

United States Environmental Protection Agency  
Region 5  
Air Programs Branch  
Air & Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604

PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY  
CONSTRUCTION PERMIT

Permit Number: PSD-ML-R50007-05-01

Issue Date: DRAFT 7-21-2005      Effective Date: DRAFT

In accordance with the provisions of the Clean Air Act and Title 40 Code of Federal Regulations Part 52 and applicable rules and regulations,

**Mille Lacs Band Corporate Commission**

is authorized to change the method of operation and operate air emission units and to conduct other air pollutant emitting activities in accordance with the permit conditions listed in this permit.

This source is authorized to operate in the following location(s):

**Grand Casino Mille Lacs  
777 Grand Avenue, Highway 169  
Onamia, Mille Lacs County, Minnesota 56359**

**Grand Casino Mille Lacs is located on lands held in trust for the Mille Lacs Band of Ojibwe Indians.**

Terms and conditions not otherwise defined in this permit have the meaning assigned to them in the referenced regulations. All terms and conditions of the permit are enforceable by EPA and citizens under the Clean Air Act.

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Bharat Mathur  
Acting Regional Administrator  
U. S. EPA - Region 5

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Date

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Stephen Rothblatt, Director  
Air and Radiation Division  
U. S. EPA - Region 5

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Date

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## Abbreviations and Acronyms

Applicant	Mille Lacs Band Corporate Commission
acfm	Actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BHP	Brake Horsepower
CFR	Code of Federal Regulations
CO	Carbon monoxide
EPA	United States Environmental Protection Agency, Region 5
EU	Emissions unit
EU 001,002,003	Three (3) engine/generator units
Facility	Grand Casino Mille Lacs
g	Grams
gal	Gallon
HAP	Hazardous Air Pollutant
hr	Hour
kg	Kilogram
kW	Kilowatt
lb	Pound
MMBtu	Million British Thermal Units
mol	Molecular Weight
MW	Megawatt
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides
NO <sub>2</sub>	Nitrogen Dioxide
NSPS	New Source Performance Standard
NSR	New Source Review
O <sub>2</sub>	Oxygen
Permittee	Grand Casino Mille Lacs
PM	Particulate Matter
PM <sub>10</sub>	Particulate matter less than 10 microns in diameter
ppm	Parts per million
PSD	Prevention of Significant Deterioration
psia	Pounds per square inch absolute
rpm	Revolutions per minute
SO <sub>2</sub>	Sulfur Dioxide
tpy	Tons per year
VOC	Volatile Organic Compounds

## 1.0 FACILITY DESCRIPTION

### (A). General Source Information

Parent Company: Mille Lacs Band Corporate Commission  
dba/Grand Casino Mille Lacs  
777 Grand Avenue  
Highway 169  
Onamia, Mille Lacs County, Minnesota 56359

Facility: Grand Casino Mille Lacs  
777 Grand Avenue  
Highway 169  
Onamia, Mille Lacs County, Minnesota 56359

County: Mille Lacs

Reservation: Mille Lacs Band of Ojibwe

Facility Contact: Phillip Kairis, Vice President, Energy  
Alternatives  
Phone: (651) 341-2244

Responsible Official: Curt Kalk, Commissioner of Natural  
Resources  
Phone: (800) 709-6445, ext. 7439

Tribal Contact: Charles Lippert, Air Quality Technician  
Phone: (320) 532-4704

SIC Code: 7011, Hotels and motels

AFS Plant Id No.: 27 095 00005

This permit will authorize a change of the method of operation of the three existing diesel-fired internal combustion engines at Grand Casino Mille Lacs. These engines had been used solely to provide backup power. Under this permit, the electricity produced will be used for peak load management, as well as, backup power for Grand Casino Mille Lacs. The total generation capacity of the engines will be 5.4 megawatts. Electricity generated at the facility will not be sold for distribution. Operation will be limited to 300 hours per year.

