# Appendix C: Previous NMOCD Orders for Eunice Gas Plant SWD #1

- Administrative Order SW-29, 9/21/1961
- Order R-12809, 9/14/2007
- Order R012809-A, 10/22/2007
- Order R-12809-B, 8/8/2008

# OIL CONSERVATION COMMISSION P. O. BOX 871 SANTA FE. NEW MEXICO

September 21, 1961

Skelly Oil Company P. O. Box 1650 Tulsa 2, Oklahoma

### Gentlemen:

Enclosed herewith please find Administrative Order SWD-29 for your Eunice Gasoline Plant SWD Well No. 1 located in the NW/4 SW/4 of Section 27, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

Very truly yours,

A. L. PORTER, Jr., Secretary-Director

# ALP/JEK/og

cc: Oil Conservation Commission - Hobbs Oil & Gas Engineering Committee - Santa Fe

#### SUBJECT: SALT WATER DISPOSAL WELL

ORDER NO. SWD-29

THE APPLICATION OF SKELLY OIL COMPANY FOR PERMISSION TO COMPLETE FOR THE PURPOSE OF SALT WATER DISPOSAL ITS EUNICE GASOLINE PLANT SWD WELL NO. 1, LOCATED IN THE NW/4 SW/4 OF SECTION 27, TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM, LEA COUNTY, NEW MEXICO.

# ADMINISTRATIVE ORDER OF THE OIL CONSERVATION COMMISSION

Under the provisions of Rule 701 (c) Skelly Oil Company made application to the New Mexico Oil Conservation Commission on August 31, 1961, for permission to complete for salt water disposal its Eunice Gasoline Plant SWD Well No. 1, located in the NW/4 SW/4 of Section 27, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

The Secretary-Director finds:

- (1) That application has been duly filed under the provisions of Rule 701 (c) of the Commission Rules and Regulations;
- (2) That satisfactory information has been provided that all offset operators, surface owners and the New Mexico State Engineers Office have been duly notified; and
- (3) That the applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 (c) will be met.
- (4) That no objections have been received within the waiting period prescribed by said rule.

### IT IS THEREFORE ORDERED:

(1) That the applicant, Skelly Oil Company, is hereby authorized to complete its Eunice Gasoline Plant SWD Well No. 1 located in the NW/4 SW/4 of Section 27, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the San Andres formation from approximately 3935 feet to approximately 4000 feet.

<u>PROVIDED HOWEVER</u>, That sufficient cement shall be used to fill the annular space between the 7-inch casing and hole from setting depth to 300 feet or above.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

Order No. SWD-29

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

Approved at Santa Fe, New Mexico, on this 21st day of September, 1961.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

A. L. PORTER, Jr., Secretary-Director

SEAL



# **SKELLY OIL COMPANY**

P. O. Box 1650

### **TULSA 2, OKLAHOMA**

PRODUCTION DEPARTMENT
C L BLACKSHER, VICE PRESIDENT
W P WHITMORE, GENERAL MANAGER

August 29, 1961

New Mexico Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

We are attaching original and two copies of an application to dispose of salt water by injection into a porous formation not productive of oil or gas, along with three copies of a plat of the area, for our Eunice Gasoline Plant Salt Water Disposal Well No. 1 located in the SW/4 of Section 27, Township 22 South, Range 37 East, Lea County, New Mexico.

This well is to be drilled for a salt water disposal well. The injection formation will be the San Andres which is not productive in any wells in this area.

Copy of this application has been furnished to all operators offsetting this well. By carbon copy of this letter we are furnishing a copy of the application to the State Engineer's Office.

Very truly yours,

NPM: br Attach.

George W. Selinger

cc-State Engineer's Office P. O. Box 1079 Santa Fe, New Mexico

w/ Attach.

