

## SPECIAL CONDITIONS

Permit Number 55779

### EMISSION STANDARDS

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit.
2. The Lean Burn Engine identified as Unit No. 401 shall be modified with low emission combustion using high pressure fuel injection and the Lean Burn Engine identified as Unit No. 402 shall be modified with a high energy ignition system according to the permit application representations dated March 23, 2005, and the modifications shall be complete by March 1, 2007. Lean Burn Compressor Engine Unit No. 401 upon modification completion shall meet 3.0 grams nitrogen oxides (NO<sub>x</sub>) per brake horsepower hour (bhp-hr) and 3.0 grams of carbon monoxide (CO) per bhp-hr and Unit No. 402 shall meet 14.4 g NO<sub>x</sub>/bhp-hr and 3.0 g CO/bhp-hr. Alternatively,
  - A. The application of control technologies may be switched, such that upon completion of the modifications no later than March 1, 2007, Unit No. 401 meets 14.4 g NO<sub>x</sub>/bhp-hr and 3.0 g CO/bhp-hr, and Unit No. 402 meets 3.0 g NO<sub>x</sub>/bhp-hr and 3.0 g CO per bhp-hr. If this alternative is selected, upon completion of the emission control installations, the holder of this permit shall submit a permit alteration request to the Air Permits Division to revise this special condition and the maximum allowable emission rates table (MAERT) to reflect this alternative; or
  - B. Control technologies may be applied, such that upon completion of the modifications no later than March 1, 2007, Unit No. 401 and Unit No. 402 both meet 8.7 g NO<sub>x</sub>/bhp-hr and 3.0 g CO/bhp-hr. If this alternative is selected, upon completion of the emission control installations, the holder of this permit shall submit a permit alteration request to the Air Permits Division to revise this special condition and the MAERT to reflect this alternative; or
  - C. Either (or both) engine(s) may be shutdown and rendered inoperable by March 1, 2007. A Form PI-GSD shall be completed and submitted by March 1, 2007, for any shutdown engine. If this alternative is selected, upon shutdown of one of the engines, the holder of this permit shall submit a permit alteration request to the Air Permits Division to revise this special condition and the MAERT to reflect this alternative.

Failure to complete the modifications to the engines, or either alternative A, B, or C

of this condition, by March 1, 2007, shall be a violation of this special condition.

3. Sweet natural gas will be used to fire each compressor engine. Natural gas usage shall be monitored and recorded for each combustion source and tabulated on a monthly basis. Records may be recorded electronically. Fuel usage may be monitored with a single fuel meter and apportioned to each engine on the basis of engine hours and other available information. These records shall be kept at the plant site for at least five years and be made immediately available to the Texas Commission on Environmental Quality (TCEQ) personnel upon request.

#### INITIAL DETERMINATION OF COMPLIANCE

4. The holder of this permit shall perform initial stack sampling and other testing to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Lean Burn Engines, Unit Nos. 401 and 402.
  - A. The engines will be stack sampled within 180 days of retrofit completion required by Special Condition No. 2.
  - B. Gaseous sampling ports and sampling platforms or equivalent methods of access shall be incorporated into the design of each engine stack per specifications in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director or the TCEQ Compliance Support Division in Austin. At the time of initial sampling, sampling ports will be installed and platforms will be installed, or equivalent access will be available.
  - C. The appropriate TCEQ Regional Office shall be given notice as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.
    - (1) The notice shall include:
      - (a) Date for pretest meeting.
      - (b) Date sampling will occur.
      - (c) Name of firm conducting sampling.
      - (d) Type of sampling equipment to be used.
      - (e) Test methods and procedures to be used in sampling.
      - (f) Procedure to be used to determine engine horsepower load during sampling period.