**(B). Emission Unit Descriptions**

<b>Emission Unit</b>	<b>Description</b>	<b>Manufacturer/ Model</b>	<b>Power Rating</b>
EU 001	Diesel-fired Engine	Caterpillar Model 3516B (Dry Manifold)	2,000 kW
EU 002	Diesel-fired Engine	Caterpillar Model 3516B (Dry Manifold)	2,000 kW
EU 003	Diesel-fired Engine	Caterpillar Model 3512B	1,400 kW

**2.0 UNIT-SPECIFIC REQUIREMENTS:**

**(A). Emission Limitations and Standards [40 CFR §52.21(j)(1)]**

The Permittee shall comply with the following requirements:

1. Nitrogen Oxide BACT Limitations and Requirements [40 CFR §52.21(j)(2)]

i. EU 001

a. Limit NOx emissions at all times to no greater than 68.16 lb/hr expressed as NO<sub>2</sub>, averaged over the duration of the emission performance test.

b. Limit NOx emissions at all times to no greater than 10.72 grams per brake horsepower-hour (g/bhp-hr).

c. Limit NOx emissions to no greater than 10.22 tpy expressed as NO<sub>2</sub>, calculated based on a 12-month rolling sum.

ii. EU 002

a. Limit NOx emissions at all times to no greater than 68.16 lb/hr expressed as NO<sub>2</sub>,

averaged over the duration of the emission performance test.

- b. Limit NOx emissions at all times to no greater than 10.72 grams per brake horsepower-hour (g/bhp-hr).
- c. Limit NOx emissions to no greater than 10.22 tpy expressed as NO<sub>2</sub>, calculated based on a 12-month rolling sum.

iii. EU 003

- a. Limit NOx emissions at all times to no greater than 50.49 lb/hr expressed as NO<sub>2</sub>, averaged over the duration of the emission performance test.
- b. Limit NOx emissions at all times to no greater than 11.12 grams per brake horsepower-hour (g/bhp-hr).
- c. Limit NOx emissions to no greater than 7.57 tpy expressed as NO<sub>2</sub>, calculated based on a 12-month rolling sum.

During the first 12 months after commencing operation, cumulative NO<sub>x</sub> emissions expressed as NO<sub>2</sub> shall not exceed 10.22 tons per engine for both EU 001 and EU 002, and 7.57 tons per engine for EU 003. Starting in the 13th calendar month after commencing operation, NO<sub>x</sub> emissions expressed as NO<sub>2</sub> shall not exceed 10.22 and 7.57 tons per consecutive 12-month period per engine, respectively. Compliance with this limit shall be based on a rolling sum of monthly emissions during the previous 12 months.

2. Operating Requirements

- i. Use a turbocharger and aftercooler at all times during operation of EU 001, 002, and 003.
- ii. Maintain the aftercooler return water temperature for each engine at less than or equal to 225 degrees Fahrenheit.

- iii. Operate EU 001, 002, and 003 at all times using lean burn combustion conditions for each engine.
  - iv. At all times operate EU 001, 002, and 003 at Retard Engine Timing, which involves delaying the injection of fuel in the engine for each engine.
  - v. Set the flash files #205-6998 and #205-6942, which electronically control each engine, for retard engine timing. Contact the EPA before modifying any parameters pertaining to retard engine timing for any of the engines.
  - vi. Conduct performance testing on EU 001, 002, and 003 to ascertain compliance with the NO<sub>x</sub> emission rates and limits in this section in accordance with the requirements set forth in Section 2(B) of this permit. Determine the NO<sub>x</sub> emission rate, expressed as NO<sub>2</sub>, using exhaust properties determined by both 40 CFR Part 60 Appendix A Method 7E and exhaust gas measurements as set out in Section 2(B)(2) of this permit.
  - vii. Certify that electronic controls are set for low emission strategy as required by Condition v, above, in accordance with the requirements in this Section.
3. Good Air Pollution Control Practice. [Sec. 114(a)(1) of the CAA]

At all times, including start-up, shut-down, and malfunction, the Permittee shall, to the extent practicable, maintain and operate all sources including associated air pollution control equipment regulated by this permit in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance practices are being used is based on information which is available to EPA. This may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspections of the facility.

