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

# AFTER-THE-FACT AIR QUALITY CONSTRUCTION PERMIT

Permit Number: MIN-SM-27139R0004-2013-01

Issue Date: JUN 23 2014 Effective Date: JUL 23 2014

In accordance with the provisions of the Clean Air Act (CAA) and the Federal Minor New Source Review Program in Indian Country, 40 C.F.R. §§ 49.151 – 49.161,

**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:

**Dakotah! Sport and Fitness**
**2100 Trail of Dreams**
**Prior Lake, Minnesota 55372**

Dakotah! Sport and Fitness is located on reservation lands held by the United States government in trust for the Shakopee Mdewakanton Sioux Community of Minnesota, a federally recognized Indian tribe with a reservation in Scott County, 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 CAA.

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

6-23-2014
Date

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**Abbreviations and Acronyms**

| | |
|---|---|
| CAA | Clean Air Act |
| C.F.R. | Code of Federal Regulations |
| CO | Carbon Monoxide |
| DSF | Dakotah! Sport and Fitness |
| EPA | Environmental Protection Agency |
| EU | Emission Unit |
| Facility | Dakotah! Sport and Fitness |
| g | gram |
| hr | hour |
| kW | kilowatt |
| NAAQS | National Ambient Air Quality Standards |
| $NO_2$ | Nitrogen Dioxide |
| $NO_x$ | Oxides of Nitrogen |
| NMHC | Non-methane Hydrocarbon |
| NSPS | New Source Performance Standards |
| Permittee | Shakopee Mdewakanton Sioux Community |
| PM | Particulate Matter |
| 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, Minnesota 55372

Facility: Dakotah! Sport and Fitness
2100 Trail of Dreams
Prior Lake, Minnesota 55372

County: Scott

Reservation: Shakopee Mdewakanton Sioux Community of Minnesota

SIC Code: 7991, Physical Fitness Facilities;
8041, Offices and Clinics of Chiropractors;
8049, Offices and Clinics of Health Practitioners, Not Elsewhere Classified.

NAICS Code: 713940, Fitness and Recreational Sport Centers;
621310, Offices of Chiropractors;
621340, Offices of Physical, Occupational and Speech Therapist, and Audiologist

This after-the-fact permit establishes federally-enforceable nitrogen oxide ($NO_x$) emission limits for three diesel-fired fuel generators at Dakotah! Sport and Fitness (DSF) by limiting the annual fuel usage of each generator. The Shakopee Mdewakanton Sioux Community of Minnesota (SMSC) owns and operates the DSF, including the three diesel-fired generators. The SMSC originally constructed DSF in 1994 during which it installed Emission Unit (EU) 204, a diesel-fired emergency generator. In 2007, the SMSC expanded DSF and installed two additional, identical, diesel-fired emergency generators, EU 213 and EU 214. The combined total generation capacity of all three generators is 2.4 megawatts. Electricity generated at this facility will not be sold for distribution.

EU 204 will continue to provide emergency and backup power for the facility. EU 204 is equipped with a run time hour meter. Operation of this generator will be limited to 100 hours of non-emergency and maintenance operation per calendar year. Emergency operation will not count towards this limit.

Under a contractual agreement with Minnesota Valley Electric Cooperative, EU 213 and EU 214 will provide emergency and backup power and peak load management for the facility. EU 213 and EU 214's fuel consumption is limited to 32,340 gallons per year, per engine, calculated as a 12-month rolling sum. For each engine, this is equivalent to 700 hours of operation per 12-month rolling period at each unit's maximum fuel usage rate of 46.2 gallons per hour.

**B. Emission Unit Description**

| Emission Unit | Description | Manufacturer/Model | Power Rating |
|---|---|---|---|
| EU 204 | Diesel-fired emergency engine/generator | Energy Dynamics model 8011250C | 1,250 kW |
| EU 213 | Diesel-fired emergency and peak shaving engine/generator | Generac model SD600 | 600 kW |
| EU 214 | Diesel-fired emergency and peak shaving engine/generator | Generac model SD600 | 600 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 204
   - a. Limit $NO_x$ emissions to no greater than 37.59 pounds per hour, expressed as $NO_2$. Compliance with this limit shall be demonstrated using the applicable monitoring and testing requirements listed in Condition 2.0 B. of this permit.
   - b. Limit $NO_x$ emissions to no greater than 9.40 tons per year, expressed as $NO_2$ and 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%. Compliance with this limit shall be demonstrated via recordkeeping as required in Condition 2.0 C.1.i.b of this permit.
   - d. Limit runtime hours to no greater than 100 hours of non-emergency and maintenance operation per calendar year. Emergency operation of EU 204 will not count towards the 100 hour limit.

