

December 31, 2014

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Mr. Isaac Chen
U.S. Environmental Protection Agency, Region 6
Regional Oil & Gas Coordinator
1445 Ross Avenue – Mail Code-6WQ-PP
Dallas, Texas 75202-2733

Subject: GMG290000 Permit – Produced Water and Water Based Drilling Mud Characterization Study TR Offshore – GMG290406

Dear Mr. Chen:

Per the permit requirements in Part I.B.4.c – Produced Water Characterization Study, TR Offshore. LLC has conducted an individual study and has collected one sample from each producing lease block for which they are the designated operator. TR Offshore has not and will not have any drilling projects within the 3-year study time frame.

The produced water samples were analyzed for the required metals, including: Dissolved arsenic, dissolved cadmium, dissolved chromium (VI), dissolved copper, free cyanide, dissolved lead, dissolved mercury, dissolved nickel, dissolved selenium, dissolved silver, and dissolved zinc.

The lease block area reported on is: Mustang Island 746 - Platform A - Permitted Feature 0002.

The analytical results are presented in the attached Excel worksheet and summary page of the laboratory report. This letter and electronic report are being submitted via hard copy and email to chen.isaac@epa.gov. The complete analytical report from the laboratory can be provided upon request.

Should you have any questions, please call me or our consultant, Ms. Marsha Lutz, of J. Connor Consulting, Inc. at 281-698-8557.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations

TR OFFSHORE, LLC

Becky Kidd

Regulatory Manager

Attachment

REF: DT5244/19655

## Produced Water Characterization Study - Sampling Results TR Offshore, LLC - GMG290406

Lease Block/Area/Permitted Feature	Lease No.	Sampling Date
Mustang Island 746 -Pltfm A-PF0002	Texas S/L MF-092000	2/18/2014

Parameter	Min.	Max.Conc.	Avg. Conc.	MAL
*All metals analyzed for dissolved	Conc.	mg/L	mg/L	mg/L
phase concentrations.	mg/L		ľ	·
Arsenic	<0.100	<0.100	<0.100	0.100
Cadmium	<0.050	<0.050	<0.050	0.050
Chromium, VI	<0.010	< 0.010	<0.010	0.010
Copper	<0.100	<0.100	<0.100	0.100
Free Cyanide	0.253	0.253	0.253	0.100
Lead	<0.050	< 0.050	<0.050	0.050
Mercury	<0.0002	<0.0002	<0.0002	0.000
Nickel	<0.400	<0.400	<0.400	0.400
Selenium	<0.350	<0.350	<0.350	0.350
Silver	<0.100	<0.100	<0.100	0.100
Zinc	<0.200	<0.200	<0.200	0.200

## SAMPLING INFORMATION

laboratory technology incorporated A Division of Pairint Services Corporation

Company: Tradition Resources Operating, LLC

Location - Area/Block: Mustang Island 746

Production Platform: A Texas S/L #: MF-092000 Sample Site: Skimmer

Type of Sampling: Chilled Grab

Control #	Date/Time Sampled	Date/Fime Received 2-19-14/1130		Sampled By Gary Ferguson	
ΓRD32819-A	2-18-14/0930				
Control #	Discharge Rate	Discharge Depth	Pipe Diameter	Temperature	
TRD32819-A	60 Bbl/Day	45 Feet	4 Inch	70 Deg F	

## TEST RESULTS LELAP # 02070, LELAP # 02079 & LELAP # 02006

Control #	Test	Result	MAL	Analyst	Date/Time Analyzed
TRD32819-A	Arsenic (Dissolved)	.100 mg/L	.100 mg/l	MHB	2-27-14/2151
TRD32819-A	Cadmium (Dissolved)	.050 mg/L	.050 mg/L	MHB	2-27-14/2151
TRD32819-A	Chromium VI (Dissolved)	.010 mg/L	.010 mg/L	LΔ	2-19-14/1604
TRD32819-A	Copper (Dissolved)	<ol> <li>100 mg/L</li> </ol>	.100 mg/l.	мнв	2-27-14/2151
TRD32819-A	Lead (Dissolved)	.050 mg/L	.050 mg/L	MITB	2-27-14/2151
TRD32819-A	Mercury (Dissolved)	· .0002 mg/L	.0002 mg/L	MB	2-28-14/1221
TRD32819-A	Nickel (Dissolved)	.400 mg/L	.400 mg/l.	MHB	2-27-14/2151
ΓRD32819-A	Sclenium (Dissolved)	+ .350 mg/L	.350 mg/L	MHB	2-27-14/2151
TRD32819-A	Silver (Dissolved)	.100 mg/L	.100 mg/L	MHB	2-27-14/2151
FRD32819-A	Zinc (Dissolved)	.200 mg/L	.200 mg/L	MHB	2-27-14/2151
TRD32819-A	Free Cyanide	.253 mg/L	.100 mg/L	IP	2-26-14/09)2

NOTE: Sample was diluted for analysis. When samples have to be diluted for analysis due to interferencess that would damage the test equipment or mast the test results, the detection levels for various parameters are elevated as a result.

TEST REFERENCES: 40 CFR 136

## CERTIFICATION

A project file was maintained during this test. Two persons checked all data transcribed to the report for accuracy. The test result(s) is—are only representative of the sample(s) submitted for analysis.

Ecertify that this report is in compliance with the terms and conditions of the contract, both technically and for completeness, for
other than the conditions detailed within. Release of the data contained in this hardcopy report or, an alternate means of electronic
transmission, has been authorized by the Laboratory Operations Manager or the Manager's designee, as verified by the following
signature.

Signature:

Name: Leonard Johnson

Date:

Title: Operations Manager