**(B) Monitoring and Testing** [Sec. 114(a)(1) of the CAA]

1. Monitoring. [Sec. 114(a)(1) of the CAA]
  - i. Continuously monitor the aftercooler water temperature for EU 001, 002, and 003. The temperature shall be controlled by thermostatic valves that maintain a 225 degrees Fahrenheit return water temperature to the engine.
  - ii. Continuously monitor the intake manifold pressure for EU 001, 002, and 003.
2. Performance Testing. [Sec. 114(a)(1) of the CAA]
  - i. Initial Compliance Test. Within 180 days after initial startup of EU 001, 002, and 003, and at such other times as may be required by the EPA under section 114 of the Act, the Permittee shall conduct performance test(s) for NO<sub>x</sub> on EU 001, EU 002, and EU 003 to ascertain compliance with the emission limits. Within 45 days of the performance test(s), the Permittee shall furnish the EPA a written report of the results of such performance test(s).
  - ii. Periodic Performance Tests. The Permittee shall conduct performance test(s) every five calendar years, starting five years after the initial compliance test (on or before the anniversary of the initial compliance test), to determine compliance with the applicable NO<sub>x</sub> emissions limits. Within 45 days of the performance test(s), the Permittee shall furnish the EPA a written report of the results of such performance test(s).
  - iii. Reference Test Methods. The Permittee shall test EU 001, 002, and 003 for emissions of nitrogen compounds in accordance with the methods and procedures specified in Method 7E of 40 CFR 60, Appendix A for testing nitrogen oxide emissions, unless otherwise approved in advance of the test by the EPA.

- iv. Representative Testing Conditions. Performance tests shall be conducted under such conditions as the EPA shall specify to the plant operator based on representative performance of the affected facility. The Permittee shall make available to the EPA such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.
- v. Operating Conditions for Performance Testing. All performance tests shall be conducted at worst-case operating (non-malfunction) conditions for all emission units for each air pollutant.
- vi. Failure to Demonstrate Compliance. Upon the EPA's written notice that the facility has failed to demonstrate compliance with an applicable emission limit, the Permittee, unless an alternative schedule is given in an applicable requirement or compliance document, shall:
  - 1. Conduct a retest within 30 days of receipt of the EPA written notice;
  - 2. Submit to the EPA written notice of testing and submit a test plan for the retest; and
  - 3. Submit a complete report of the results of the retest within 45 days after completion.
- vii. Agency Tests. Upon request of the EPA, the Permittee shall allow the EPA, or any authorized employee or agent of the EPA, to enter upon the premises of the owner or operator for the purposes of conducting performance tests. The owner or operator shall provide performance testing facilities that enable the EPA to conduct performance tests, including:
  - 1. Sampling ports adequate for the applicable test methods;
  - 2. Safe sampling platforms;
  - 3. Safe access to sampling platforms; and
  - 4. Utilities for sampling and testing equipment.

For testing, the Permittee shall operate the emission facility at worst-case conditions or other conditions as requested by the EPA, and shall provide assistance in process monitoring and process material sampling as requested.

3. Annual Testing

- i. The Permittee shall measure NO<sub>x</sub> emissions annually (on or before the anniversary of the initial compliance test) using a portable emissions analyzer to determine compliance with the applicable NO<sub>x</sub> emissions limits, and shall furnish the EPA with a written report of the results of such measurements no later than 45 days after the tests are completed. The portable emissions analyzer shall be used according to the Portable Electrochemical Analyzer Procedure in Attachment 2 of the permit. This requirement does not apply during the calendar years in which a performance test is required, only during years between the periodic performance tests.
- ii. Test Reports. Within 45 days after completion of a set NO<sub>x</sub> emissions measurements, the Permittee shall submit a copy of the results to the EPA.
- iii. Operating Conditions. All measurements shall be conducted at worst-case operating (non-malfunction) conditions for all emission units for each air pollutant that is required to be tested.

