

JEFFERSON BLOCK 24



OIL & GAS, LLC

FedEx Tracking No. 8034 5784 8578

May 29, 2015
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
– GMG290336

Dear Mr. Chen:

Per the permit requirements in Part I.B.4.c – Produced Water Characterization Study, Jefferson Block 24 Oil & Gas, LLC, has conducted an individual study and has collected one sample from each producing lease block for which they are the designated operator. Jefferson Block 24 has not and will not have a drilling project within the 3-year study time frame.

The lease block area reported on is High Island 24L – Platform A. 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.

A summary of the analytical results are presented in the attached Excel worksheet and summary pages from the laboratory report. This letter and analytical summary are being submitted via hard copy and email to chen.isaac@epa.gov so that it is also available in electronic format. The complete analytical report from the laboratory can be provided upon request. Please note that the ALS analytical report references the sample as Tammany Oil; High Island 24. Jefferson Block 24 Oil & Gas LLC is a wholly owned subsidiary of Tammany Oil & Gas LLC. This lease block is permitted under Jefferson Block 24.

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.

Sincerely,

R.W. Bradford
Chief Operating Officer
Attachments
REF: DT5512/10400

20445 STATE HIGHWAY 249, SUITE 200, HOUSTON, TEXAS 77070
PHONE: 281.517.0770
FAX: 281.517.0719

**Produced Water Characterization Study - Sampling Results
Jefferson Block - GMG290336**

Lease Block/Area	Lease No.		Sampling Date		
High Island 24 -Platform A	MF 103387		1/28/2015		
Parameter *All metals analysed for dissolved phase concentrations.	Min. Conc. mg/L	Max.Conc. mg/L	Avg. Conc. mg/L	MDL mg/L	MRL mg/L
Arsenic	< 0.050	< 0.050	< 0.050	0.050	0.250
Cadmium	< 0.040	< 0.040	< 0.040	0.040	0.010
Chromium, VI	< 0.010	< 0.010	< 0.010	0.010	0.010
Copper	< 0.050	< 0.050	< 0.050	0.050	0.250
Free Cyanide	< 0.020	< 0.020	< 0.020	0.020	0.020
Lead	< 0.035	< 0.035	< 0.035	0.035	0.250
Mercury	< 0.000042	< 0.000042	< 0.000042	0.000042	0.0002
Nickel	< 0.050	< 0.050	< 0.050	0.050	0.250
Selenium	0.191 J	0.191 J	0.191 J	0.050	0.250
Silver	< 0.040	< 0.040	< 0.040	0.040	0.250
Zinc	< 0.125	< 0.125	< 0.125	0.125	0.250

MDL - Minimum Detection Limit

MRL Method Reporting Limit. Also known as:LOQ Limit of Quantitation (LOQ)

Values between the MDL and MRL are estimated (see J qualifier).

J - Analyte Detected Below Quantitation Limit

Client: Tetra Tech, Inc.
 Project: Gulf of Mexico MPWCS 212C-HN-00073, Task 01
 Sample ID: Tammy Oil; High Island (HI) 24
 Collection Date: 28-Jan-2015 05:30

ANALYTICAL REPORT

WorkOrder:HS15010831
 Lab ID:HS15010831-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A		Method:SW6020				Prep:SW3010A / 30-Jan-2015	Analyst: RPM
Arsenic	U		0.0500	0.250	mg/L	50	05-Feb-2015 15:10
Cadmium	U		0.0400	0.100	mg/L	50	05-Feb-2015 15:10
Copper	U		0.0500	0.250	mg/L	50	05-Feb-2015 15:10
Lead	U		0.0350	0.250	mg/L	50	05-Feb-2015 15:10
Nickel	U		0.0500	0.250	mg/L	50	05-Feb-2015 15:10
Selenium	0.191	J	0.0500	0.250	mg/L	50	05-Feb-2015 15:10
Silver	U		0.0400	0.250	mg/L	50	05-Feb-2015 15:10
Zinc	U		0.125	0.250	mg/L	50	05-Feb-2015 15:10
CYANIDE - SW9014		Method:SW9014				Prep:SW9010C / 31-Jan-2015	Analyst: KHT
Cyanide, Dissolved	U		0.0200	0.0200	mg/L	1	31-Jan-2015 15:31
DISSOLVED MERCURY BY SW7470A		Method:SW7470				Prep:SW7470 / 03-Feb-2015	Analyst: OFO
Mercury	U		0.000420	0.000200	mg/L	1	03-Feb-2015 15:49
SUBCONTRACT ANALYSIS		Method:NA					Analyst: SUB
Miscellaneous Analysis	See Attached		0			1	11-Feb-2015 14:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.





ALS Laboratory Group
 10450 Stancliff Rd. #210
 Houston, Texas 77099
 (Tel) 281.530.5656
 (Fax) 281.530.5887

Chain of Custody Form

HS

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Gulf of Mexico MI



ALS Project Manager: Kristin Brown

Customer Information		Project Information			Parameters/Methodology Required							
Purchase Order	1097177	Project Name	Gulf of Mexico MPWCS			A	Dissolved Metals (6020/7000) As,Cd,Cu,Pb,...					
Work Order		Project Number	212C-HN-00073, Task 01			B	Dissolved Cyanide (9014)					
Company Name	Tetra Tech	Bill To Company	Tetra Tech			C	Dissolved Hexavalent Chromium (218.6)					
Send Report To	June Mire	Invoice Attn.	June Mire			D						
Address	1408 Pasadena Avenue	Address	1408 Pasadena Avenue			E						
						F						
City/State/Zip	Metairie, LA 70001	City/State/Zip	Metairie, LA 70001			G						
Phone	504-273-9186	Phone	504-273-9186			H						
Fax		Fax				I						
e-Mail Address	june.mire@tetratech.com	e-Mail Address	june.mire@tetratech.com			J						

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G
1	Tammany Oil; High Island (HI) 24	1-28-15	5:30	PW		3	X	X	X				
2													
3													
4													
5													
6													
7													
8													
9													
10													

Sampler(s): Please Print & Sign Daniel Perck *DP* Shipment Method: _____ Required Turnaround Time: STD 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour Other _____ Re

Relinquished by: <u>DP</u>	Date: <u>1-28-15</u>	Time: _____	Received by: _____	Notes: _____
Relinquished by: _____	Date: <u>1-28-15</u>	Time: <u>1109</u>	Received by (Laboratory): <u>[Signature]</u>	Cooler Temp. _____ QC Package: (Check Box Below) <input type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Std QC + Rav <input checked="" type="checkbox"/> Level IV: SW846 CLP-
Logged by (Laboratory): _____	Date: _____	Time: _____	Checked by (Laboratory): _____	Other: _____

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group. Copyright 2008 by ALS La



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: ALS Environmental - US
Project: HS15010831
Sample Matrix: Water
Sample Name: HS15010831-01
Lab Code: R1500658-001

Service Request: R1500658
Date Collected: 1/28/15 0530
Date Received: 1/29/15

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.010	U	mg/L	0.010	1	NA	2/10/15 12:12	





CHAIN OF CUSTODY RECORD

Date 28 Jan 2015

COC ID 2213

Due date 11 FEB 15

Subcontractor

ALS	Phone
1565 Jefferson Road Building 300, Suite 360	5852885380
Rochester, NY 14623	Fax

R1500658 **5**

ALS Group USA, Corp.
HS15010831



Customer Information		Project Information	
PO		Project Name	HS15010831

Customer Information		Project Information	
Company Name	ALS Houston	Company Name	ALS Houston
		Inv Attn	Accounts Payable
Address	10450 Stancliff Rd, Ste 210	Address	10450 Stancliff Rd, Ste 210
	Houston, TX 77099		Houston, TX 77099
Phone	281-530-5656	Phone	281-530-5656
Email1	ana.spencer@alsglobal.com	Email2	jumoke.lawal@alsglobal.com

Lab ID	Client Samp ID	Collection Date	Matrix	Analysis Requested
HS15010831-01	Tammy Oil; High Island (HI) 24	28-Jan-15 05:30 am	Water	ALS-Rochester 218.6

Comments Please analyze for the above and send report to ana.spencer@alsglobal.com and cc to jumoke.lawal@alsglobal.com.

Relinquished by:	Date/Time:	Received by:	Date/Time:	Cooler IDs:	Report/QC Level
<i>D. Spill</i>	1-28-15 1800		<i>Supp</i>	1/29/15 @ 0920	