

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
AIR QUALITY OPERATING PERMIT**

**RESPONSE TO COMMENTS**

**Owner Name:** Various

**Application No.:** Various

**Public Comment Closing Date:** March 15, 2005

**Permit No.:** GP-A

**Stationary Source Name:** Diesel Electric Generating Stations

The public comment period for the Renewal General Operating Permit A for Diesel Electric Generating Stations closed on March 15, 2005. Comments were received from the City of Galena, which appear exactly as submitted by the applicant. This paper provides ADEC's responses to the comments.

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1. **From City of Galena:** Condition 8.4 imposes a requirement for a nitrogen oxides (NO<sub>x</sub>) emission source test on each non-identical engine when the plant's fuel consumption reaches 750,000 gallons in any 12 consecutive months. The purpose of this test is to confirm the worst case emission factor is equal to or less than 4.41 pounds per million British thermal units (lb/MMBtu), the AP-42 factor for diesel-fired reciprocating engines with an output rating equal to or less than 600 horsepower (hp). While currently the Galena power plant's fuel consumption has not reached this level, the City anticipates the possibility of exceeding this fuel threshold during the life of the permit.

The City of Galena makes the following observations: (1) the AP-42 emission factors are widely understood to be very conservative estimates; (2) the AP-42 emission factor for diesel-fired reciprocating engines with an output rating of greater than 600 hp is a lower 3.2 lb/MMBtu; and (3) the source test(s) required by condition 8.4 impose a significant expense on small rural electric utilities such as Galena.

To ease the potential financial burden, please include in condition 8.4 the alternative of using the AP-42 NO<sub>x</sub> emission factor for large diesel-fired engines, if appropriate, and/or manufacturer's data that documents lower NO<sub>x</sub> emission factors to calculate NO<sub>x</sub> emissions. Testing could then be required if the calculated NO<sub>x</sub> emissions using the alternative factors are greater than the testing threshold.

**Response from ADEC:** *Condition 8.4 requires a source test at three loads to determine the maximum NO<sub>x</sub> emission factor on each non-identical diesel engine greater than 400 hp when fuel consumption reaches 750,000 gallons in any 12 consecutive month period. The source test will confirm that the AP-42 emission factor, which is used to determine the 825,000 gallon fuel limit and keep emissions less than the new source review major source classification threshold of 250 tons per year (TPY), remains conservative. ADEC understands that source testing can be a*

*financial burden. 18 AAC 50.326(k) requires ADEC to include in each permit conditions for monitoring, record keeping and reporting consistent with the applicable standard or limit to verify continuing compliance. However, to reduce the financial burden, ADEC imposes the test obligation only after the source exceeds 90 percent of the 250 TPY threshold. It is the responsibility of ADEC to develop a general permit that is sufficiently generic to be applicable to all diesel power plants that wish to avoid new source review major source classification. If more flexibility is desired while still capping emissions less than 250 TPY, a permit holder may apply for a site specific operating permit and use more representative data, such as engine vendor data or emission source test data to determine the necessary fuel limit.*

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