

June 23, 2005

**OIL & GAS DOCKET NO. 05-0243050**

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**THE APPLICATION OF XTO ENERGY INC. TO CONSTRUCT AND OPERATE A HYDROGEN SULPHIDE GAS PIPELINE, AN EXTENSION OF THE TEAGUE SOUR GAS GATHERING SYSTEM, THE BUTLER #8 TO CURRY #1, 12-INCH LINE, FREESTONE COUNTY, TEXAS**

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**APPLICATION REVIEWED BY:** Thomas H. Richter, P.E.

**DATE APPLICATION FILED:** May 25, 2005

**DATE REVIEWED:** June 23, 2005

**EXAMINER'S REPORT AND RECOMMENDATION**  
**STATEMENT OF THE CASE**

This is the unprotested application of XTO Energy Inc. for Commission authority pursuant to Statewide Rules 106, 70 and 36 for approval to construct and operate a hydrogen sulphide (H<sub>2</sub>S) gas pipeline in Freestone County.

The Commission's Field Operations Section, Gas Services Division and Safety Division have reviewed the application and have determined that the application complies with the applicable provisions of the Commission's Rules. The proposed 12" low pressure gathering line will gather produced gas from wells between the Butler Lease Well No. 8 and the Curry Lease Well No. 1 will deliver gas to either the Teague Townsite Compressor Station or the N.E. Teague Compressor Station whichever has the lower suction pressure at any given time. The examiner recommends approval of the application.

**DISCUSSION OF THE EVIDENCE**

The Teague Sour Gas Gathering System (T-4 Permit No. 06595) gathers full well stream gas from area wells that produce gas containing hydrogen sulphide. The gathering system delivers produced gas to either the Teague Townsite Gas Plant or the Enbridge Pipeline delivery point. The gathering system, the compressor stations and the gas plant have their own H<sub>2</sub>S contingency plans. The proposed 12" line will be approximately 10,348 feet in length. The low pressure line will be operated at between 30 and 75 psig and the maximum allowed operating pressure is 800 psig. Overpressure relief valves are set at 575 psig at the compressor stations. If the pressure on the line reaches 575 psig the compressors will shut down and default to the flare at the compressor stations.

If the line pressure at a station decreases to 15 psig or less, the compressors will shut down on low suction pressure. The maximum through put of the line will not exceed 20 MMCFD.

The H<sub>2</sub>S concentration is 1400 parts per million (ppm). The 100 ppm and 500 ppm radius of exposure (ROE) is based on the Statewide Rule 36 Pasquill-Gifford equation that estimates the 100 ppm ROE is 811 feet and the 500 ppm ROE is 371 feet [Section (c)(2)]. The line will cross both County Road 705 and State Hwy 179. The 100 ppm ROE includes five residential dwellings.

The submitted contingency plan for the gathering line is in accordance and complies with the provisions of Rule 36(c)(9).

All materials will satisfy the requirements described in the latest editions of NACE Standard MR-01-75-2003. The handling and installation of materials and equipment used in hydrogen sulphide service are to be performed in such a manner so as not to induce susceptibility to Sulphide stress cracking. The gathering line will be new API 5L X-42 Grade steel pipe equipped with a cathodic protection system for external corrosion control. All welds will be x-rayed. The lines will be chemically treated as needed for internal corrosion and monitored with corrosion coupons. H<sub>2</sub>S warning signs compliant with Rule 36(c)(6)(A) and (c)(6)(B) will be posted at all public road crossings as well as intervals along the pipeline frequent enough as to provide warning to avoid accidental rupture of the line by excavation. The signs will indicate poison gas, company name and emergency phone numbers. The line will be buried more than 5 feet below ground level at road crossings and 3 feet along the rest of the right-of-way.

The proposed line will comply with Statewide Rule 36(c)(8). This is an area that has had H<sub>2</sub>S gas production and transmission for many years.

XTO Energy Inc. published notice of the application in a newspaper of general circulation in Freestone County. The notice was published in *The Teague Chronicle* on May 11, 2005. The application was filed with the Freestone County Clerk on May 11, 2005.

### **FINDINGS OF FACT**

1. On May 25, 2005, XTO Energy, Inc. filed an application for a permit to construct hydrogen sulphide gas gathering pipeline extensions in Freestone County.
2. XTO Energy Inc. published notice of the application in a newspaper of general circulation in Freestone County. The notice was published in *The Teague Chronicle* on May 11, 2005. The application was filed with the Freestone County Clerk on May 11, 2005.
3. The Teague Sour Gas Gathering System (T-4 Permit No. 06595) gathers full well stream gas from area wells that produce gas containing hydrogen sulphide and deliver gas from the compressor facility to either the Teague Townsite Gas Plant or the Enbridge Pipeline delivery point. The gathering system, the compressor stations and the gas plant have their own H<sub>2</sub>S contingency plans.

4. The proposed 12" low pressure gathering line (approximately 10,348 feet in length) will gather produced gas from wells between the Butler Lease Well No. 8 and the Curry Lease Well No. 1 will deliver gas to either the Teague Townsite Compressor Station or the N.E. Teague Compressor Station whichever has the lower suction pressure at any given time.
  - a. The low pressure line will be operated at between 30 and 75 psig and the maximum allowed operating pressure is 800 psig. Overpressure relief valves are set at 575 psig at the compressor stations. If the line pressure at a station decreases to 15 psig or less, the compressors will shut down on low suction pressure.
  - b. The line is designed to go to flare in case of an incident.
  - c. The line is designed to carry a maximum of 20 MMCFD.
  - d. The hydrogen sulphide (H<sub>2</sub>S) concentration is 1400 parts per million (ppm).
  - e. Statewide Rule 36's authorized Pasquill-Gifford equation estimates the 100 ppm ROE is 811 feet and the 500 ppm ROE is 371 feet [Section (c)(2)].
  - f. The 100 ppm ROE includes five residential dwellings and the 500 ppm ROE crosses a county road and a state highway.
4. Pipeline materials and construction meet the NACE standards as required by Statewide Rule 36 for hydrogen sulphide service.
5. The submitted contingency plan for the line is in accordance and complies with the provisions of Rule 36(c)(9).
6. The pipeline will be constructed subject to Commission inspections for compliance with the appropriate Commission Rules pursuant to Statewide Rule 36(c)(6)(7)(8) and (13).
7. The Commission's Deputy Director of Field Operations, Gas Services Division and Safety Division have reviewed the application and recommend approval.

#### **CONCLUSIONS OF LAW**

1. Proper notice was timely given to all parties entitled to notice pursuant to applicable statutes and rules.
2. All things have occurred and have been accomplished to give the Commission jurisdiction in this case.
3. The application complies with Statewide Rules 36, 70 and 106.

4. Approving the application for a permit to construct and operate the proposed gas pipeline is consistent with the rules and safety standards adopted by the Commission.

**EXAMINER'S RECOMMENDATION**

The examiner recommends that the application of XTO Energy Inc. for Commission authority pursuant to Statewide Rules 106, 70 and 36 for approval to construct and operate the proposed hydrogen sulphide gas pipeline extension in Freestone County be approved.

Respectfully submitted,

Thomas H. Richter, P.E.  
Technical Examiner  
Office of General Counsel