Revised 9 16 58

# STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

# APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS

Operator Sk	elly Oil Compan	yAddr	ess P. O. Box 1650, Tul	sa 2, Oklahoma						
Lease Eunice G	asoline Plt. 5W	DWell No. 1 Co	ountyLea,							
Unit L Section 27 Township 22-S Range 37-E										
This is an application to dispose of salt water produced from the following pool (s):										
Langlie-Mattix										
Name of Injection Formation(s): San Andres										
Top of injection zone: 3935* Bottom of injection zone: 4500*  Give operator, lease, well no., and location of any other well in this area using this same										
zone for dispos	sal purposes:	None								
CASING PROGRAM										
	Diameter	Setting Depth	Sacks Cement	Top of Cement						
Surface	10-3/4"	3001	250	Surface						
Intermediate	ntermediate									
Long String	7#	750	6851							
Will injection b	e through tubir	ng, casing, or annul	us? Casing							
Size tubing:	Sett	ing depth: -	Packer s	set at:						
Name and Mode	el No. of packe	r:	<del></del>							
Will injection be through perforations or open hole? Open hole										
Proposed interval(s) of injection: 3935-4000*										
Well was originally drilled for what purpose? Salt Water Disposal Well										
Has well ever been perforated in any zone other than the proposed injection zone? No										
List all such perforated intervals and sacks of cement used to seal off or squeeze each:										
-										
Give depth of bottom of next higher zone which produces oil or gas: 3650*										
Give depth of top of next lower zone which produces oil or gas: 5100										
Give depth of bottom of deepest fresh water zone in area: 8007										
Expected volume of salt water to be injected daily (barrels): 5000 bbls.										
Will injection b	Will injection be by gravity or pump pressure? Gravity Estimated pressure: -									
Is system open or close type? Closed Is filtration or chemical treatment necessary? Yes										



Is the water to be disposed of mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes							
Is any water occurring naturally within the proposed disposal formation mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes							
List all offset operators to the lease on which this well is located and their mailing address Ambassador Oil Corp., P. O. Box 9338, Fort Worth, Texas Gulf Oil Corp., Gulf Building, Houston 1, Texas							
Humble Cil & Refining Co., Box 2180, Houston, Texas							
Neville G. Penrose, Inc., 1813 Fair Bldg., Fort Worth 2, Texas							
Sinclair Oil & Gas Co., P. O. Box 521, Tulsa, Okla.							
Tidewater Oi	1 Company, P. O. Bcx 1404, Houston 1, Texas						
Name and add	dress of surface owner Skelly Oil Company						
	of this application been sent by registered mail or given to all offset operators, and to the New Mexico State Engineer? Yes						
Is a complete	e electrical log of this well attached? None						
	Operator: Skelly Oil Company						
	La						
	Bothany Workelinger						
	George w. gerrußer.						
	Title: Manager of Conservation						
========							
	STATE OF ( delicion )						
	County of)						
	BEFORE ME, The undersigned authority, on this day personally appeared						
	George W. Selinger known to me to be the person whose						
name is subscribed to the above instrument, who being by me duly sworn							
on oath states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein and that said report is true							
and correct.							
	SUBSCRIBED AND SWORN TO before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and sworn to before me this the gradual of the subscribed and subscribed						
	Natura Public in add for the Country of						
	Notary Public in and for the Gounty of						
	My Commission Expires						
NOTE:	Should waivers from all offset operators, the surface owner, and the State Engineer not accompany an application, the New Mexico Oil Conservation Commission will hold the application for a period of fifteen (15) days from date of receipt by the Commission's Santa Fe office. If at the end of said fifteen-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.						

# SKELLY OIL COMPANY LEA COUNTY NEW MEXICO

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# STATE OF NEW MEXICO

#### STATE ENGINEER OFFICE SANTA FE

S. E. REYNOLDS STATE ENGINEER

September 12, 1961

ADDRESS CORRESPONDENCE TO: STATE CAPITOL SANTA FE, N. M.

Mr. A. L. Porter, Jr. Secretary-Director Oil Conservation Commission Santa Fe, New Mexico

Dear Mr. Porter:

FEI/ma

cc-Skelly Oil Co.

