



MEMO TO : Air Quality Staff and Interested Parties

FROM : Terry L. O'Clair, P.E.  
Director  
Division of Air Quality *TLO*

RE : Permitting of Electric-driven Compressor Stations

DATE : November 21, 2012

The Department has traditionally issued air quality permits to all natural gas compressor stations operating in the state. These facilities included compressors driven by natural gas-fired engines, which are the primary source of emissions at the site. Based on annual emissions, these sources were usually permitted as minor sources of air emissions.

Over the past several years, the Department has seen an increase in the number of new compressor stations consisting of electric-driven compressors (with other associated equipment including storage tanks, emergency flares, etc.). Facilities with electric-driven compressors tend to have significantly lower emissions compared to stations with engine-driven compressors. Also, there are generally little or no emissions testing requirements at facilities with electric-driven compressors.

Subdivision 33-15-14-02.13.n of the North Dakota Air Pollution Control Rules states that the Department may exempt "Sources or alterations to a source which are of minor significance as determined by the department" from the requirement to obtain an air quality permit for the source. The purpose of this memorandum is to establish guidance to be used to determine when an electric-driven compressor station is considered to be a "source of minor significance" which is not required to obtain an air quality permit.

In general, if the compressors at a compressor station are all electric-driven compressors, an air quality permit (Permit to Construct or Permit to Operate) will not be required for the facility if all of the following conditions are met:

1. A complete application for an air quality permit (with the appropriate filing fee) is submitted to the Department. The application should include a discussion of the applicability of federal regulations as discussed below.
2. Maximum expected VOC emissions from the facility are less than 40 tons/year and maximum expected emissions of any other criteria pollutant are less than 25 tons/year.
3. Maximum expected emissions from the facility of combined hazardous air pollutants are less than 5 tons/year.

4. A glycol dehydration unit will not be operated at the facility.
5. The tanks located at the facility are not subject to 40 CFR 60, Subparts K, Ka or Kb.

Even if an air quality permit is not required, the owner/operator of the facility must still comply with the applicable state and federal air pollution rules and regulations. Federal air pollution regulations that may apply to a facility include, but are not limited to, the following:

1. 40 CFR 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (NSPS Subpart OOOO).
2. 40 CFR 63, Subpart HH – National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. Since a facility which is exempt from the permitting requirement will not be a major source of hazardous air pollutants (HAPs) and will not operate a triethylene glycol dehydrator, this subpart is not expected to apply.
3. 40 CFR 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. Since a facility which is exempt from the permitting requirement will not be a major source of HAPs, this subpart is not expected to apply.
4. Engines at the facility may be subject to the following:
  - a. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
  - b. 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
  - c. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

An air quality permit will not be required based solely on the applicability of federal New Source Performance Standards (from 40 CFR 60) or Maximum Achievable Control Technology standards (from 40 CFR 63).

This memorandum is meant to provide general guidance when determining if an air quality permit is required for electric-driven compressor stations and may not be appropriate where special environmental issues exist. Questions regarding this memorandum may be addressed to Craig Thorstenson at 701-328-5188 or [cthorstenson@nd.gov](mailto:cthorstenson@nd.gov).

TLO/CDT:saj