   ii. EU 213
   - a. Limit $NO_x$ emissions to no greater than 9.11 pounds per hour, expressed as $NO_2$. Compliance with this limit shall be demonstrated using the applicable monitoring and periodic testing requirements listed in Condition 2.0 B. of this permit.
   - b. Limit $NO_x$ emissions to no greater than 3.2 tons per year, expressed as $NO_2$ and 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%. Compliance with this limit shall be demonstrated via recordkeeping as required in Condition 2.0 C.1.i.b. of this permit.
d. Limit fuel usage to 32,340 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 214
a. Limit NOx emissions to no greater than 9.11 pounds per hour, expressed as $NO_2$. Compliance with this limit shall be demonstrated using the applicable monitoring and periodic testing requirements listed in Condition 2.0 B of this permit.
b. Limit NOx emissions to no greater than 3.2 tons per year, expressed as $NO_2$ and 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%. Compliance with this limit shall be demonstrated via recordkeeping as required in Condition 2.0 C.1.i.b of this permit.
d. Limit fuel usage to 32,340 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. Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 C.F.R. Part 60, Subpart IIII)
a. The Permittee shall operate and maintain EU 213 and EU 214 to meet the emission standards set forth in 40 C.F.R. § 60.4201(a) over the life of each engine. Specifically, the exhaust emissions from EU 213 and EU 214 shall not exceed the following standards as listed in 40 C.F.R. §§ 89.112 and 89.113:
[40 C.F.R. §§ 60.4201(a), 60.4204(b), 60.4206, 60.4211(a)(3)]:
    1. NMHC+NOx: 6.4 g/kW-hr
    2. CO: 3.5 g/kW-hr
    3. PM: 0.20 g/kW-hr
    4. Exhaust opacity shall not exceed:
        a. 20 percent during the acceleration mode;
        b. 15 percent during the lugging mode; and
        c. 50 percent during the peaks in either the acceleration or lugging modes.
b. To demonstrate compliance with the emission standards listed in Condition 2.0 A.1.iv.a. of this permit, the Permittee shall:
    1. Operate and maintain EU 213 and EU 214 according to the manufacturer's emission-related written instructions [40 C.F.R. § 60.4211(a)(1)];
    2. Change only those emission-related settings that are permitted by the manufacturer of EU 213 and EU 214 [40 C.F.R. § 60.4211(a)(2)];

3. Meet the requirements of 40 C.F.R. Parts 89, 94, and/or 1068 as they apply to EU 213 and EU 214 [40 C.F.R. § 60.4211(a)(3)]; and
4. Purchase engines certified to meet the emission standards. Obtain from the manufacturer for EU 213 and EU 214 a certification that generator emissions will be at or below the emission standards. Each engine shall be installed and configured according to the manufacturer's emission-related specifications. [40 C.F.R. § 60.4211(c)]

c. The Permittee shall limit fuel usage in EU 213 and EU 214 to diesel fuel with a minimum cetane index of 40, or maximum aromatic content of 35 volume percent. [40 C.F.R. § 60.4207(b), § 80.510(b)]

v. National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 C.F.R. Part 63, Subpart ZZZZ)

a. EU 204 shall meet the following requirements [40 C.F.R. § 63.6603(a), Table 2d to Subpart ZZZZ]:
    1. Change oil and filter every 500 hours of operation or annually, whichever comes first;
    2. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
    3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

b. The Permittee shall operate and maintain EU 204 according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions.[40 C.F.R. § 63.6625(e)]

c. EU 204 shall have installed a non-resettable hour meter. [40 C.F.R. § 63.6625(f)]

d. The Permittee shall minimize EU 204's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine. [40 C.F.R. § 63.6625(h)]

e. The Permittee shall operate EU 204 according to the requirements for emergency stationary reciprocating internal combustion engines at 40 C.F.R. § 63.6640(f). [40 C.F.R. § 63.6640(f)]

f. The following records shall be kept for at least five years in a form suitable and readily available for review [40 C.F.R. § 63.6660]:
    1. Records of the maintenance conducted on EU 204 [40 C.F.R. § 63.6655(e)]; and
    2. Records of the hours of operation of EU 204 recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as an emergency and how many hours are spent for non-emergency operation. [40 C.F.R. § 63.6655(f)]

vi. Good Air Pollution Control Practices

a. 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. EU 213 and EU 214 shall each be equipped with a fuel meter and a runtime hour meter.

ii. EU 204 shall be equipped with a runtime hour meter.

iii. The Permittee shall calculate $NO_x$ emissions and determine fuel usage to demonstrate compliance with the requirements of Condition 2.0 A. by the 15th day of each calendar month. For 12-month rolling sums, the Permittee shall add the present monthly total to the previous 11 months of data.

iv. The Permittee shall calculate $NO_x$ emissions using the $NO_x$ emission factor determined from the most recent performance test as required by Condition 2.0 B.2. of this permit. Prior to the initial performance test, the Permittee shall use the emission factors based on manufacturer data, or AP-42 if manufacturer data is not available, when calculating $NO_x$ emissions for each unit.

v. If a fuel meter fails on any individual generator, the Permittee shall calculate $NO_x$ emissions using runtime hour data and the $NO_x$ emission factor determined from the most recent performance test as required by Condition 2.0 B.2. of this permit.

vi. Monthly $NO_x$ emissions shall be calculated using the following equation:

$$NOx = F \times EF_{gal}/2000$$

Where: $NO_x$ is the monthly $NO_x$ emissions, in tons;
F is the engine's monthly MMbtu generated, calculated by (137,000 btu/gal x gal burned)/ 1,000,000, in MMbtu;
$EF_{gal}$ is the $NO_x$ emission factor, in pounds/MMbtu.