F. H. Hennighausen

Reference is made to the application of Skelly Oil Company dated August 29, 1961 which seeks permission to dispose of salt water by injection into a porous formation not productive of oil or gas through a well to be located in the  $SW_4^1$  of Sec. 27, T. 22 S., R. 37 E., which is to be drilled for this specific purpose.

It is noted on the application that the 10 3/4" surface casing will be set at 300 feet and the cement will be circulated to the surface and that the long string will be set at 3985 feet and the top of cement behind this string will be at 685 feet. This leaves 385 feet of casing unprotected by cement and according to my tables, an additional ten sacks of cement would bring the cement behind the long string up into the surface casing giving protection to all casing. It is my opinion that the surface pipe should be set below all fresh water or that the cement behind the long string should come up into the surface string. The depth to the bottom of the deepest fresh water zone is 800 feet, according to information given on the application, and it is my contention that all fresh water zones should be adequately protected.

Very truly yours,

S. E. Reynolds State Engineer

Frank E. Irby

Chief

Water Rights Division



# SKELLY OIL COMPANY

P. C. Box 1650

#### **TULSA 2, OKLAHOMA**

PRODUCTION DEPARTMENT
C. L. BLACKSHER, VICE PRESIDENT
W. P. WHITMORE GENERAL MANAGER

September 19, 1961

VIA AIR MAIL

Re: Eunice Gasoline Plant Salt Water Disposal Well No. 1

Mr. A. L. Porter, Jr., Secretary-Director Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to Mr. S. E. Reynolds' letter of September 12, 1961, which concerned our application dated August 29, 1961 which seeks permission to dispose of salt water by injection into a porous formation not productive of oil or gas through a well to be located in the  $SW_{\pi}^{1}$  of Sec. 27, T. 22 S., R. 37 E., which is to be drilled for this specific purpose.

This is to advise that we will use 800 sacks of cement, or more if necessary, on the long string in order that the cement behind it will come up into the surface string.

Very truly yours,

George A. Selinger

Lunge W. Selinger

cc-State Engineer's Office F. D. Box 1079 Santa Fe, New Mexico

NPM:br

# OIL CONSERVATION COMMISSION

# BOX 2045

# HOBBS, NEW MERCICO

	DATE_	Sept. 8, 1961
OIL CONSERVATION COMMISSION	Re: I	Propose NSP
BOY 371 SANTA FE, YEW MEXICO	F	Proposed MSL
5	F	Propose: VFC
	F	Proposed DC
Gentlemen:		SWDX
I have examined the application dated	9/1/61	L
for the <u>Skelly Oil Co. Eunice Gasoline Plant SW</u> Operator Lease and Well No.		
and my recommendations are as follows:		
Casing should be protected by sweet crude or	other m	neansE.F.E.
O.KJ.W.R.		
Yours very truly,		

fours very truly,

OIL CONSERVATION COMMISSION

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

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 13865 ORDER NO. R-12809

APPLICATION OF VERSADO GAS PROCESSORS, LLC, OPERATED BY TARGA RESOURCES, LLC, FOR APPROVAL OF AN ACID GAS INJECTION WELL, LEA COUNTY, NEW MEXICO

#### ORDER OF THE DIVISION

#### BY THE DIVISION:

This case came before the Oil Conservation Division for hearing at 8:15 a.m. on February 1, 2007 and again on July 26, 2007, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 14<sup>th</sup> day of September, 2007, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

#### FINDS THAT:

- (1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.
- (2) The applicant, Versado Gas Processors, LLC as operated by Targa Resources, LLC (hereinafter collectively referred to as "Targa"), seeks authority to inject waste water and acid gas (hydrogen sulfide and carbon dioxide) into the San Andres formation, at a depth interval approximately 4500 feet to 5000 feet below the surface, through its proposed Versado AGI Well No. 1 (API No. 30-045-NA) which it proposes to drill at a location 2250 feet from the South line and 1200 feet from the West line (Unit L) of Section 27, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico. The purpose of the injection is to dispose of natural gas processing wastes from Versado's South Eunice Gas Plant. This well will replace the Eunice Gas Plant SWD Well No. 1 (API No. 30-025-21497) which is located 2580 feet from the South line and 1200 feet from the West line of said Section 27.

