

**ATTACHMENT 5**

**NMOCC Order R-13809**

**OCT 28 2014**

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

**APPLICATION OF DCP MIDSTREAM, LP  
FOR AUTHORITY TO INJECT TREATED  
ACID GAS INTO THE LOWER CHERRY CANYON  
AND UPPER BRUSHY CANYON FORMATIONS  
THROUGH ITS PROPOSED ZIA AGI #1 AND ZIA AGI #2,  
LEA COUNTY, NEW MEXICO**

**CASE NO. 15073  
ORDER NO.R-13809**

**ORDER OF THE COMMISSION**

THIS MATTER came before the Oil Conservation Commission ("Commission") on the application of DCP Midstream, LP ("DCP" or the "Applicant") for authority to inject treated acid gas. The Commission having conducted a public hearing on February 13, 2014, and having considered the testimony, the record, and the arguments of the parties, and being otherwise fully advised, enters the following findings, conclusions and order.

**THE COMMISSION FINDS THAT:**

1. Notice has been given of the application and the hearing of this matter, and the Commission has jurisdiction of the parties and the subject matter herein.
2. On December 10, 2013, DCP filed an administrative application (OCD Form C-108 and attachments), seeking authority to inject treated acid gas ("TAG") consisting of carbon dioxide and hydrogen sulfide into the target injection zones located in the Lower Cherry Canyon and Upper Brushy Canyon formations through two deviated acid gas injection wells, Zia AGI No. 1 and No. 2, at a depth interval of approximately 5,470 to 6,070 feet below the surface, and at a location Section 19, Township 19 South, Range 32 East, N.M.P.M., in Lea County, New Mexico.
3. The Form C-108 Application was complete and contains all the information necessary to grant approval.
4. Adjacent operators and the U.S. Bureau of Land Management, which owns the surface and minerals within the application area, support DCP's application.
5. The purpose of the proposed Class II injection wells is to dispose of natural gas processing wastes consisting of carbon dioxide ("CO<sub>2</sub>") and hydrogen sulfide ("H<sub>2</sub>S") from the Applicant's proposed Zia II gas processing plant ("Zia II Gas Plant") by

injecting TAG into the target injection zones. The TAG will consist of approximately 11 percent H<sub>2</sub>S and 89 percent CO<sub>2</sub>, although these proportions will vary with inlet gas composition changes over time.

6. The Zia AGI No. 1 well will have a surface location approximately 2100 feet from the South line and 950 feet from the West line and a bottom-hole location approximately 2580 feet from the North line and 950 feet from the West line of said Section 19. The Zia AGI No. 2 well will have a surface location approximately 1900 feet from the South line and 950 feet from the West line and a bottom-hole location approximately 1950 feet from the South line and 1400 feet from the West line of said Section 19.

7. The bottom-hole locations will be approximately 1200 feet apart due to the deviation of the well bores.

8. The proposed acid gas injection wells will be located within the boundary of the Zia II Gas Plant's premises.

9. On December 10, 2013, DCP formally requested that its C-108 Application be set for a hearing before the Commission on the February 13, 2014, docket.

10. On February 6, 2014, DCP filed with its Prehearing Statement a corrected "Table I—Reservoir Injection Pressure and Volume Calculations" that was to replace the original Table 1 filed with the Form C-108 Application.

11. DCP provided personal notice, via certified mail, return-receipt requested, of the submission of its application and the Commission hearing to all operators, surface owners, and lessees within one-half mile radius of the bottom-hole location for each proposed well.

12. Pursuant to Rule 19.15.4.9.B.3 NMRA, the Energy, Minerals and Natural Resources Department Oil Conservation Division ("Division" or "OCD") provided public notice by publishing notice of DCP's application and the Commission hearing in a newspaper of general circulation in Lea County.

13. In support of the application, DCP presented direct testimony from two witnesses: one fact witness, David Stone, DCP's Vice President Commercial and Operations, and a technical witness, Alberto Gutiérrez, RG, President of Geolex, Inc.

14. The Division filed an entry of appearance as an intervener and presented one witness, Phillip Goetze, who testified in support of the Division's recommended conditions of approval outlined in the Division's Prehearing Statement.

15. No objections to the application were filed.

16. David Stone testified that the proposed Zia II Gas Plant will have a capacity to process up to 200 MMSCF of sour gas per day and that the design and operation of the Zia II Gas Plant is dependent on the approval of the proposed AGI wells to dispose of the residual acid gas. The AGI wells will have a combined injection capacity of 15.0 MMSCF per day to dispose of the resulting TAG stream.

17. The proposed Zia II Gas Plant and two AGI wells are necessary to help meet growing production demand for sour gas processing and waste disposal, will replace some out-dated DCP facilities, will increase processing reliability, and will result in a net reduction of air emissions.