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

$$NOx = H \times EF_{hour}/2000$$

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

viii. The Permittee shall prepare and submit to EPA for approval an Operations and Maintenance Manual.

ix. The Permittee shall operate and maintain EU 204, EU 213, and EU 214 in accordance with the submitted Operations and Maintenance Manual.
   a. The Permittee shall conduct monthly, annual, and triennial maintenance and inspection activities in accordance with the manual. The Permittee shall perform necessary follow-up to ensure EU 204, EU 213, and EU 214 are maintained appropriately, including but not limited to filter replacement, leak repair, and oil and fluid changes.

2. Performance Testing

i. Initial Compliance Test. Within 180 days after permit issuance, the Permittee shall conduct initial $NO_x$ performance tests on EU 204, EU 213, and EU 214 to determine compliance with the emission limits established in Conditions 2.0 A.1.i, A.1.ii, and A.1.iii. For each test, the Permittee shall use the Reference Test Method specified in Condition 2.0 B.2.iii. of this permit.

ii. Periodic Performance Tests. The Permittee shall conduct a $NO_x$ performance test on both engines EU 213 and EU 214 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 $NO_x$ emission limits established in Condition 2.0 A.1. For each test, the Permittee shall use the Reference Test Method specified in Condition 2.0 B.2.iii. of this permit.

iii. Reference Test Methods. The Permittee shall test EU 204, EU 213, and EU 214 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 method has been approved in advance 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 as described in the EPA approved test plan. 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 based on the conditions as described in the EPA-approved test plan.

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; and
   c. Submit a complete report of the results of the retest within 45 days after completion.

## C. Recordkeeping and Reporting

1. Recordkeeping

i. The Permittee shall maintain at the Tribal Government office a file containing the records specified in subsection a through g of this permit condition, 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 213 and EU 214;
   b. Fuel supplier certification for emissions units EU 204, EU 213 and EU 214. 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. Hours of operation for emissions units EU 204, EU 213, and EU 214;
   d. Operations and Maintenance Manual;
   e. Records of maintenance performed on engines EU 204, EU 213, and EU 214;
   f. Reports of excess emissions; and
   g. Standard operation and maintenance procedures for each emission unit.

ii. The Permittee shall maintain initial performance test data and results for EU 204, EU 213, and EU 214 as required in condition 2.0 B.2.ii. for at least five years. The Permittee shall maintain subsequent periodic performance test data and results for at least five years or until the next periodic performance test is performed on each engine, whichever is later. All of the required performance test data and results shall be retained at the Tribal Government office. Performance test data and results include, but are not limited to:
   a. Sampling dates and the times of sampling or measurement;

b. The operating conditions that existed at the time of sampling or measurement;
c. The date analyses were performed;
d. The location where samples were taken;
e. The company or entity that performed the sampling and analysis;
f. The analytical techniques or methods used; and
g. The results of the analysis.

2. Reporting

i. Test Reports. No later than 45 days following the completion of the initial or periodic performance tests required in Condition 2.0 B.2.i. and ii., the Permittee shall submit to EPA a written report of the test results obtained from the initial and periodic NOx performance tests.

ii. 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 within 180 days of the deviation.

iii. The Permittee shall submit any changes to the Operation and Maintenance Manual to EPA for approval.

## 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 in conducting the scheduled performance test (due to operational problems, etc.), 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 in Condition 3.0 A.1 of this permit in response to 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, then EPA may reject the plan and the owner or operator must address any of EPA's comments on revision and additions that are necessary to make the plan complete before the test date.

## 4.0 GENERAL PERMIT REQUIREMENTS

### A. Definitions

1. 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

1. This permit shall become effective on the date of signature by the Regional Administrator.

2. The EPA is issuing this permit pursuant to Administrative Amended Consent Order EPA-5-11-113(a)-MN-02.

### C. Construction without a Permit

1. If the Permittee constructs or operates any source or modification not in accordance with the terms of any approval to construct then 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 emission units.

### E. Compliance with Permit Requirements

1. The Permittee shall comply with each term and condition in this permit. 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; or

    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**

1. 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**

1. 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

1. The Permittee shall allow an EPA-authorized representative, upon presentation of credentials at the offices of the Shakopee Mdewakanton Sioux Community Business Council, to:

    i. 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;

    ii. At reasonable times, have access to any records required by this permit and to make copies of any records;

    iii. Inspect, during normal business hours or while the source is in operation, the generators that are the subject of this permit and any monitoring equipment and method required by or referenced in this permit;

    iv. Record any inspection by use of written, electronic, magnetic, and photographic media; and

    v. Sample or monitor, at reasonable times, any emissions or parameters to assure compliance with this permit or other applicable requirements.

## J. Circumvention

1. 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

1. This permit does not convey any property rights or any sort of 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 re-issuance 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 confidentially in accordance with 40 C.F.R. Part 2, Subpart B. [40 C.F.R. § 49.155]