- (3) Targa filed its application (Division Form C-108) on December 20, 2006, and at the direction of the Director of the Division, the application was set for hearing before a Division Examiner pursuant to the provisions of Division Rule 701.D.
- (4) This case was first heard on February 1 2007. At that time, no operator or other party appeared in the case in opposition to the application.
- (5) Targa produced one witness at this hearing, Alberto Gutierrez, a hydrogeologist from Geolex, Inc. who testified as follows:
  - (a) Targa had engaged Geolex Inc. to locate a suitable subsurface reservoir into which it could inject the waste water and acid gas from its Eunice Gas Plants. Mr. Gutierrez reviewed the study conducted on behalf of Targa to find a suitable location for acid gas injection and concluded that the proposed injection site met the requisite reservoir criteria. Based on his stratigraphic studies of the formations in this area, Mr. Gutierrez concluded that the San Andres formation has excellent porosity development to the south of the Plant and other reservoir development characteristics that will enable Targa to successfully inject waste water and acid gas into this reservoir.
  - (b) Targa intends to abandon the existing open-hole San Andres UIC Class II injection well due to the age of the well and possible mechanical problems and drill a new well specifically to inject non-hazardous wastewater as well as both hydrogen sulfide and carbon dioxide from Targa's plants through perforations from approximately 4500 to 5000 feet into the San Andres formation. These waste streams would all be continuously mixed and kept under pressure so as to inject in a "liquid" phase.
  - (c) Targa owns the surface and minerals at the proposed injection site in fee, and Targa has obtained all necessary easements and other rights for its surface facilities.
  - (d) Targa has furnished notice to all surface owners and all "affected parties" in the San Andres formation within a one-mile radius of the wellbore, and from the surface to the top of the San Andres and below the base of the San Andres to all "affected parties" within one-half mile of the proposed location as required by the Division.
  - (e) Targa will prepare a hydrogen sulfide contingency plan that complies with OCD Rule 118 prior to activating the system.
- (6) Subsequent to the February 1, 2007 hearing, the case was re-opened for more testimony. Prior to the date of the new hearing, the Division entered appearances from the Environmental Bureau and from the Hobbs District Office. No other parties appeared or otherwise opposed this application.

- (7) At the Division hearing on July 26, 2007, the Applicant produced one witness, Cal Wrangham, a senior environmental safety and health specialist employed by Targa Midstream Services, LP. Mr. Wrangham testified as follows:
  - (a) The proposed well is located in Versado's South Eunice Compressor Station. The land is deeded and owned by Versado Gas Processors, LLC, and Targa is the lessee of oil and gas rights under this tract.
  - (b) Gauge, density, and sonar surveys have been run on the closest of four nearby Liquified Petroleum Gas ("LPG") storage wells which were drilled to store "product" in the Salado ("salt") formation at depths from approximately 1200 to 2400 feet. The Skelly Gasoline Plant Well No. 4 (API No. 30-025-23853) was drilled to a depth of 2075 feet, according to Division records, and is located 2471 feet from the South line and 1658 feet from the West line of Section 27, or 509 feet from the proposed acid gas injection well. The surveys on this well show the well has no remaining LPG "product" in the well and the well's enlarged radius (begun just below the 7-inch casing shoe at 1857 feet) extends a maximum of 60 feet in the direction of the proposed acid gas injection well.
  - (c) None of the four LPG wells identified as being within ½ mile of this proposed injection well is being used anymore. All of these wells are planned to be plugged, but the nearest well would be plugged first.
  - (d) The proposed operator for the new injection well will be Targa Midstream Services LP, who is also the operator of the existing injection well and of the nearby LPG wells. The bond with the Division is under the name of Targa Midstream Services LP.
  - (e) Targa is willing to set surface casing as deep as is needed to protect fresh water.
  - (f) The wellhead will be equipped with a back pressure valve designed to maintain pressure on the waste stream in order to keep the wastes in a liquid phase. The maximum surface injection pressure will be 750 psi or as permitted by the Division.
  - (g) Targa has never injected acid gas into the Eunice Gas Plant SWD Well No. 1.
  - (h) Targa operates an acid gas injection well in Crane County, Texas, which also injects water, hydrogen sulfide, and carbon dioxide.
  - (i) The source of the H2S to be injected into this proposed well is approximately 5 miles away. The pipeline will be permitted separately from this injection permit.

