

US EPA ARCHIVE DOCUMENT

United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

CONSTRUCTION PERMIT WITH SYNTHETIC MINOR LIMITS

Permit Number: SYN-SM-27139R0001-2012-02

Issue Date: Draft Effective Date: Draft

In accordance with the provisions of the Clean Air Act (CAA) and 40 C.F.R. Part 49,

Shakopee Mdewakanton Sioux Community of Minnesota

is authorized to construct and operate air emissions units and to conduct other air pollutant emitting activities in accordance with the permit conditions listed in this permit.

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

**Mystic Lake Casino Hotel
2400 Mystic Lake Boulevard
Prior Lake, Minnesota 55372**

Mystic Lake Casino Hotel is located on reservation lands held by the United States government in trust for the Shakopee Mdewakanton Sioux Community of Minnesota.

Terms and conditions not otherwise defined in this permit have the meaning assigned to them in 40 C.F.R. Part 49. All terms and conditions of the permit are enforceable by the U.S. Environmental Protection Agency and citizens under the under the CAA.



Susan Hedman
Regional Administrator
U.S. EPA, Region 5

2-17-15
Date

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Abbreviations and Acronyms

BTU	British Thermal Unit
CAA	Clean Air Act
C.F.R.	Code of Federal Regulations
EPA	Environmental Protection Agency
EU	Emission Unit
Facility	Mystic Lake Casino Hotel
g	gram
hr	hour
kW	kilowatt
lb	pound
MMBTU	Million BTU
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
Permittee	Shakopee Mdewakanton Sioux Community of Minnesota
PSD	Prevention of Significant Deterioration
SMSC	Shakopee Mdewakanton Sioux Community of Minnesota

1.0 FACILITY DESCRIPTION

A. General Source Information

Owner: Shakopee Mdewakanton Sioux Community of Minnesota
2330 Sioux Trail NW
Prior Lake, Scott County, Minnesota 55372

Facility: Mystic Lake Casino Hotel
2400 Mystic Lake Boulevard
Prior Lake, Scott County, Minnesota 55372

County: Scott

Reservation: Shakopee Mdewakanton Sioux Community of Minnesota

SIC Code: 7011, Hotels and Motels; 4911, electric generating facilities

NAICS Code: 721120, Casino Hotel

This permit authorizes the construction of three identical diesel-fired peak load management generators at the Shakopee Mdewakanton Sioux Community of Minnesota's Mystic Lake Casino Hotel facility. The generators will provide emergency and backup power and peak load management for the casino and hotel under contract with Minnesota Valley Electric Cooperative. The combined total generation capacity of those engines will be 6.0 megawatts. Electricity generated at the facility will not be sold for distribution. Operation will be limited by fuel usage of 99,610 gallons per unit per year, based on a 12-month rolling sum.

B. Emission Unit Descriptions

Emission Unit	Description	Manufacturer/Model	Power Rating
EU 116	Diesel-fired engine/generator	Caterpillar Model 3516C	2,230 kW
EU 117	Diesel-fired engine/generator	Caterpillar Model 3516C	2,230 kW
EU 118	Diesel-fired engine/generator	Caterpillar Model 3516C	2,230 kW

2.0 UNIT-SPECIFIC REQUIREMENTS

A. Emission Limitations and Standards

The Permittee shall comply with the following requirements:

1. Nitrogen Oxide (NO_x) Limitations and Requirements
 - i. EU 116
 - a. Limit NO_x emissions to no greater than 35.9 pounds per hour expressed as NO₂, averaged over the duration of the emission performance test.
 - b. Limit NO_x emissions to no greater than 12.6 tons per year expressed as NO₂, based on a 12 month rolling sum. Compliance with this limit shall be based on a rolling sum of monthly emissions during the previous 12 months.
 - c. Limit fuel usage to ultra-low sulfur diesel fuel with a maximum sulfur content of 0.0015%.
 - d. Limit fuel usage to no greater than 99,610 gallons per year, based on a 12 month rolling sum. Compliance with this limit shall be based on a rolling sum of monthly fuel usage (in gallons) during the previous 12 months.
 - ii. EU 117
 - a. Limit NO_x emissions to no greater than 35.9 pounds per hour expressed as NO₂, averaged over the duration of the emission performance test.
 - b. Limit NO_x emissions to no greater than 12.6 tons per year expressed as NO₂, based on a 12 month rolling sum. Compliance with this limit shall be based on a rolling sum of monthly emissions during the previous 12 months.
 - c. Limit fuel usage to ultra-low sulfur diesel fuel with a maximum sulfur content of 0.0015%.
 - d. Limit fuel usage to no greater than 99,610 gallons per year, based on a 12 month rolling sum. Compliance with this limit shall be based on a rolling sum of monthly fuel usage (in gallons) during the previous 12 months.
 - iii. EU 118
 - a. Limit NO_x emissions to no greater than 35.9 pounds per hour expressed as NO₂, averaged over the duration of the emission performance test.
 - b. Limit NO_x emissions to no greater than 12.6 tons per year expressed as NO₂, based on a 12 month rolling sum. Compliance with this limit shall be based on a rolling sum of monthly emissions during the previous 12 months.

