page 4 of 13

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Certificate of Analysis

Project:

Client ID:

PABR00211

PABR001

Report Date: September 20, 2011

Company:

Pennsylvania Brine Treatment

Address:

5148 US 322

Franklin, Pennsylvania 16323

Contact:

Mr. Sparky DeLong

Project:

PA Brine Treatment - Franklin Facility

Client Sample ID: Sample ID:

Outfall 001

284404001

Matrix:

Water

Collect Date:

15-AUG-11 18:00

Receive Date:

19-AUG-11

Collector:

Client

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analys	t Date	Time	Batch	Method
Rad Gamma Spec	Analysis											
Gammaspec, Gam	ma, Liquid (Standa	ard List) '	'As Received"									
Radium-228		28.8	+/~22.4	20.2		pCi/L		KXG3	09/12/11	0942	1136819	1
Rad Gas Flow Pro	portional Counting	3										
GFPC, Gross Alph	a Liquid "As Rece	eived"										
Alpha	U	95.3	+/-86.7	139	5.00	pCi/L		CAS2	09/07/11	1820	1139206	2
Rad Radium-226												
Lucas Cell, Ra226	, liquid "As Receiv	ved"										
Radium-226	Prince Modern Annihology Trust Walls	9.02	+/-1.22	0.326	1.00	pCi/L		KSD1	09/19/11	1400	1135129	3
The following An	alytical Methods v	vere perfo	rmed:									
Method	Description			*		An	alyst Co	mments				
1	EPA 901.1											
2	EPA 900.0/SV	W846 9310				-						
3	EPA 903.1 M	odified										



Microbac Laboratories, Inc.

Erie Division

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CERTIFICATE OF ANALYSIS

Work Order Number: 11H2181

Pennsylvania Brine Treatment Attn: Elton Delong, Jr. (Sparky) 5148 Us 322 Franklin, PA 16323 Date Reported

08/31/2011

Date Received

08/16/2011

Order Number

11H2181

Account Number

000000016369



Purchase Order.

Subject: Weekly Wastewater Sample

ANALYSIS

MP	TEST	METHOD	RESULT UNITS	DATE T	ME TECH	NOTES
010	Composite Sample	100 may 200 may				VIII.V
	Sample Date: 08/15/2011		Sample Time: 22:00			
Acidity, Wa	ater	SM 2310 B	<7 mg/L	08/19/11	11:30 CMF	TREUSEL T. ANDRES .
Alkalinity A	As CaCO3 to pH 4.5, Water	SM 2320B	97.0 mg CaCO	3/L 08/19/11	9:15 CMF	7
Chlorides I	by Titration, Water	ASTM D512-89A	43600 mg/L	08/25/11	9:15 CMF	
Solids, Dis	ssolved, Water	SM 2540C	87000 mg/L	08/22/11	11:15 CMF	
Solids, Su	spended, Water	SM 2540 D	39.0 mg/L	08/17/11	9:15 CMF	•
Sulfate, W	/ater	SM 4500-SO4 D	853 mg/L	08/17/11	13:30 CMF	ř
02	Grab Sample			San San San		
4.14 W	Sample Date: 08/15/2011		Sample Time: 16:00			
	se, Water	EPA 1664A	< 6 mg/L	08/25/11	8:30 CAP	
03 × 0	Composite Sample	(7)	A TENNE TENNE TENNE (TENNE TENNE TEN	AND		PARTY TO THE TOTAL PROPERTY OF THE PARTY OF
	Sample Date: 08/15/2011	Mention of the second section of the second	Sample Time: 22:00			
and the thirt will be	mg/L by EPA 200.7	EPA 200.7	6.53 mg/L	08/23/11	10:26 MW	Q
	mg/L by EPA 200.7	EPA 200.7	< 0.100 mg/L	08/23/11		:BA
ron, Total		EPA 200.7	< 0.500 mg/L	08/23/11		
Carlo and an arrange	ng/L by EPA 200.7	EPA 200.7	< 0.100 mg/L	08/23/11		
	in mg/L by EPA 200.7	EPA 200.7	310 mg/L	08/25/11		
- 04	Composite Sample	Part and the second of the sec			· 清雪。 发	
All the second second	Sample Date: 08/15/2011		Sample Time: 22:00	440		
3romide, \	And the second of the second o	EPA 300.0	563 mg/ L	08/18/11	15:45 OST	September V. J., Sebas.
	Order Notes					
1	OTHER HIVES					

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