

217/785-1705

CONSTRUCTION PERMIT

PERMITTEE

FutureGen Industrial Alliance, Inc.  
Attn: David Brown  
73 Central Park Plaza East  
Jacksonville, Illinois 62650

Application No.: 12020051                      I.D. No.: 137805AAA  
Applicant's Designation: Eng@SequestSite   Date Received: February 9, 2012  
Subject: Emergency Engine Generator  
Date Issued:  
Location: Rural Northeastern Morgan County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT an emergency engine generator, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Introduction

An oil-fired engine generator (the affected engine) will be installed at the sequestration facility for the FutureGen project to provide electricity to buildings during power outages.

2. Applicable Federal Emission Standards

- a. For the engine, the Permittee shall comply with applicable requirements of the federal New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subpart I IIII, and related requirements of General Provisions of the NSPS, 40 CFR 60 Subpart A.
- b.
  - i. This permit is issued based on the affected engine being subject to the requirement of the NSPS for model year 2007 and later emergency engines with a displacement of less than 30 liters per cylinder so that the engine is subject to and shall comply with the applicable emission standards in 40 CFR 89.112 and 89.113, pursuant to 40 CFR 60.4205(b).
  - ii. For the affected engine, the Permittee shall demonstrate compliance with applicable NSPS standards in accordance with 40 CFR 60.4211(c), by purchasing an engine certified to the standards in 40 CFR 60.4205(b) for the same model year and maximum engine power. The affected engine must be installed and configured according to the manufacturer's specifications.
- c. The Permittee shall operate and maintain the affected engine according to the manufacturer's written instructions or

procedures developed by the Permittee that are approved by the affected engine's manufacturer, pursuant to 40 CFR 60.4211(a). For the affected engine, the Permittee shall also meet any applicable requirements of 40 CFR Parts 89, 94 and/or 1068.

- d. The Permittee shall use diesel fuel in the affected engine that meets the requirements of 40 CFR 80.510, pursuant to 40 CFR 60.4207.
- e. The Permittee shall install, operate and maintain a non-resettable hour meter on the affected engine, as required by 40 CFR 60.4209(a).

3. State Emission Standards

Pursuant to 35 IAC 212.123(a), the opacity of the exhaust from the affected engine shall not exceed 30 percent, except as allowed by 35 IAC 212.123(b).

4. Non-Applicability Provisions

- a. This permit is issued based on the affected engine only being subject to the initial notification requirements of the federal National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Compression Ignition Reciprocating Internal Combustion Engines, 40 CFR 63 Subpart ZZZZ. This is because the engine is also an emergency engine pursuant to 40 CFR 63.6590(b)(i).
- b. This permit is issued based on the affected engine not being subject to the requirements of 35 IAC 212.321 because a process weight rate cannot be set due to the nature of this unit, so that this rule cannot be applied.

5. Design and Operational Limits

- a. The rated output capacity of the affected engine shall not exceed 100 kWe.
- b. The affected engine shall be operated as an emergency engine for purposes of the NSPS and NESHAP, as provided in 40 CFR 60.4211(f) and 63.6640(f), respectively. In particular, the operation of the engine for maintenance checks and readiness testing shall be limited to 100 hours per calendar year. The engine shall not be used for peak shaving or to generate income by supplying power to the electric grid or otherwise supplying non-emergency power as part of a financial arrangement with another entity.

6. Emissions

- a. The emissions of greenhouse gases (GHG), as carbon dioxide equivalents (CO<sub>2</sub>e), from the affected engine shall not exceed 132 tons/year. Compliance with this limit shall be determined from a running total of 12 months of data.

- b. This permit is issued based on the affected engine having negligible emissions of nitrogen oxides, particulate matter (PM/PM<sub>10</sub>), carbon monoxide, volatile organic material, sulfur dioxide and hazardous air pollutants (HAPs) from the affected engine. For this purpose, emissions of pollutants other than HAPs shall each not exceed 0.44 tons/year. Emissions of HAPs shall not exceed 0.1 tons/year.

7. Requirements for Opacity Observations

Upon written request by the Illinois EPA, the Permittee shall have the opacity of the exhaust from the affected engine determined in accordance with USEPA Method 9, as follows:

- a. These observations shall be conducted within 60 calendar days of the request, on the date the engine next operates, or on the date agreed upon by the Illinois EPA, whichever is later.
- b. The Permittee shall notify the Illinois EPA at least 7 days in advance of the date and time of observations, in order to enable the Illinois EPA to witness the observations. The Permittee shall promptly notify the Illinois EPA of any changes in the date or time of observations.
- c. Within 30 days of the date of observations, the Permittee shall submit a written report to the Illinois EPA for these observations.

8. Recordkeeping Requirements

- a. For the affected engine, the Permittee shall fulfill applicable recordkeeping requirements of the NSPS.
- b. The Permittee shall maintain the following records for the affected engine:
  - i. A file containing the following information for the engine:
    - A. The manufacturer's specification for the affected engine, including rated output capacity, a copy of the manufacturer's certification of compliance with 40 CFR Part 89 or 1039, and the manufacturer's recommended operating and maintenance practices.
    - B. The emission factor used by the Permittee to determine GHG emissions of the affected engine (pounds, as CO<sub>2</sub>e, per gallon fuel), with supporting documentation.
  - ii. An operating log, which shall include the following information:
    - A. Information for each time the affected engine is operated, with date, time, duration, and purpose (i.e., exercise or emergency need), in accordance with 40 CFR 60.4214(b).

B. Information for any period in which the operation of the engine continued during upset or malfunction, including: date, time, and duration; a description of the incident; a description of the corrective actions taken; and a description of the preventative measures taken to prevent future occurrences.

- iii. An inspection, maintenance and repair log, listing activities performed with date.
- iv. Records of fuel usage (gallons/month and gallons/year).
- v. Records of emissions of GHG, as CO<sub>2</sub>e (tons/month and tons/year), with supporting calculations.
- vi. Records for opacity observations made in accordance with USEPA Method 9 for the affected engine that it conducts or that are conducted on its behalf by individuals who are qualified to make such observations.

9. Reporting Requirements

- a. For the affected engine, the Permittee shall fulfill applicable notification and reporting requirements of the NSPS and NESHAP, including 40 CFR 60.7 and 60.4214 and 40 CFR 63.6645(f).
- b. The Permittee shall notify the Illinois EPA of deviations from applicable requirements of this permit as follows. These notifications shall include a description of the deviations, the probable cause of the deviations, the corrective actions taken and any preventative measures taken to prevent future occurrences.

10. Authorization to Operate

The Permittee is allowed to operate the affected engine pursuant to this construction permit until an air pollution control operating permit is issued for this facility.

If you have any questions on this permit, please call Bob Smet at 217/785-1705.

Robert W. Bernoteit  
Acting Manager, Permit Section  
Division of Air Pollution Control

Date Signed: \_\_\_\_\_

RWB:RPS:psj

cc: Region 2