- c. Limit fuel usage to ultra-low sulfur diesel fuel with a maximum sulfur content of 0.0015%.
 - d. Limit fuel usage to no greater than 99,610 gallons per year, based on a 12 month rolling sum. Compliance with this limit shall be based on a rolling sum of monthly fuel usage (in gallons) during the previous 12 months.
- iv. Operational Limitations (New Source Performance Standards)
- a. Obtain from the manufacturer for EU 116, 117 and 118 a certification that generator emissions will be at or below the emission standards set forth for new non-emergency stationary internal combustion engines at 40 C.F.R. §§ 94.8, 60.4201 and 60.4202 and shall continue to meet them for the useful life of the engine.
 - b. Operate and maintain applicable units according to the manufacturer's written emission-related instructions over the entire life of the engine. Change only those emission-related settings that are permitted by the manufacturer.
 - c. Meet the requirements of 40 C.F.R. Parts 89, 94 and 1068, as they apply to you.
- v. Conduct performance testing on EU 116, 117 and 118 to determine compliance with the NO_x emission rates and limits in this Section in accordance with the requirements set forth in Section 2(B) of this permit. Determine the NO_x emission rate, expressed as NO₂, using exhaust properties determined by both 40 C.F.R. Part 60, Appendix A, Method 7E and exhaust gas measurements as set out in Section 2(B)(2) of this permit.
- vi. Good Air Pollution Control Practices
- At all times, including start-up, shut-down, and malfunction, maintain and operate all sources including associated air pollution control equipment regulated by this permit in a manner consistent with good air pollution control practices for minimizing emissions. The determination of whether acceptable operating and maintenance practices are being used will be made by EPA based on information that 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

- 1. Monitoring
 - i. The Permittee shall make calculations to comply with rolling monthly averages by the 15th day of the next month and shall add the monthly total to the previous 11 months of data.

- ii. EU 116, EU 117, and EU 118 shall each be equipped with a fuel meter and a runtime hour meter.
- iii. The Permittee shall calculate NO_x emissions using fuel usage data and the NO_x emission factor determined from the most recent performance test.
- iv. Monthly NO_x emissions shall be calculated using the following equation:

$$\text{NO}_x = F \times \text{EF}_{\text{gal}} \times 0.137 / 2000$$

Where: NO_x is the NO_x emissions, in tons.
F is the engine's monthly fuel usage, in gallons.
EF_{gal} is the NO_x emission factor in pounds/MMBTU.

- v. If a fuel meter fails on any individual generator, monthly NO_x emissions shall be calculated using the following equation:

$$\text{NO}_x = H \times \text{EF}_{\text{hour}} / 2000$$

Where: NO_x is the NO_x emissions, in tons.
H is the engine's monthly operating hours, in hours.
EF_{hour} is the NO_x emission factor in pounds/hour.

2. Performance Testing

- i. Initial Compliance Test. Within 180 days after initial startup of EU 116, 117 and 118, and at other times as may be required by the EPA under Section 114 of the CAA, the Permittee shall conduct performance test(s) for NO_x on EU 116, 117 and 118 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 a NO_x performance test on EU 116, EU 117, and EU 118 once every five years, starting five years after the initial compliance test (on or before the anniversary of the initial compliance test). The Permittee shall conduct the tests to determine compliance with the applicable NO_x emissions limits. Each test shall be conducted using the Reference Test Method specified in Condition 2.0 B.2.iii of this permit.
- iii. Reference Test Methods. The Permittee shall test EU 116, 117 and 118 for emissions of nitrogen compounds in accordance with the methods and procedures specified in Method 7E of 40 C.F.R. Part 60, Appendix A for testing NO_x emissions, unless an alternative test method has been 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 facility 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, unless an alternative schedule is given in an applicable requirement or compliance document, the Permittee shall:
 - a. Conduct a retest within 30 days of receipt of the EPA written notice.
 - b. Submit to the EPA written notice of testing and submit a test plan for the retest.
 - c. 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 for the purposes of conducting performance tests or inspections. The Permittee shall provide performance testing facilities that enable the EPA to conduct performance tests, including:
 - a. Sampling ports adequate for the applicable test methods;
 - b. Safe sampling platforms;
 - c. Safe access to sampling platforms; and
 - d. Utilities for sampling and testing equipment.
- viii. **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

