



STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

May 14, 2012

Mr. Kreg Wyskochil
Human Resources
Team Services, LLC
P.O. Box 1104
Kalkaska, Michigan 49646

Dear Mr. Wyskochil:

I have evaluated the test results for each source of oil field brine you recently submitted. Brine from the source(s) listed below is approved for dust and ice control until December 31, 2012, at which time it must be re-tested. The approval is granted pursuant to R 324.705 of Part 615, Supervisor of Wells, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); MCL 324.61501 to 324.61507.

State Excelsior 1-25 HD1, Permit No. 60389, NE NW NE, Sec. 1, T26N, R06W
Oliver Township, Kalkaska County

Please note that if the above wells are, at any time, ordered shut-in by the Supervisor of Wells, due to violations of the NREPA, the approval will lapse. A list of approved sources is available.

If you have any questions, please contact me by mail at Department of Environmental Quality, Office of Oil, Gas, and Minerals, P.O. Box 30256, Lansing, MI 48909, by phone at 517-241-1532, or by email at vugrinovichr@michigan.gov.

Sincerely,

Raymond Vugrinovich, Senior Geologist
Petroleum and Mining Geology Unit
Office of Oil, Gas, and Minerals
Resource Management Division

cc: Mr. Gary Hagler, DNR *File copy Chrono*
Mr. Andy Stempky, DEQ

Client Identification: Team Completion Services	Sample Description: Excelsior 1-25	Chain of Custody: 71063
Client Project Name: Excelsior 1-25 HD1	Sample No: 1	Collect Date: 05/02/12
Client Project No: NA	Sample Matrix: Brine	Collect Time: 08:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Trace Elements by ICP/AES, Dissolved (EPA 0200.7)				Aliquot ID: 49806-001A		Matrix: Brine		Analyst: JLH	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Calcium	110000		mg/L	12000	2000	05/08/12	PT12E08B	05/08/12	T312E08A

BTEX (EPA 5030B/EPA 8260B)				Aliquot ID: 49806-001		Matrix: Brine		Analyst: HNB	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Benzene	U		µg/L	5.0	10	05/07/12	VB12E07A	05/07/12	VB12E07A
2. Ethylbenzene	U		µg/L	5.0	10	05/07/12	VB12E07A	05/07/12	VB12E07A
3. Toluene	U		µg/L	5.0	10	05/07/12	VB12E07A	05/07/12	VB12E07A
4. Xylenes	U		µg/L	20	10	05/07/12	VB12E07A	05/07/12	VB12E07A

Chloride by Titrimetry (SM 4500-Cl- B.)				Aliquot ID: 49806-001B		Matrix: Brine		Analyst: EAS	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chloride (NN)	280000		mg/L	10000	1000	NA	NA	05/07/12	NA

Hydrogen Sulfide (HACH 8131) (SM 4500-S2- H.)				Aliquot ID: 49806-001B		Matrix: Brine		Analyst: EAS	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Hydrogen Sulfide (NN)	U		mg/L	0.20	10	NA	NA	05/07/12 00:00	NA

1914 Holloway Drive
11766 E. Grand River
8660 S. Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584



0
RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

June 13, 2012

Mr. Kreg Wyskochil
Human Resources
Team Services, LLC
P.O. Box 1104
Kalkaska, Michigan 49646

Dear Mr. Wyskochil:

Subject: Brine source approval **REVOCATION**

The well listed below was approved as a source of brine for dust and ice control by my letter of May 14, 2012.

State Excelsior 1-25 HD1, Permit No. 60389, NE NW NE, Sec. 1, T26N, R06W
Oliver Township, Kalkaska County

Since that time, it has come to my attention that the well is still producing so-called flow back water from hydraulic fracturing. Because of the unknown composition of the flow back water; the uncertainty regarding impacts to soil, groundwater and surface water, of the compounds used during hydraulic fracturing, use of brine from the State Excelsior 1-25 HD-1 must be **discontinued immediately**. Brine from the well that has been moved to a central holding site prior to use must be disposed of by injection into a disposal well.

If you have any questions, please contact me by mail at Department of Environmental Quality, Office of Oil, Gas, and Minerals, P.O. Box 30256, Lansing, MI 48909, by phone at 517-241-1532, or by email at vugrinovichr@michigan.gov.

Sincerely,

Raymond Vugrinovich, Senior Geologist
Petroleum and Mining Geology Unit
Office of Oil, Gas, and Minerals
Resource Management Division

cc: Mr. Steve Mansur, Field Regulatory Coordinator, Encana Oil and Gas USA, Incorporated
370 17th Street Suite 1700, Denver CO 80202
Ms. Brenda Leister,
Mr. Gary Hagler, DNR
Mr. Andy Stempky, DEQ
Ms. Susanne Biteman, DEQ
Mr. Rick Henderson, DEQ