18. DCP is prepared to commit nearly \$500 million to the construction of the Zia II Gas Plant, the AGI wells and associated facilities and infrastructure, the construction and operation all of which are dependent on a permit that approves operations for thirty-plus years.

19. DCP intends to begin construction of the Zia II Gas Plant and AGI wells to commence operations in the summer 2015, but requests authority to initiate injection for up to three years from entry of an order to accommodate variables and long lead times necessary for obtaining the required permits and construction associated with the plant.

20. DCP technical witness Alberto Gutiérrez, RG, testified that injection of TAG through the proposed AGI wells will be at a maximum rate of 15.0 MMSCF per day, or about 7.5 MMSCF per day for each well, and at a maximum operating surface pressure of 2,233 pounds per square inch gauge.

21. With a safety factor of 100 percent, or 15.0 MMSCF per day per well, the radius of influence for each well after injecting for thirty years will be approximately 0.37 miles. The actual radius of influence for each well, based on the actual injection volumes, will be approximately 0.26 miles after thirty years of injection.

22. The data used to model the reservoir characteristics and conditions was derived from more than 30 wells which penetrate the injection zone and are located within approximately two miles of the proposed injection points.

23. Twenty-nine wells penetrate the proposed injection zone within a one-mile radius of each proposed AGI well. Within one-half mile of the injection points, nine wells penetrate the injection zone, of which seven are active wells and two wells are plugged and abandoned.

24. The proposed injection zone is laterally extensive with a high porosity, indicating that it will adequately contain the injected TAG within the target injection zone and within the half-mile area of review.

25. The proposed injection zone provides a sufficient geologic seal to contain the injected TAG and prevent its migration into other zones. The injection zone is

sufficiently isolated from any protectable groundwater sources and there is no evidence injection will impair existing or potential hydrocarbon production in the area. Nor are there any faulting or other geologic or manmade conduits that will allow the treated injected acid gas to migrate out of the injection zone.

26. Freshwater will be protected by surface casing, which will extend to approximately 1,025 feet below the surface. The Capitan Aquifer will be completely isolated by the intermediate casing, set at approximately 4,600 feet below the surface. All casing strings will be cemented to the surface, pressure tested and verified using 360-degree cement bond logs. The casing and cement program will meet all Bureau of Land Management guidelines and requirements, in addition to all Oil Conservation Division requirements.

27. The entire production tubing in both AGI wells will be lined with fiberglass to prevent corrosion. Approximately 250 feet of corrosion-resistant production casing will be installed between approximately 5,400 feet to 5,650 feet below the surface to protect the packer and packer seat.

28. The annular space will be filled with corrosion-inhibited diesel fuel that also contains a biocide.

29. Surface TAG injection pressures, temperatures and flow rates will be continuously monitored and recorded, as will surface annular pressure, and bottom-hole temperatures and pressures in the tubing and annulus of each well.

30. Injection of the proposed TAG stream will protect the environment and human health, and will not cause waste or impair correlative rights.

31. Phillip Goetze, the Division's witness, presented testimony that the Division proposed several conditions of approval in its Prehearing Statement and that the Division and DCP had reached agreement on the proposed conditions.

32. DCP and the Division reached agreement on the conditions of approval proposed by the Division, as follows:

- a. DCP agrees to conduct a mechanical integrity test ("MIT") on both proposed AGI wells every year.
- b. DCP agrees to conduct continuous monitoring of surface TAG injection pressure, temperature and rate, surface annular pressure and bottom-hole temperatures and pressures inside the tubing and annulus.
- c. DCP agrees to keep a maintenance log of its diesel replacement activities in the annulus of the wells.

- d. DCP agrees to provide summary data on injection parameters monitored in item b. above, as requested by the Division in quarterly reports.
- e. DCP agrees to obtain approval of a H<sub>2</sub>S Contingency Plan pursuant to Division Rule 11 that incorporates the activities and operations of the proposed Zia II Gas Plant and the AGI well operations, and to conduct and implement all required air monitoring and safety measures pursuant to that Plan.
- f. DCP agrees that thirty days prior to commencing injection, the operator shall coordinate with the Division to establish immediate notification parameters for annulus pressure and tubing and casing differential pressure at a set injection temperature.
- g. DCP agrees that ninety days after commencing injection, the operator shall review the pre-injection immediate notification parameters with the Division. If the Division determines that the parameters require modification, new immediate notification parameters shall be developed and implemented in coordination with the Division.
- h. DCP agrees that the immediate notification parameters shall be reviewed jointly by the operator and the Division periodically, but not less than once a year.

33. DCP also agrees to undertake a good-faith effort to perform reasonable and prudent remedial work requested by the Division on the four wells identified by the Division, as follows:

- a. Delhi Federal-001, API No. 3002520025; Lusk Deep Unit A-005, API No. 3002520122; and Gulf Federal-003, API No. 3002520876:

DCP will undertake a good-faith effort to work with the operator of the well or the Division (in the case of an orphaned well) to enhance isolation of the injection zone when the operator either works-over the well, plugs and abandons the well or after 15 years from the date of this order, whichever is sooner.