- 1. **Recordkeeping**
 - i. The Permittee shall maintain at the Tribal Government office a file containing the records specified below. The Permittee shall retain all records at the Tribal Government office for at least five years following the creation of such records. Records that 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 monitoring include, but are not limited to:

- a. Fuel usage for emissions units EU 116, 117, 118;
- b. Fuel supplier certification for emissions units EU 116, 117 and 118. The Permittee shall obtain and maintain a fuel supplier certification for each shipment of fuel oil, certifying that the sulfur content does not exceed 0.0015% by weight;
- c. Performance test data and results including:
 1. Sampling dates and the times of sampling or measurement;
 2. The operating conditions that existed at the time of sampling or measurement;
 3. The date analyses were performed;
 4. The location where samples were taken;
 5. The company or entity that performed the sampling and analysis;
 6. The analytical techniques or methods used; and
 7. The results of the analysis;
- d. Results of annual NO_x testing from the portable emissions analyzer;
- e. Reports of excess emissions;
- f. Calibration and maintenance records, original strip chart, or computer-based recordings;
- g. Standard operation and maintenance procedures for each emission unit; and
- h. Number of hours of operation for EU 116, 117, or 118 during periods of fuel meter failure.

2. Reporting

Deviation Reporting. The Permittee shall report to EPA any deviation from any permit requirements, including those attributable to upset conditions the probable cause of such deviation, and any corrective actions or preventative measures taken. The Permittee shall report to EPA within 2 working days of the deviation.

3.0 FACILITY-WIDE REQUIREMENTS

A. Notification

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 Section 3 (A), above, 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 before the test date.

B. Recordkeeping and Reporting

1. The Permittee shall maintain for five years at the Tribal Government office 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 REQUIREMENTS

A. Definitions

Terms and conditions in this permit have the meaning assigned to them in 40 C.F.R. § 49.152 unless other regulations or statutes are referenced or applicable.

B. Issuance and Effective Date of Permit

This permit shall become effective on the date of signature by the Regional Administrator. The EPA is issuing this permit pursuant to an executed Administrative Compliance Order. The Permittee must resume construction and installation of the three generators within 18 months after the effective date of this permit or the permit automatically will become invalid.

C. Construction without a Permit

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

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 of federal law or regulation, including Title V of the CAA.
3. The Permittee is responsible for submitting a timely application for a federal Title V operating permit to authorize continued operation of the subject emissions units.

E. Compliance with Permit Requirements

1. The Permittee must comply with each permit term and condition. Failure to comply with any term or condition of this permit constitutes a violation of the permit, and may constitute a violation of the CAA and grounds for:
 - i. An enforcement action under Section 113 of the CAA;
 - ii. Termination, revocation and reissuance, or modification of the permit; or
 - iii. Denial of a federal operating permit application under 40 C.F.R. Part 71.

2. It is not a defense in an enforcement action for violation of this permit that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

F. Prohibition on Violation of National Ambient Air Quality Standards and Prevention of Significant Deterioration Increments

The three generators that are the subject of this construction permit must not cause or contribute to a violation of any National Ambient Air Quality Standard or to a violation of a Prevention of Significant Deterioration increment.

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 applications and information regarding 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. Severability

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 the validity or application of other terms or conditions.

I. Entry and Inspection

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 any records required by this permit and to make copies of any records;
3. Inspect, during normal business hours or while the source is in operation, the generators that are the subject of the this permit and any monitoring equipment and method required by or referenced in this permit;
4. Record any inspection by use of written, electronic, magnetic, and photographic media; and
5. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

J. Circumvention

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.

K. Reservation

This permit does not convey any property rights of any sort or any exclusive privilege.

L. Permit Revision, Reopening, Revocation and Reissuance, or Termination

1. EPA may revise, reopen, revoke and reissue, or terminate this permit for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance or termination or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 49.155]
2. The Permittee shall furnish, within a reasonable time, any information that EPA may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. For any such information claimed to be confidential, the Permittee must also submit a claim of confidentiality in accordance with 40 C.F.R. Part 2, Subpart B. [40 C.F.R. § 49.155]