- (j) The proposed acid gas injection well will enable Targa to shut down the sulfur recovery unit at its main Eunice gas processing plant. The sulfur recovery unit is an air emission source and is costly to maintain.
- (k) The proposed acid gas injection well will enable Targa to discontinue releasing into the atmosphere approximately 1226 tons per year of sulfur dioxide and 200 tons per year of carbon dioxide. Instead these gases will be injected back underground where they originated.
- (8) The Environmental Bureau (the "Bureau") of the Division and the Hobbs District office (the "District") each presented one witness at this hearing who testified as follows:
  - (a) The Bureau is charged with regulating LPG wells in New Mexico and was at first concerned about deep acid gas injection and its effect on these LPG wells, or its effect on the fresh water. The Bureau determined that the J.V. Baker Wells No. 1, 2, and 3 were drilled in 1952 and the Skelly Gasoline Plant Well No. 4 in 1971.
  - . (b) The Bureau asked Targa prior to this hearing for the sonar survey on the Skelly Gasoline Plant Well No. 4 in lieu of a simple calculation of borehole volume. The Bureau wants Targa to test the mechanical integrity ("MIT" test) and then plug these wells prior to injecting acid gas into the proposed injection well.
  - (c) The Bureau will be working with Targa on the pipeline permitting and H2S surface safety issues.
  - (d) The Bureau does not otherwise oppose the granting of a permit to inject acid gas into the proposed injection well.
  - (e) The supervisor of the Division's Hobbs district office also supports the granting of this injection permit as long as the well is drilled, cased, cemented, and equipped in a manner which will isolate injection into the intended injection interval, prevent corrosion from the salt interval, and protect fresh water, public health and safety.
  - (f) After investigation into reported depths of "protectable" waters encountered in adjacent lands during drilling operations, the supervisor of the Division's Hobbs district has determined that Targa should set surface pipe into the top of the Rustler anhydrite and cement this pipe completely to surface. Setting pipe to this depth will ensure the protection of all possible Ogallala and Santa Rosa water intervals.
  - (g) The District will require the cement job on the injection casing to be designed with the intention to circulate to surface, and injection tubing to be





lined with a material designed to withstand both types of acid which will be generated from water combining with carbon dioxide and with hydrogen sulfide.

- (h) The District recommends the LPG wells be plugged prior to drilling the proposed well in order to ensure the drilling operations do not cause "fingering" into the LPG wells and migration upward of pressurized waters.
- (i) The District recommends a cement bond log be run after cementing the injection casing even if cement has visually circulated to surface.
- (j) The District recommends an MIT test be run more often than the normal five year interval.
- (9) Division records show the Eunice Gas Plant SWD Well No. 1 (API No. 30-025-21497) was drilled for the purpose of injection and was permitted (prior to the well completion) on September 21, 1961, for injection into an open-hole interval within the upper San Andres formation from approximately 3935 to 4000 feet (SWD-29). The well was actually completed as an open-hole injection well from 4010 to 4550 feet. Injection records indicate the well has very high capability of taking water, and the operator was still reporting substantial injection volumes as of June of 2007. In 1983, a pump-in injection test reached a rate of 10 barrels per minute at a bottomhole pressure of 3000 psi without showing any apparent evidence of fracturing.
- (10) The Eunice Gas Plant SWD Well No. 1 should be plugged and abandoned under supervision of the Hobbs district office prior to any injection into the proposed injection well.
- (11) Prior to drilling the proposed new injection well, the Skelly Gasoline Plant Well No. 4 LPG storage well should be MIT tested under the direction of the Division's Environmental Bureau and then plugged and abandoned with a procedure acceptable to the District office and the Environmental Bureau.
- (12) With the exception of the Eunice Gas Plant SWD Well No. 1, there are no wells within ½ mile of the proposed well which penetrate the top of the proposed injection interval.
- (13) There are approximately nine wells producing from the Penrose sand within ½ mile of the proposed injection well. The most common total depths of these Penrose wells are 3700 feet deep with the deepest at 4075 feet.
- (14) The proposed well should be cased and cemented with a program in accordance with the requirements of the Hobbs district office and allowing for possible cement thief zones in the San Andres injection interval, and protection of the Penrose sands, the Salado salt interval, and all water sands down to the Rustler anhydrite.