- b. Lusk Deep Unit-008, API No. 3001510382:

DCP will review any available records regarding this well and then consult with the Division to determine whether remedial work is required. If it is determined that additional zone isolation needs to occur, DCP has up to 15 years from the date of this order to undertake a good-faith effort to complete said isolation.

**THE COMMISSION CONCLUDES THAT:**

1. The Commission has jurisdiction over the parties and the subject matter of this case.
2. Proper public notice has been given. Proper individual notice has been given to all operators, surface owners, and lessees within a one-half mile radius of each proposed injection well.
3. Under the conditions approved in this Order, DCP's injection of CO<sub>2</sub> and H<sub>2</sub>S can be conducted in a safe manner without causing waste, impairing correlative rights, negatively impacting oil and gas producing zones, or endangering fresh water, public health, or the environment.
4. Given the nature of the TAG, the Commission concludes that the specific conditions are necessary to ensure protection of public health, the environment and correlative rights.

**IT IS THEREFORE ORDERED THAT:**

1. DCP's application is approved as provided in the Form C-108 as amended, and as modified by the conditions addressed below. Accordingly, DCP is hereby authorized to drill and operate two AGI wells located in Section 19, Township 19 South, Range 32 East, N.M.P.M., Lea County, New Mexico, to dispose of TAG containing CO<sub>2</sub> and H<sub>2</sub>S from DCP's proposed Zia II gas processing plant through injection only into the Lower Cherry Canyon and Upper Brushy Canyon formations at a depth of approximately 5,470 to 6,070 feet below the surface.
2. The AGI wells shall be constructed in accordance with the description in the Form C-108 filed by the Applicant in this case, as amended, and as modified at the hearing by the conditions agreed to by DCP and the Oil Conservation Division. DCP's request for a maximum allowable operating pressure for injection of 2,233 pounds per square inch gauge (psig) is approved.
3. DCP agrees to undertake good faith efforts at remedial actions addressing the requirements of the Division with respect to each of the four wells identified in the findings of this Order that penetrate the injection zone.
4. DCP shall be required to conduct a MIT on both AGI wells once every year in accordance with Division rules. The operator shall notify the District Office of the Division of the time of the mechanical integrity tests so that such operations can be witnessed or inspected.
5. Prior to commencing injection, the operator shall prepare and secure approval by the Division's Environmental Bureau of a hydrogen sulfide contingency plan that complies with Division Rule 19.15.11.9 NMAC for both AGI wells.

6. The casing-tubing annulus of the AGI No. 2 well shall be loaded with diesel fluid treated with corrosion inhibitors and biocides and equipped with a pressure gauge or approved leak-detection device to detect any leakage in the casing, tubing, or packer.

7. No later than thirty days prior to commencing injection, the operator shall coordinate with the Division to establish immediate notification parameters for annulus pressure and tubing and casing differential pressure at a set injection temperature.

8. Ninety days after commencing injection, the operator must review the pre-injection immediate notification parameters with the Division. If the Division determines that the parameters require modification, new immediate notification parameters shall be developed and implemented in coordination with the Division.

9. The immediate notification parameters shall be reviewed jointly by the operator and the Division periodically, but not less than once a year.

10. The operator shall record injection rates and pressures on a continuous basis and report these readings in a summary form on a quarterly basis to the Engineering Bureau in the Division's Santa Fe Office and to the Division's Hobbs District Office. Each such report shall include the well name, location, API Number and the number of this order.

11. The operator shall every ten years, once injection begins, provide the Division with a report that compares the reservoir pressures, volumes injected and projected TAG plume extent to those provided in the original order, along with a summary of all the injection results to date. The report shall include an updated model of current and projected plume migration and shall use the modeling technology in standard use at the time of the report and any available information about plume migration.

12. The injection authority herein granted shall terminate three years 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, may extend this time for good cause shown.

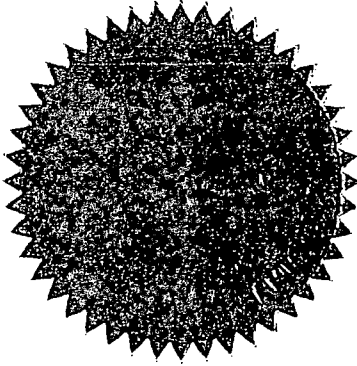
13. Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state, or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

OCT 27 2014

DONE at Santa Fe, New Mexico, on this 13th day of March, 2014.

RECEIVED

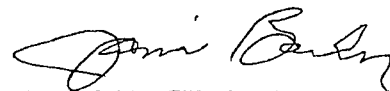
STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



SEAL

  
ROBERT BALCH, Member

  
TERRY WARNELL, Member

  
JAMI BAILEY, Chair