

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 052012-005

Project Number: 2012-02-017
Installation Number: 047-0188

Parent Company: Platte-Clay Electric Cooperative, Inc.

Parent Company Address: 1000 W. 92 Hwy, Kearney, MO 64060

Installation Name: Platte-Clay Electric Cooperative, Inc.

Installation Address: 1000 W. 92 Hwy, Kearney, MO 64060

Location Information: Clay County, S28, T53N, R31W

Application for Authority to Construct was made for:
Installation of a Caterpillar diesel engine generator to provide back-up power, and for peak shaving during high use conditions. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

MAY 09 2012

EFFECTIVE DATE

A handwritten signature in cursive script that reads "Kyndal Moore".

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual startup of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

Page No.	3
Permit No.	
Project No.	2012-02-017

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Platte-Clay Electric Cooperative, Inc.
Clay County, S28, T53N, R31W

1. Emission Limitation – Nitrogen Oxides
 - A. Platte-Clay Electric Cooperative, Inc. shall emit less than 40 tons of nitrogen oxides (NO_x) in any consecutive 12 month period from the diesel engine generator (EP-01).
 - B. Platte-Clay Electric Cooperative, Inc. shall maintain an accurate record of NO_x emitted into the atmosphere from the diesel engine generator (EP-01). Attachment A or an equivalent form shall be used for this purpose. Platte-Clay Electric Cooperative, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
2. Fuel Requirement
 - A. Platte-Clay Electric Cooperative, Inc. shall fuel the diesel engine generator (EP-01) exclusively with diesel not exceeding 15 parts per million (15 ppm) sulfur (ultra low sulfur diesel).
 - B. Platte-Clay Electric Cooperative, Inc. shall demonstrate compliance with Special Condition 2.A. by obtaining the sulfur content of the fuel oil for each fuel oil delivery from the fuel vendor or conduct their own fuel analysis to evaluate the sulfur content weight percent of the fuel in accordance with the method described in 1- CSR 10-6.040 Reference Methods.
3. Record Keeping and Reporting Requirements
 - A. Platte-Clay Electric Cooperative, Inc. shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

Page No.	4
Permit No.	
Project No.	2012-02-017

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- B. Platte-Clay Electric Cooperative, Inc. shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2012-02-017
Installation ID Number: 047-0188
Permit Number:

Platte-Clay Electric Cooperative, Inc.
1000 W. 92 Hwy
Kearney, MO 64060

Complete: February 6, 2012

Parent Company:
Platte-Clay Electric Cooperative, Inc.
1000 W. 92 Hwy
Kearney, MO 64060

Clay County, S28, T53N, R31W

REVIEW SUMMARY

- Platte-Clay Electric Cooperative, Inc. has applied for authority to install a Caterpillar diesel engine generator to provide back-up power, and for peak shaving during high use conditions.
- Hazardous Air Pollutant (HAP) emissions are expected due to the combustion of No.2 fuel oil from the proposed equipment. HAPs of concern from this process are Benzene, Toluene, Xylenes, Formaldehyde, Acetaldehyde, and Acrolein.
- None of the New Source Performance Standards (NSPS) apply to the installation. 40 CFR Part 60 Subpart IIII of the New Source Performance Standards (NSPS), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, does not apply to the generator because the generator was manufactured in 1996 prior to the applicability date of April 1, 2006.
- 40 CFR Part 63 Subpart ZZZZ of the Maximum Achievable Control Technology (MACT), *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to the emergency generator. None of the 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of NO_x are conditioned below de minimis levels.

- This installation is located in Clay County, a maintenance area for ozone and an attainment area for all other criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment as a condition of this permit. However, Platte-Clay Electric Cooperative, Inc. must comply with the testing requirements for 40 CFR Part 63 Subpart ZZZZ.
- No operating permit is required for this installation.
- Approval of this permit is recommended with special conditions.

INSTALLATION/PROJECT DESCRIPTION

A rural electric cooperative, Platte-Clay Electric Cooperative, Inc. is a member-owned cooperative serving residents and businesses in a seven county area that stretches in a rectangle north of metropolitan Kansas City. The service area includes Clay and Platte Counties, with the most population, and the more rural areas in Buchanan, Caldwell, Clinton, DeKalb and Ray Counties.

Platte-Clay Electric Cooperative, Inc. installed a Caterpillar Diesel Engine Generator Set 1600 kw, Model 3516, made in 1996, to provide emergency back-up power to their offices and for peak shaving during high use conditions. The project was completed in 1996. The engine uses ultralow sulfur (15 ppm) diesel fuel. They became aware that a construction permit was necessary in January, 2012 when they pursued emission testing of the engine for compliance with 40 CFR Part 63 Subpart ZZZZ after their oxidation catalyst was installed. This facility has no other emission units.

No permits have been issued to Platte-Clay Electric Cooperative, Inc. from the Air Pollution Control Program.

EMISSIONS/CONTROLS EVALUATION

The emissions data for the criteria pollutants for the engine were provided by Caterpillar for this model at 100% load, rated at 1600 kw. The most conservative emission data was used for estimating potential to emit emissions for all criteria pollutants.

The emission factors for HAPs used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Volume 1, Section 3.4 "Large Stationary Diesel and All Stationary Dual-Fuel Engines," October, 1996. Potential emissions of the application

represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2011 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/A	N/A	4.86	0.71
PM ₁₀	15.0	N/A	N/A	4.86	0.71
PM _{2.5}	10.0	N/A	N/A	4.86	0.71
SO _x	40.0	N/A	N/A	0.098	0.014
NO _x	40.0	N/A	N/A	274.013	<40
VOC	40.0	N/A	N/A	3.85	0.56
CO	100.0	N/A	N/A	53.92	7.87
Benzene	2.0 ¹	N/A	N/A	5.01E-02	7.32E-03
Toluene	10.0 ¹	N/A	N/A	1.82E-02	2.65E-03
Xylene	10.0 ¹	N/A	N/A	1.25E-02	1.82E-03
Formaldehyde	2.0 ¹	N/A	N/A	5.10E-03	7.44E-04
Acetaldehyde	9.0 ¹	N/A	N/A	1.63E-03	2.38E-04
Acrolein	0.04 ¹	N/A	N/A	5.09E-04	7.43E-05
Total HAPs	25.0	N/A	N/A	0.088	0.013

N/A = Not Applicable

¹Screen Model Action Levels (SMAL)

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of NO_x are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Platte-Clay Electric Cooperative, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110*
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, 10 CSR 10-6.170*
- *Restriction of Emission of Visible Air Contaminants, 10 CSR 10-6.220*
- *Restriction of Emission of Odors, 10 CSR 10-6.165*

SPECIFIC REQUIREMENTS

- *Maximum Achievable Control Technology (MACT) Regulations, 10 CSR 10-6.075, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63, Subpart ZZZZ*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Kathy Kolb
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 30, 2012, received February 6, 2012, designating Platte-Clay Electric Cooperative, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Mr. Mike Torres
CEO
Platte-Clay Electric Cooperative, Inc.
PO Box 100
Kearney, MO 64060

RE: New Source Review Permit - Project Number: 2012-02-017

Dear Mr. Torres:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Kathy Kolb, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:kk1

Enclosures

c: Kansas City Regional Office
PAMS File: 2012-02-017

Permit Number: