

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



June 5, 2015

Mr. James C. Hunter
Geolex, Inc.
500 Marquette Ave. NW, Suite 1350
Albuquerque, NM 87102

RE: Division Order No. R-12921; Temporary Variance of the Maximum Surface Injection Pressure

Jal 3 AGI Well No. 1 (API 30-025-38822)

1550' FNL, 1000' FWL; Unit P, Sec 33, T24S, R37E, NMPM, Lea County, New Mexico

Order Date: March 21, 2008

Injection into the San Andres formation; approved interval: 4375 feet to 5200 feet

Mr. Hunter:

Reference is made to your request on behalf of Regency Field Services, LLC (the "operator") for a temporary variance to allow an increase in maximum surface injection pressure (MSIP) for the above named well for reasons outlined in the attached correspondence.

Division has reviewed Geolex's information for the temporary increase and finds that the proposed MSIP of 1330 pounds per square inch (psi) conforms to the 0.2 psi/foot gradient utilized in administrative orders which eliminates the requirement for a step-rate test as stipulated in Ordering Paragraph (16) of the referenced Order. It is the Division's understanding that the increase in pressure will be limited to the injection of treated acid gas only.

The Division finds that granting this request to temporarily increase the MSIP is in the interest of conservation, will prevent waste, and will protect the environment. The Division also finds that granting the temporary increase will not adversely affect correlative rights.


Therefore, the Division hereby approves **a MSIP of 1330 psi for the injection of treated acid gas only** into the subject well. This authority for the increase of the MSIP shall expire either on December 1, 2015, or **with the reintroduction of waste water into the injected fluid** as approved under Order No. R-12921.

The operator shall notify the Hobbs District office, through sundry notice, (1) of commencement of

injection at the higher MSIP of this variance, and (2) resumption of injection operations with mixed treated acid gas and waste water.

All requirements of the referenced Division order and agreements in the application remain in full force and effect.

Sincerely,



DAVID R. CATANACH
Director

DRC/prg

cc: Oil Conservation Division – Hobbs District Office
Well File API 30-025-38822
File Case No. 14080

Goetze, Phillip, EMNRD

From: Bradford, Johnnie <Johnnie.Bradford@energytransfer.com>
Sent: Monday, June 08, 2015 4:39 PM
To: Goetze, Phillip, EMNRD
Cc: Alberto A. Gutierrez <aag@geolex.com> (aag@geolex.com); Becker, Thomas
Subject: RE: Request for Temporary Variance on MAOP, Energy Transfer Partners, LP Jal #3 AGI #1 (API 300-25-38822)

June 8, 2015

New Mexico Oil Conservation Division
Attn: Phillip R. Goetze, P.G.
Engineering and Geological Services Bureau, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505

Dear Mr. Goetze:

Currently Energy Transfer Partners LP Engineering is working to complete the design scope of the wastewater handling project at the Jal #3 Gas Plant. In doing so, pump systems are being defined and equipment specifications finalized. Once the project is approved for work, long lead time equipment will be ordered which will include the AGI Well wastewater injection pumps. It is expected that once construction begins the new system, consisting of tankage, drain line modifications and waste water injection systems, will be operational by November 15, 2015. Considering the extent of this project, Energy Transfer Partners LP, respectfully requests that the surface pressure variance for the Jal #3 AGI #1 (API 300-25-38822) be issued with an end date of December 1, 2015. This will allow the system to be installed, commissioned and test operated prior to variance expiration.

Respectfully submitted,

Johnnie Bradford
Energy Transfer Partners LP

Please note my email address will change to:
johnnie.bradford@energytransfer.com



Johnnie Bradford Energy Transfer Partners – Sr. Environmental Specialist
600 N. Marientfeld Str. Ste. 700 Midland, Texas 79701 | (817) 302-9812/(432) 250-5542

From: Goetze, Phillip, EMNRD [mailto:Phillip.Goetze@state.nm.us]
Sent: Friday, June 05, 2015 10:21 AM
To: Bradford, Johnnie

Cc: Alberto A. Gutierrez <aag@geolex.com> (aag@geolex.com)

Subject: Request for Temporary Variance on MAOP, Energy Transfer Partners, LP Jal #3 AGI #1 (API 300-25-38822)

Mr. Bradford:

The Director requested a timeframe for the return of the wastewater system to include as an end date for the variance. Please provide me (preferably by e-mail) your best estimate for completion of the system and return to operation. Thanks. PRG

Phillip R. Goetze, P.G.

Engineering and Geological Services Bureau, Oil Conservation Division

1220 South St. Francis Drive, Santa Fe, NM 87505

O: 505.476.3466 F: 505.476.3462

phillip.goetze@state.nm.us

From: James C. Hunter {GeoLex} [<mailto:JCH@GeoLex.com>]

Sent: Friday, May 29, 2015 12:31 PM

To: Goetze, Phillip, EMNRD

Cc: johnnie.bradford@regencygas.com; aag@GeoLex.com

Subject: Request for Temporary Variance on MAOP, Energy Transfer Partners, LP Jal #3 AGI #1 (API 300-25-38822)

Dear Mr. Goetze:

Thank you for discussion this matter with me this morning.

