

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION COMMISSION

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IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF CONSIDERING TARGA MIDSTREAM
SERVICES LLC'S MOTION TO REOPEN CASE TO OFFER PROOF OF WELL
COMPLETION, WELL TEST RESULTS, AND EXTENT OF INJECTION RADIUS

CASE NO. 14575

FINDINGS OF FACT AND CONCLUSIONS OF LAW

COMES NOW the Oil Conservation Division (Division), through its undersigned counsel, requesting the Oil Conservation Commission (Commission) adopt the following facts and conclusions of law.

FACTS:

1. This matter came before the Commission on February 23, 2012. That day the Commission heard testimony regarding Targa Midstream Services' (Targa) proof of completion and results of pressure testing.
2. On December 20, 2010 the Commission entered Order R-1809-C which directed Targa to reopen the case to present evidence that Targa was in compliance with the terms of said Order. (*Transcript* pgs 31-32 lns 16-5).
3. Mr. Alberto Gutierrez testified on behalf of Targa. (*Transcript* pg 33 ln 9).
4. Mr. Gutierrez is a registered professional geologist, petroleum geologist and hydrologist and is recognized as an expert. (*Transcript* pg 34 lns 1-2).
5. Targa recompleted the Eunice Gas Plant SWD Number 1 for use as an Acid Gas Injection Well. (*Transcript* pg 38 lns 12-20).


6. The well is located approximately five miles south of Eunice and the acid gas is generated at a plant in the middle of Eunice. (*Transcript* pg 53 lns 16-19).
7. Targa made three requests of the Commission. The first request was to authorize injection for 30 years, second to establish a new maximum allowable operating pressure of 1600 psig and third for the Commission to authorize perforation of an additional interval. (*Transcript* pgs 38&39 lns 21-8).
8. Targa conducted porosity and resistivity logging, as well as extended range micro-imaging logging. In addition, Targa extracted sidewall cores between 4,195 and 4,826 feet. Those samples were used to calculate irreducible water and CO₂ permeability. Targa also conducted a step-rate test. (*Transcript* pg 55 lns 1-14).
9. The micro-imaging log and the sidewall cores show high porosities above 4,500 feet and much lower porosities below 4,500 feet. (*Transcript* pg 56 lns 6-11).
10. After being analyzed, the sidewall core porosities range from about 2 to 38 percent. The air permeability ranged from three-thousandths to about nine millidarcies and irreducible water ranged from .32 to about .6. (*Transcript* pg 57 lns 4-11).
11. Mr. Gutierrez testified that there is about a 300 foot thick zone accepting fluid with a net porosity of about 18 feet. Based upon the thickness of the zone and the net porosity, Targa believes that after 30 years of injection only .35 mile radius in the San Andres would be invaded and it would take approximately 75 years for the injectate to reach a half a mile. (*Transcript* pg 63 lns 1-7).
12. Targa's witness, Mr. Gutierrez, did not object to the Division's suggestion of requiring a plume progress test after ten (10) years of injection. (*Transcript* pgs 70-

- 71 lns 18-2). The Division did not object to requiring additional testing after ten (10) years. (*Transcript* pg 119 lns 3-5).
13. Targa's witness did not object to the Division's suggestion of requiring a mechanical integrity test yearly. (*Transcript* pg 71 lns 3-10).
14. Mr. Will Jones testified as an expert in Engineering on behalf of the Division. (*Transcript* pg 97 lns 12-18).
15. The Division suggested a plume progress test because it is probable that the most porous permeable interval in the well is taking the majority of the fluid. (*Transcript* pg 108 lns 1-6).
16. The Division would use a subsequent plume progress test to re-plot the injection rates and review the information with Targa. Subsequent plume progress tests would also assist the Division in preventing waste and protecting correlative rights because the information could be used to determine whether the nearby wellbores are at risk. (*Transcript* pg 109 lns 9-17).
17. A yearly mechanical integrity test allows a Division inspector to not just monitor the pressure but actually change the pressure to determine if there is a problem with the well. (*Transcript* pg 110 lns 6-18).
18. The Division requested that a contingency plan be included as a requirement for Targa. This contingency plan would, at a minimum, provide that the Division's district office in Hobbs and Targa agree to the criteria of pressure differences that would indicate a potential mechanical integrity failure and if such a pressure difference were to occur then the Division's Hobbs district office would immediately be notified. (*Transcript* pg 112 lns 7-14).

CONCLUSIONS OF LAW:

1. The Commission is empowered to regulate the disposition of nondomestic waste resulting from the treatment of natural gas or the refinement of crude oil to protect public health and the environment. N.M. Stat. Ann. § 70-2-12(B)22 (1978).
2. Granting Targa a thirty (30) year injection permit requiring yearly mechanical integrity testing, a plume progress test every ten (10) years and the development of acceptable pressure differences will ensure that public health and the environment are protected.
3. The Commission has a statutory duty to prevent waste and protect correlative rights. NMSA 70-2-11(A) and *Continental Oil Co.*, 70 N.M. at 323, 373 P.2d at 817.
4. By requiring subsequent plume progress tests the Commission is fulfilling its duty to prevent waste and protect correlative rights because the Division will be able to notify adjacent well operators if there is a foreseeable injectate invasion.

Respectfully Submitted,



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Certificate of Service

I hereby certify I sent a true and correct copy of this pleading on March 15, 2012 to:

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