

THE APPLICATION OF SOUTHERN UNION GAS SERVICES, LTD TO CONSTRUCT AND OPERATE A HYDROGEN SULPHIDE GAS PIPELINE, KEYSTONE SYSTEM, JAL # 3 TO KEYSTONE TRANSFER LINE, WINKLER COUNTY, TEXAS

APPLICATION REVIEWED BY: Thomas H. Richter, P.E.
DATE APPLICATION FILED: September 20, 2006
DATE EXAMINER RECEIVED FILE: October 20, 2006
DATE REVIEWED: October 24, 2006

EXAMINER'S REPORT AND RECOMMENDATION
STATEMENT OF THE CASE

This is the unprotected application of Southern Union Gas Services for Commission authority pursuant to Statewide Rules 106, 70 and 36 for approval to construct and operate a hydrogen sulphide (H₂S) gas pipeline in Winkler County.

The Commission's Field Operations Section recommends approval. The Commission's Pipeline Safety Division has reviewed the application. Gas Services recommends approval of the T- 4 (Application For Permit To Operate A Pipeline In Texas). The examiner recommends Commission approval.

DISCUSSION OF THE EVIDENCE

The proposed transfer line (an extension of an existing system T-4 Permit No. 01078) will deliver gathered gas from JAL #3 Plant in New Mexico to the Keystone Gas Plant in Winkler County. The Keystone Gas Plant, a 24 hour manned facility, has been in existence for many years and has its own H₂S contingency plan. The proposed 16" line will be approximately 4.13 miles in length connecting the Keystone Gas Plant and ending at the Texas-New Mexico State Line connecting with two existing pipeline systems. The normal operating pressure of the line will be 1170 psig and the maximum allowed design pressure is 1440 psig. The maximum volume capacity of the line is 95,000 MCFD.

The H₂S concentration is 5,000 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 4,768 feet and the 500 ppm ROE is 2,179 feet. There are no public areas within the 100 ppm ROE. The 500 ppm ROE includes the crossing of one public road, FM 1218 (a rural road with little traffic other than oil field traffic). Manual block valves will be located at the gas plant and north of the Farm Market Road crossing and the JAL #3 Plant in New Mexico. Pressure relief valves are installed at the plants to continuously monitor line pressure.

The contingency plan for the proposed line is incorporated with the Keystone Gas Plant's contingency plan and is in accordance 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 and API RP-14E. 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 line will be new API 5L X-42 Grade steel pipe equipped with a cathodic protection system for external corrosion control. The operator will implement a leak protection plan that includes a program of inspection and internal corrosion prevention (routine pigging and chemical treating). All valves, flanges, etc shall be constructed of those metals manufactured to be resistant to H₂S. H₂S 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 proposed line will comply with Statewide Rule 36(c)(8). This is an area that has had H₂S gas production and transmission for many years.

Southern Union Gas Services published notice of the application in a newspaper of general circulation in Winkler County. The notice was published in *The Winkler County News* on September 14 and 21, 2006. The application was filed with the Winkler County Clerk on September 18, 2006.

FINDINGS OF FACT

1. On September 20, 2006, Southern Union Gas Services filed an application for a permit to construct hydrogen sulphide gas gathering pipeline in Winkler County.
2. Southern Union Gas Services published notice of the application in a newspaper of general circulation in Winkler County. The notice was published in *The Winkler County News* on September 14 and 21, 2006. The application was filed with the Winkler County Clerk on September 18, 2006.
3. The proposed transfer line (an extension of an existing system T-4 Permit No. 01078) will deliver gathered gas containing hydrogen sulphide from the JAL #3 Plant in New Mexico to the Keystone Gas Plant in Winkler County.
 - a. The Keystone Gas Plant, a 24 hour manned facility, has been in existence for many years and has its own H₂S contingency plan.
4. The proposed 16" line will be approximately 4.13 miles in length connecting the Keystone Gas Plant and ending at the Texas-New Mexico State Line connecting with two existing pipeline systems.
 - a. The normal operating pressure of the line will be 1170 psig and the maximum allowed design pressure is 1440 psig.

- b. The maximum volume capacity of the line is 95,000 MCFD.
 - c. The H₂S concentration is 5,000 parts per million (ppm).
 - d. Statewide Rule 36's authorized Pasquill-Gifford equation estimates the 100 ppm ROE is 4,768 feet and the 500 ppm ROE is 2,179 feet.
 - e. There are no public areas within the 100 ppm ROE. The 500 ppm ROE includes the crossing of one public road, FM 1218 (a rural road with little traffic other than oil field traffic).
- 5. Pipeline materials and construction meet the NACE standards as required by Statewide Rule 36 for hydrogen sulphide service.
 - 6. The contingency plan for the proposed line is incorporated with Gas Plant's contingency plan and is in accordance with the provisions of Rule 36(c)(9).
 - 7. 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).
 - 8. The Commission's Field Operations Section recommends approval. The Commission's Pipeline Safety Division has reviewed the application. Gas Services recommends approval of the T- 4 (Application For Permit To Operate A Pipeline In Texas).

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 Southern Union Gas Services for Commission authority pursuant to Statewide Rules 106, 70 and 36 for approval to construct and operate the proposed hydrogen sulphide gas pipeline in Winkler County be approved.

Respectfully submitted,

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