- (15) Targa should conduct any reservoir tests, such as falloff or step-rate tests, on the newly drilled well prior to injecting acid gas into the well for the first time. The bottomhole injection pressure, allowing for density of injected fluids, should be restricted to a pressure which will not cause formation fracturing. Any future application to raise the permitted injection pressure into this well should include notice provided to surrounding operators in the overlying Penrose sands.
- (16) The proposed well should be equipped with injection tubing coated to prevent corrosion from a mixture of hydrogen sulfide, wastewater, and carbon dioxide. The casing-tubing annulus should be filled with diesel or corrosion inhibited fluid as directed by the District. The well should be equipped with a back pressure choke or valve designed to maintain pressure on the injection stream so the injection mixture stays primarily in a liquid phase. The well should have gauges installed to record pressures both before and after this tubing choke and on the annulus. A record should be maintained by the operator of these wellhead pressures and of injection rates and volumes of all components entering the well.
- (17) Due to the probable complexity of this order and the possible need for small future changes, the Division should include a provision in this order allowing the operator to apply administratively, after proper notice, for amendments except for amendments changing the depth of the injection interval or the injection formation.
- (18) The Division concludes that Targa's proposed injection well should be approved, and the proposed injection operation can be conducted in a safe and responsible manner, without causing waste, impairing correlative rights or endangering fresh water, public health or the environment.
- (19) The proposed operation is an environmentally superior means of disposing of wastes generated at the South Eunice Gas Plant because it will provide for the sequestration of the greenhouse gases: hydrogen sulfide and carbon dioxide.

### IT IS THEREFORE ORDERED THAT:

- (1) Targa Midstream Services LP ("Targa" or "operator") is hereby authorized to inject natural gas processing wastes such as waste water, hydrogen sulfide, and carbon dioxide for disposal purposes into its proposed Versado AGI Well No. 1 which will be drilled 2250 feet from the South line and 1200 feet from the West line (Unit L) of Section 27, Township 22 South, Range 37 East, NMPM, in Lea County, New Mexico. Injection is permitted into the San Andres formation through perforations from approximately 4500 feet to 5000 feet below the surface, through tubing set in a packer located within 100 feet of the top injection perforation.
- (2) Prior to drilling the Versado AGI Well No. 1 for purposes of injection, the Skelly Gasoline Plant Well No. 4 LPG storage well shall be MIT tested under the direction of the Environmental Bureau and then plugged and abandoned with a procedure acceptable to the Hobbs district office and the Environmental Bureau.