**(C) Recordkeeping and Reporting** [Sec. 114(a)(1) of the CAA]

The Permittee shall maintain at the facility a file containing the records specified below. The Permittee shall retain all records at the facility location for at least five years following the creation of such records. Records which must be retained at this location include all calibration and maintenance records, all original recording for continuous monitoring instrumentation, and copies of all reports required by this permit. Records of all monitoring required by this permit, and information about the monitoring, include, but are not limited to:

1. The aftercooler return water temperature, intake manifold pressure, and any changes to flash files #205-6998 and #205-6942 for emission units EU 001, 002, and 003;
2. Fuel usage for emission units 001, 002, and 003;
3. Hours of operation for emission units 001, 002, and 003;
4. Performance test data and results including:
  - i. Sampling dates and the times of sampling or measurement;
  - ii. The operating conditions that existed at the time of sampling or measurement;
  - iii. The date analyses were performed;
  - iv. The location where samples were taken;
  - v. The company or entity that performed the sampling and analyses;
  - vi. The analytical techniques or methods used in the sampling and analysis;
  - vii. The results of the analyses;
5. Results of annual NOx testing from the portable emissions analyzer;
6. Reports of excess emissions;
7. Calibration and maintenance records, original strip chart, or computer-based recordings; and
8. Standard Operation and Maintenance Procedures for each emission unit.

### 3.0 FACILITY-WIDE PERMIT CONDITIONS

#### (A). Notification [Sec. 114(a)(1) of the CAA]

1. Testing Notification. Written notification of the planned test date shall be postmarked or received by the EPA at least 30 days before the planned test date. The EPA shall reject the results of a test if less than 30 days notice is given unless written authorization of a shorter notice was given by the EPA. If after 30 days notice for a scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify EPA as soon as possible, either by providing at least 7 days prior notice of the rescheduled date of the performance test or by arranging a reschedule date with the EPA by mutual agreement.

2. Approval of Test Plan. The Permittee shall submit to the EPA a test plan with or in advance of the test notification required under this section or in response to the EPA's request for supplemental information. If the proposed test plan does not contain sufficient or accurate enough detail to ensure that the performance test meets the requirements of the applicable requirement or compliance document, EPA may reject the plan, and the owner or operator must address any of EPA's comments on revisions and additions that are necessary to make the plan complete.

**(B). Recordkeeping, and Reporting** [Section 114(a)(1) of the CAA]

1. The Permittee shall maintain at the facility at which the permitted units are located a file of all measurements, including monitoring device, and performance testing measurements; adjustments and maintenance performed on these systems or devices; and all other information required by this Permit in a permanent form suitable for inspection.
2. Within 45 days after completion of a performance test, the Permittee shall submit a copy of the results to EPA.

**4.0 GENERAL PERMIT CONDITIONS**

The following general terms and conditions apply under the authority of the Clean Air Act and 40 CFR §52.21 and 40 CFR Part 124.

**(A). Definitions** [40 CFR §§52.21(b), 124.2, 124.41]

Terms and conditions in this permit have the meaning assigned to them in Parts 52.21 and 124 unless other regulations or statutes are referenced or applicable.

**(B). Issuance and effective date of Permit** [40 CFR §124.15]

This permit shall become effective 30 days after EPA issues a final permit decision unless:

1. A later effective date is specified in the decision; or
2. Review is requested under the appeal procedures under 40 CFR §124.19; or

3. Commenters requested a change in the draft permit, in which case the permit shall become effective immediately upon issuance. A final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.

