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BUREAU OF AIR, PERMIT SECTION  
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PROJECT SUMMARY  
FOR A CONSTRUCTION PERMIT APPLICATION FROM  
ROCKIES EXPRESS PIPELINE, LLC FOR A  
COMPRESSOR STATION IN  
BLUE MOUND, ILLINOIS

Site Identification No.: 021809AAB  
Application No.: 07060061  
Date Received: June 21, 2007

Schedule

Public Comment Period Begins: 11/01/2007  
Public Comment Period Closes: 12/01/2007

Illinois EPA Contacts

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## **I. INTRODUCTION**

Rockies Express Pipeline, LLC has submitted a construction permit application for a new pipeline compressor Station, which will be used to move natural gas through an interstate transmission pipeline. The significant emission units at the station would be five natural gas fired compressor engines equipped with oxidation catalysts and an emergency generator. The construction of these units requires a permit from the Illinois EPA because of their emissions.

The Illinois EPA has reviewed Rockies Express Pipeline's application and made a preliminary determination that the application for the proposed project meets applicable requirements. Accordingly, the Illinois EPA has prepared a draft of the air pollution control construction permit that it would propose to issue for this project. The permit is intended to identify the additional control requirements that apply to the proposed project and to set necessary limitations on those emissions. However, before issuing this permit, the Illinois EPA is holding a public comment period to receive comments on the proposed issuance of this permit and the terms and conditions of the draft permit.

## **II. PROJECT DESCRIPTION**

The principal units at the proposed new compressor station would be five natural gas fired compressor engines equipped with oxidation catalysts. The compressor station would also have an emergency engine generator, five small storage tanks, a fuel heater, and several very small space heaters.

The principal air contaminants emitted from the proposed engines would be NO<sub>x</sub>, CO, and VOM with trace amount of PM and SO<sub>2</sub>. NO<sub>x</sub> can be formed thermally by combination of oxygen and nitrogen in the air at the temperatures at which fuel is burned. NO<sub>x</sub> can also be formed from the combination of any nitrogen in the fuel with oxygen. This is not relevant for burning of natural gas, which contains minimal amounts of nitrogen. CO is formed by the incomplete combustion of fuel. CO is associated with most combustion processes and is found in measurable amounts in engine exhaust. CO and VOM emissions from the new compressor engines will be controlled by the oxidation catalysts systems.

VOM and PM are also emitted as a result of incomplete combustion of fuel. SO<sub>2</sub> is also found from combustion of natural gas.

NO<sub>x</sub> emissions are also controlled by proper combustion. Natural gas fuel has minimal PM and SO<sub>2</sub> emissions.

## **III. PROJECT EMISSIONS**

The potential annual emissions from the five compressor engines will be approximately 244 tons of NO<sub>x</sub>, 71 tons CO, 133 tons of VOM, and 9 tons of PM. Total annual emissions from the other units at the station will be approximately 3 tons of NO<sub>x</sub>, 2 tons of CO, and 3 tons of VOM.

## **IV. APPLICABLE EMISSION STANDARDS**

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois. The proposed station show compliance with the applicable state emission standards (35 Ill. Adm. Code: Subtitle B).

The compressor engines are subject to the federal National Emission Standards of Hazardous Air pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR 63 Subpart ZZZZ. The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement. These standards requires either at least 93% control of CO emissions or formaldehyde concentration in the exhaust no more than 14 ppmv (parts per million by volume). The engines should readily comply with these standards because of the oxidation catalyst system. The emergency engine generator is exempt from any control requirement of the NESHAP, because it is exclusively operated as an emergency engine as defined under 40 CFR 63.6675, with its usage limited to less than 500 hours per year.

Being a major source of emissions the source will be required to obtain a Clean Air Act Permit Program (CAAPP) permit to operate this station.

## **V. APPLICABLE REGULATORY PROGRAMS**

This project is not considered a major new construction under the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21. This is because the potential emissions from the proposed project, as limited by the permit, would be less than the major source thresholds for PSD, i.e., 250 tons per year for each pollutant.

## **VI. DRAFT PERMIT**

The conditions of the draft permit for the proposed station contain limitations and requirements for the compressor engines and other emission units. The draft permit also identifies measures that must be used as good air pollution control practices to minimize emissions from the compressor engines.

The draft permit includes enforceable limits on emissions and operation of the station to assure that it remains below the levels at which it would be considered major for PSD. In addition to limiting annual emissions, the permit also includes limits on hourly emissions from the compressor engines.

The permit also establishes appropriate compliance procedures for the emission units, including requirements for emission testing, monitoring, recordkeeping, and reporting. Emission testing is required as part of the initial shakedown and operation of the compressor engines after completion of construction.

These measures are being imposed to assure that the emissions of the station accurately tracked to confirm compliance with both the short-term and annual emission limits established for them.

## **VII. REQUEST FOR COMMENTS**

It is the Illinois EPA's preliminary determination that the proposed permit meets all applicable state and federal air pollution control requirements. The Illinois EPA is therefore proposing to issue this permit. Comments are requested on this proposed action by the Illinois EPA and the proposed conditions of the draft permit.