- (3) Targa shall obtain a permit to drill the Versado AGI Well No. 1 from the District. During drilling operations of the Versado AGI Well No. 1, Targa shall monitor the well for hydrocarbon shows, lost circulation zones, and water flows, and shall report any of these events to the District on sundry forms.
- (4) The well shall be drilled, cased, and cemented using information gathered during drilling and according to the requirements of the District. The design shall effectively isolate the injection fluid into the intended injection formation, isolate the Penrose sand oil producing interval and the Salado salt with casing and cement, and cover all water sands to the top of the Rustler anhydrite with two casing strings and at least one cement sheath. A cement bond log shall be run from total depth to the surface on any casing which did not circulate cement and also after cementing the final casing, even if cement did visually circulate.
- (5) The tubing and packer shall be coated with material rated to protect against corrosion due to a mixture of water, carbon dioxide, and hydrogen sulfide or as required by the District. The tubing shall be equipped with a back pressure choke in order to maintain pressure on the injection mixture and keep the mixture in a liquid phase. The well shall have gauges installed to record and control pressures both before and after this tubing choke.
- (6) The casing-tubing annulus shall be loaded with an inert, corrosion resistant fluid such as diesel or inhibited water [or as specified by the District] and equipped with a gauge and a leak detection device capable of determining any leakage in the casing, tubing, or packer.
- (7) Mechanical integrity testing is required after installation of the injection tubing and prior to commencing injection operations, and at least once every two years thereafter.
- (8) Gandy shall notify the District of the time of the setting of the tubing and packer and of any mechanical integrity test ("MIT") so such operations can be witnessed or inspected.
- (9) Prior to any injection into the approved injection well, the Eunice Gas Plant SWD Well No. 1 (API No. 30-025-21497) shall be plugged and abandoned under supervision of the District and a final sundry report filed with the Division showing evidence of plugging.
- (10) The surface injection pressure downstream of the installed choke shall be regulated such that bottomhole pressure at 4500 feet in the injection well does not exceed 2850 psi. This bottomhole pressure equates to maintaining a maximum of 900 psi on the surface of the well if injecting pure water or a higher allowable surface pressure if injecting lighter weight fluid.



- (11) The Director may administratively authorize an increase in the injection pressure if the operator shows that a higher pressure will not result in formation fracturing or migration of injected fluids from the permitted injection formation. As justification, the operator must submit results of an injection test such as a Step-Rate-Test to the Division and must provide notice thereof to affected persons, including offset operators in the overlying Penrose sands.
- (12) A daily record shall be maintained by the operator of these three wellhead pressures and of injection rates and volumes of all components entering the well. The operator shall report these readings annually to the Engineering Bureau in the Division's Santa Fe Office and to the District. Each such report shall include the well name, location, API Number and the number of this order.
- (13) The operator of the well (Targa or any successor operator) shall take all steps necessary to insure that injected fluids enter the proposed injection interval and do not escape to other formations or onto the surface.
- (14) Without limitation on the duties of the operator as provided in Division Rules 19 and 116, or otherwise; the operator shall immediately notify the District of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.
- (15) Prior to commencing injection of acid gas, the operator shall prepare and secure approval by the Division's Environmental Bureau of a hydrogen sulfide contingency plan that complies with Division Rule 118.
- (16) The operator may commence injection of produced water prior to injection of acid gas and may inject either or both fluids pursuant to the limitations of this order, depending on operational considerations. The operator shall submit monthly reports of injection volumes of waste water and acid gas on Form C-115, in accordance with Division Rules 706 and 1115.
- (17) The injection authority herein granted shall terminate one year after the effective date of this order if the operator has not commenced injection operations pursuant hereto; provided however, the Division Director, upon written request of the operator received by the Division prior to the end of one year, may extend this time for good cause shown.
- (18) Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.
- (19) At the discretion of the Division Director and after proper notice is provided, any proposed amendments or changes to this order may be granted administratively; provided however, proposed amendments to raise the depth of the

Case No. 13865 Order No. R-12809 Page 9 of 9

injection interval or change the target injection formation may be granted only after notice and hearing.

(20) Jurisdiction is retained by the Division for the entry of further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (i) to protect fresh water or (ii) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.

Director

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

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 13865 ORDER NO. R-12809-A

APPLICATION OF VERSADO GAS PROCESSORS, LLC, OPERATED BY TARGA RESOURCES, LLC, FOR APPROVAL OF AN ACID GAS INJECTION WELL, LEA COUNTY, NEW MEXICO

#### **NUNC PRO TUNC ORDER**

### BY THE DIVISION:

It appears to the Oil Conservation Division that Order No. R-12809, dated September 14, 2007, does not correctly state the intended order of the Division.