**(C). Construction without a Permit** [40 CFR §52.21(r)(1)]

If the Permittee constructs or operates any source or modification not in accordance with the terms of any approval to construct, the Permittee shall be subject to appropriate enforcement action.

**(D). Construction Approval** [40 CFR §52.21(r)]

1. Nothing in this permit shall alter the requirement for the Permittee to obtain a construction permit before commencement of construction or modification of an emission unit.
2. Approval for construction or installation shall not relieve the Permittee of the responsibility to comply fully with applicable provisions of any other requirements under Mille Lacs Band of Ojibwe Indian law or federal law.

**(E). Compliance with Permit Requirements**

The Permittee must comply with each permit term and condition. Failure to comply with the terms and conditions of this permit or any other applicable provisions under the Clean Air Act or 40 CFR §52.21 constitutes noncompliance and a violation of 40 CFR §52.21 and the Clean Air Act, and is grounds for:

1. An enforcement action under section 113 of the Clean Air Act;
2. Permit termination, revocation and reissuance, or modification in accordance with 40 CFR §52.21; or
3. Denial of a federal operating permit application under 40 CFR Part 71.

**(F). Credible Evidence** [40 CFR §52.33(a), and 62 FR 8314 (February 24, 1997)]

For purposes of establishing whether or not the Permittee has violated or is in violation of any standard in this permit, nothing in this permit precludes the use by the Permittee, the EPA or the public, of any credible evidence to determine whether the facility would have been in compliance with applicable requirements if the appropriate performance test or procedures had been performed.

**(G). Submittals**

1. Unless otherwise directed by EPA or this permit, the Permittee shall submit a copy of all test plans, reports, certifications, notifications, and other information pertaining to compliance with this permit to:

**Air Enforcement and Compliance  
Assurance Branch (AE-17J)  
Air and Radiation Division  
EPA Region 5  
77 West Jackson Boulevard  
Chicago, Illinois 60604**

2. The Permittee shall submit permit applications, applications for permit amendments, and other applicable permit information, which includes but is not limited to installation of control equipment, replacement of an emissions unit, and requests for changes that contravene current permit terms, to:

**Air Permits Section  
Air Programs Branch (AR-18J)  
EPA Region 5  
77 West Jackson Boulevard  
Chicago, Illinois 60604**

**(H). Certification [Sec. 114(a)(1) of the CAA]**

1. The Permittee shall certify all reports, compliance certifications, or other documents submitted to EPA under this permit.

2. All reports, compliance certifications, or other documents submitted to EPA under this permit shall include the following statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine, imprisonment, or both, for knowing violations. See, e.g., 18 U.S.C. § 1001.

3. The certification must be signed by a corporate officer or other responsible management official.

**(I). Severability** [40 CFR §52.21(bb)]

The terms and conditions in this permit are distinct and severable. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit. If any term or condition in this permit is held invalid, such invalidity shall not affect other provisions or the application of such terms or conditions.

**(J). Permit Rescission** [40 CFR §52.21(w)]

This permit shall remain in effect, unless and until it expires under 40 CFR §52.21(r) or is rescinded. The Permittee may request that EPA rescind this permit or a particular portion of this permit. If EPA rescinds this permit, or any portion of this permit, the public shall be given adequate notice of the rescission. Publication of an announcement of rescission shall be given in a newspaper of general circulation in the affected region within 60 days of the rescission.

**(K). Entry and Inspection** [Sec. 114(a)(2) of the CAA]

The Permittee shall allow an EPA authorized representative, upon presentation of credentials, to:

1. Have a right of entry to, upon, or through any premises where a source subject to this permit is located or where records required by this permit are kept;
2. At reasonable times, have access to, and copies of any records required by this permit;
3. Inspect any monitoring equipment and method required by or referenced in this permit; and
4. Sample any emissions to assure compliance with this permit or other applicable requirements.

**(L). Circumvention** [Sec. 114(a)(1) of the CAA]

The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals any emission which would otherwise constitute a violation of an applicable standard.