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- (2) The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper forms for recording pertinent data, and to review the format of the test report.
  - (3) Prior to the pretest meeting, a written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or the U.S. Environmental Protection Agency (EPA) sampling procedures shall be made available to the TCEQ. The TCEQ Regional Director or the TCEQ Compliance Support Division in Austin shall approve or disapprove of any deviation from specified sampling procedures.
- D. Air contaminants emitted from the lean burn engines to be tested for include (but are not limited to) NO<sub>x</sub> and CO, expressed in units of pounds per hour (lb/hr) and grams/bhp-hr. The sampling will be used to demonstrate initial compliance with the lb/hr emission limits of CO and NO<sub>x</sub> on the MAERT and the grams of NO<sub>x</sub> and CO per bhp-hr limits from Special Condition No. 2.
- E. Engine emissions shall be determined by appropriate EPA methods or other methods approved by the TCEQ Regional Director or the TCEQ Compliance Support Division in Austin prior to sampling. Methods described in Title 30 Texas Administrative Code § 106.512 (2)(C)(iii) are considered to be approved methods.
- F. Emissions shall be sampled at operating load and speed conditions consistent with the sampling used to determine the pre-control baseline NO<sub>x</sub> emissions. Sampling in the operating range of 247 to 249 RPM, and 2,019 to 2,038-bhp is consistent with the pre-control baseline and every reasonable effort shall be made to maintain average operating conditions during each test run within these parameters. However, any lower average speed or higher average load than these parameters will be considered to conservatively represent pre-control operating conditions and is acceptable.
- G. Sampling shall be performed at other such times as required by the TCEQ Regional Director or the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office.
- H. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. Information in the test report shall also include the following data for each test run:
  - (1) Fuel flow and heating value;
  - (2) Procedure and calculations used to determine engine hp; and

- (3) Emissions of NO<sub>x</sub> and CO in lbs/hr and g/hp-hr.

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- I. Two copies of the final sampling report shall be forwarded to the TCEQ within 90 days after sampling is completed. These reports shall be distributed as follows:

One copy to the TCEQ Regional Office.

One copy to the TCEQ Compliance Support Division in Austin

CONTINUOUS DETERMINATION OF COMPLIANCE

5. In order to demonstrate that emission limits specified in Special Condition No. 2 are continuously met, the holder of this permit shall perform the following for each engine identified as Unit Nos. 401 and 402 within 90 days after installation of emission controls.

- A. Conduct evaluations of engine performance every three months (quarterly) at full engine load and speed by measuring the NO<sub>x</sub>, CO, and oxygen content of the exhaust. If an engine does not operate during a quarter, it does not need to be sampled for that quarter.

The use of portable analyzers specifically designed for measuring the concentration of each contaminant in parts per million by volume is acceptable for these evaluations. A hot air probe or equivalent shall be used with portable analyzers to prevent error in results due to high exhaust gas temperatures. Three sets of measurements shall be averaged to determine the concentrations. Prior to and following the measurements, the portable analyzer shall be checked for accuracy using an audit gas that conforms to the specifications in Title 40 Code of Federal Regulations Part 60, Appendix F, 5.1.2(3). Any other method approved by the appropriate TCEQ Regional Director or the TCEQ Compliance Support Division in Austin is also acceptable.

- B. If the portable analyzer is capable of measuring nitric oxide and nitrogen dioxide, then these measurements shall be summed to determine the NO<sub>x</sub> emission rate. The NO<sub>x</sub> emission rate shall be expressed as (using the molecular weight of) nitrogen dioxide.

Emissions shall be measured and recorded in the as-found operating condition, except no compliance determination shall be established during start-up, shutdown, or under breakdown conditions. As-found operating condition means that no adjustment shall be made to artificially lower emissions prior to taking emission samples. Increasing loading or speed to

approximate initial stack test operating conditions is acceptable.

- C. Emissions calculations shall be used to convert the portable analyzer data to lb/hr NO<sub>x</sub> and CO on a quarterly basis for each engine.

RECORDKEEPING

- 6. The following written records demonstrating compliance shall be made and maintained by the holder of this permit on a five-year rolling retention basis and shall be made immediately available upon request to designated representatives of the TCEQ or EPA.
  - A. The results of all stack tests and quarterly sampling required in Special Condition Nos. 4 and 5 shall be permanently kept on file at the plant site.
  - B. Date and description of any engine maintenance.

Dated June 10, 2005