### IT IS THEREFORE ORDERED:

- (1) Finding Paragraph 2 of Order No. R-12809 is replaced with the following:
- (2) The applicant, Versado Gas Processors, LLC as operated by Targa Resources, LLC (hereinafter collectively referred to as "Targa"), seeks authority to inject waste water and acid gas (hydrogen sulfide and carbon dioxide) into the San Andres formation, at a depth interval approximately 4500 feet to 5000 feet below the surface, through its proposed Versado AGI Well No. 1 (API No. 30-045-NA) which it proposes to drill at a location 2250 feet from the South line and 1200 feet from the West line (Unit L) of Section 27, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico. The purpose of the injection is to dispose of natural gas processing wastes from Versado's Eunice Gas Plant and South Eunice Compressor Station. This well will replace the South Eunice Compressor Station SWD Well No. 1 (API No. 30-025-21497) which is located 2580 feet from the South line and 1200 feet from the West line of said Section 27.
- (2) Finding Paragraph 7(f) of Order No. R-12809 is replaced with the following:
  - (f) The wellhead will be equipped with a back pressure valve designed to maintain pressure on the waste stream in order to keep the wastes in a liquid phase.

- (3) Finding Paragraph 19 of Order No. R-12809 is replaced with the following:
  - (19) The proposed operation is an environmentally superior means of disposing of wastes generated at the Eunice Gas Plant because it will provide for the sequestration of the greenhouse gases: hydrogen sulfide and carbon dioxide.
  - (4) Ordering Paragraph No. 8 of Order No. R-12809 is replaced with the following:
  - (8) Targa shall notify the District of the time of the setting of the tubing and packer and of any mechanical integrity test ("MIT") so such operations can be witnessed or inspected.
- (5) The corrections set forth in this order shall be entered retroactively as of September 14, 2007.
- (6) Except as modified hereby, Order No. R-12809 shall remain in full force and effect.
- (7) Jurisdiction is retained for the entry of such further orders as may be necessary.

DONE at Santa Fe, New Mexico, on this 22<sup>nd</sup> day of October, 2007.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.

Director



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

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 13865 (Re-Opened) ORDER NO. R-12809-B

APPLICATION OF TARGA MIDSTREAM SERVICES, LP TO EXTEND THE DEADLINE TO COMMENCE INJECTION OF ACID GAS INTO AN APPROVED INJECTION WELL, LEA COUNTY, NEW MEXICO

# ORDER OF THE DIVISION

# THE DIVISION FINDS THAT:

- (1) Targa through its attorney has petitioned in writing to extend the deadline to begin injection into the proposed Versado AGI Well No. 1 to be located 2250 FSL, 1200 FWL, within Unit L of Section 27, T22S R37E, NMPM, Lea County New Mexico. Said well was approved for injection of acid gas by Division Order No. R-12809, as amended, in Case No. 13865.
- (2) The following reasons were cited by Targa in this request: (i) additional time is needed to plug nearby wells required in the order; and (ii) the location of this acid gas injection well may be moved if approved by the Division in an upcoming hearing.
- (3) Targa's request should be granted and the deadline to commence injection should be extended by one calendar year until September 14, 2009.

### IT IS THEREFORE ORDERED:

- (1) Targa's request is granted and the deadline to commence injection into the proposed Versado AGI Well No. 1 to be located 2250 FSL, 1200 FWL, Unit L of Section 27, T22S R37E, NMPM, Lea County New Mexico, is hereby extended until September 14, 2009.
- (2) Ordering Paragraph (17) of Division Order No. R-12809 is hereby modified to read as follows:

"The injection authority herein granted shall terminate September 14, 2009, if the operator has not commenced injection operations pursuant hereto; provided however, the Division director, upon written request of the operator received by the Division prior to September 14, 2009, may extend this time for good cause shown."

- (3) Except as modified hereby, Order No. R-12809 shall remain in full force and effect.
  - (4) Jurisdiction is retained for the entry of such further orders as may be necessary.

DONE at Santa Fe, New Mexico, on this 3 day of August 2008

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.

DIRECTOR

SEAL