On behalf of Energy Transfer Partners, LP (successor of Regency Energy Partners, LP), Geolex has prepared this request for a temporary variance from the original Maximum Allowable Operating Pressure (MAOP) for Jal #3 AGI #1 from 986 pounds per square inch (psi) to 1,300 psi.

The Jal #3 AGI (APD 300-25-38822) well was permitted under NMOCD Order R-12921, on March 21, 2008, and is located 1,570' FNL, 1,05' FWL in Section 33, T24S, R37E in Lea County, New Mexico at the Energy Transfer Partners, LP's Jal #3 natural gas plant.

In Section 15 of the Order, the well was permitted to inject at no more than 986 psi "...while injecting acid gas and waste water". Unanticipated mechanical problems have prevented the injection of mixed acid gases and wastewater, and currently only acid gases are being injected. Although acid gas volumes have not increased, the surface pressure is now approximately 1,280 psi and reducing the surface pressure to only 986 psi would reduce the plant's capacity by approximately 50%.

The original MAOP was calculated in the December 2007 C-108 Application as described below:

We have used the following method approved by NMOCD to calculate the preliminary proposed maximum injection pressure. The final maximum permitted surface injection pressure should be based on the final specific gravity of the injection fluid according to the following formula:

$$IP_{max} = PG(D_{top}) \quad \text{where:} \quad \begin{array}{l} IP_{max} = \text{maximum surface injection pressure (psi)} \\ PG = \text{pressure gradient of mixed injection fluid (psi/ft)} \\ D_{top} = \text{depth at top of perforated interval of injection zone (ft)} \end{array}$$

and $PG = 0.2 + 0.433 (1.04 - SG_{bif})$ where: $SG_{bif} = \text{specific gravity of blended injection fluid}$

$$\text{and } SG_{bif} = \frac{[(SG_{ww})(WW_{vol})] + [(SG_{tag})(TAG_{vol})]}{WW_{vol} + TAG_{vol}}$$

where: SG_{ww} = specific gravity of wastewater
 SG_{tag} = specific gravity of treated acid gas
 WW_{vol} = volume of wastewater in mix
 TAG_{vol} = volume of treated acid gas in mix

For the maximum requested injection volume, case it is assumed that:

$$\begin{aligned} SG_{ww} &= 1.04 \\ SG_{tag} &= 0.80 \\ WW_{vol} &= 6000 \\ TAG_{vol} &= 1929 \\ D_{top} &= 4375 \end{aligned}$$

Therefore:

$$\frac{SG_{bif} = [(SG_{ww})(WW_{vol})] + [(SG_{tag})(TAG_{vol})]}{WW_{vol} + TAG_{vol}} = \frac{6240 + 1543}{7929} = 0.9816$$

$$PG = 0.2 + 0.433 (1.04 - SG_{bif}) = 0.2 + 0.433 (1.04 - 0.9816) = 0.22529$$

$$IP_{max} = PG(D_{top}) = .22529(4375) = 985.6$$

Our proposed new temporary MAOP is based on the current injected acid gas mixture's density of (SG_{tag}) 0.80, rather than the original mixed specific gravity of 0.9816. Thus, using the same formula, the MAOP for pure acid gases would be calculated as:

$$PG = 0.2 + 0.433 (1.04 - SG_{tag}) = 0.2 + 0.433 (1.04 - 0.8) = 0.3039$$

$$IP_{max} = PG(D_{top}) = .3039(4375) = 1,329.65 \text{ psi}$$

Based on these calculations, Geolex is confident that a temporary MAOP of 1,330 psi will be a safe injection pressure and will be consistent with NMOCD's guidelines.

A range of MAOPs, based on the relative mixture of acid gases and wastewater, was approved for a recent AGI well project. In NMOCC Order R-13861 the proposed DCP Midstream Artesia AGI #2 was permitted to inject wastewater only at 916 psi, but was allowed to inject pure acid gases up to 1,704 psi.

We respectfully request that this approach be used in evaluating Energy Transfer Partners, LP's application for a temporary variance. After the repairs and testing of the wastewater system, Energy Transfer Partners, LP plans to return to their original operations and comply with the original MAOP. Documentation of these activities will be provided to NMOCD when they are completed, and the pressures and volumes will be provided in the normal C-115 reporting.

As I will be out of my office from June 1 through June 10, after today please forward your questions or comments to Mr. Alberto Gutierrez and Mr. Johnnie Bradford at the email addresses above.

Thank you for your attention to this request.

James C. Hunter, RG
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