United States Environmental Protection Agency
Region 7
Air and Waste Management Division
Air Permitting and Compliance Branch
11201 Renner Boulevard
Lenexa, KS 66219

SYNTHETIC MINOR SOURCE PERMIT

Permit Number: R7-TMNSR-2018-001

In accordance with the provisions of the Clean Air Act (CAA) and the Federal Minor New Source Review Program in Indian Country, 40 CFR 49.151-49.161,

Pender Municipal Power Plant

is authorized to 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 operate at the following location(s):

205 North 3rd Street (NE Corner of Ivan St. and N 3rd St.)
Pender, Nebraska 68047

Pender Municipal Power Plant is located in Thurston County, within the exterior boundaries of the Omaha Indian Reservation.

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

This permit shall become effective on _____, 2018.

Issued this _____ day of _____, 2018, by

_____
Mark Smith, Acting Director
Air and Waste Management Division

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SECTION I - FACILITY DESCRIPTION

(A) General Source Information

Owner:	Village of Pender P.O. Box 5 416 Main Street Pender, NE 68047
Facility:	Pender Municipal Power Plant 205 North 3rd Street (NE Corner of Ivan St. and 3rd St.) Pender, Nebraska 68047
County:	Thurston
Reservation:	Omaha Tribe of Nebraska
SIC Code:	4911 (Electric Services)
NAICS Code:	221112 (Fossil Fuel Electric Power Generation)

The Village of Pender owns and operates the Pender Municipal Power Plant and has a capacity lease agreement with Municipal Energy Agency of Nebraska (MEAN). This permit establishes federally enforceable nitrogen oxide (NOx) emission limits for the existing three (3) dual-fuel and one (1) diesel-only, compression ignition (CI) engine-generators totaling 7,120 horsepower at the Pender Municipal Power Plant by limiting the plant's hours of operation and fuel usage.

Air pollutants at this facility include nitrogen oxides (NOx), carbon monoxide (CO), sulfur oxides (SOx), volatile organic compounds (VOC), particulate matter (PM), PM with aerodynamic diameter equal to or less than 10 microns (PM10), and PM with aerodynamic diameter equal to or less than 2.5 microns (PM2.5), hazardous air pollutants (HAP), and greenhouse gases (GHG) emitted from combustion of natural gas and diesel fuel in internal combustion engines. The uncontrolled potential emissions for NOx are above major source thresholds established under the Prevention of Significant Deterioration (PSD) permitting program regulations and the federal operating permit program regulations at 40 CFR Part 71 (Title V or Part 71).

This permit is being issued under authority of the Tribal Minor New Source Review Permit Program at 40 CFR Part 49 (TMNSR). Under 40 CFR 49.158, a synthetic minor source permit may be obtained under this program to establish a synthetic minor source for nonattainment major New Source Review (NSR), PSD and Title V purposes and/or a synthetic minor HAP source for CAA standards established for maximum achievable control technology (MACT) and Title V purposes.

This permit establishes federally enforceable nitrogen oxide (NOx) emission limitations for four existing engine-generators to avoid PSD and/or Title V permitting requirements for major sources. The restrictions replace those agreed to by the owner pursuant to the March 7, 1999, Potential to Emit (PTE) Transition Policy for Part 71 Implementation in Indian Country (50% PTE Transition Policy). In order to continue to avoid major source requirements, the permittee has requested a synthetic minor source

permit and the reviewing authority is issuing this permit that establishes limitations to maintain NOx emissions below 100 tons per year.

(B) Emission Unit Descriptions

Emission Unit ID	Source Description	Year Installed	Identified Pollutant Emissions	Control Device – Pollutants Controlled	Control Device Efficiency	Emission Point(s)
EU-1-EG	**Dual-Fuel Fired Engine-generator:** Fairbanks Morse 38TDD8 1/8; Serial #: 38D867051TDFS9; 720 rpm; 2-cycle; 9-cylinder; Site Rated 2,160 hp; Calculated Power Output: 1,611 kW; Calculated Heat Input: 15.29 MMBtu/hr	1967	*PM, PM_{10}, $PM_{2.5}$, CO, NOx, SO_2 VOC, organic HAP; GHG*	Oxidation Catalyst - *CO*	≥ 70% as specified by 40 CFR Part 63 Subpart ZZZZ	EP-1
EU-2-EG	**Diesel-Only Fired Engine-generator:** Fairbanks Morse 38TDD8 1/8; Serial #: 38D872065TDFS12; 720 rpm; 2-cycle; 12-cylinder; Site Rated 2,880 hp; Calculated Power Output: 2,148 kW; Calculated Heat Input: 20.43 MMBtu/hr	1972	*PM, PM_{10}, $PM_{2.5}$, CO, NOx, SO_2 VOC, organic HAP; GHG*	Oxidation Catalyst - *CO*	≥ 70% as specified by 40 CFR Part 63 Subpart ZZZZ	EP-2
EU-3-EG	**Dual-Fuel Fired Engine-generator:** Fairbanks Morse 38DD8 1/8; Serial #: 967678; 720 rpm; 2-cycle; 5-cylinder; Site Rated 800 hp; Calculated Power Output: 597 kW; Calculated Heat Input: 5.56 MMBtu/hr	1952	*PM, PM_{10}, $PM_{2.5}$, CO, NOx, SO_2 VOC, organic HAP; GHG*	Oxidation Catalyst - *CO*	≥ 70% as specified by 40 CFR Part 63 Subpart ZZZZ	EP-3
EU-4-EG	**Dual-Fuel Fired Engine-generator:** Fairbanks Morse 38DD8 1/8; Serial #: 969829; 720 rpm; 2-cycle; 8-cylinder; Site Rated 1,280 hp; Calculated Power Output: 954.5 kW; Calculated Heat Input: 8.90 MMBtu/hr	1961	*PM, PM_{10}, $PM_{2.5}$, CO, NOx, SO_2 VOC, organic HAP; GHG*	Oxidation Catalyst - *CO*	≥ 70% as specified by 40 CFR Part 63 Subpart ZZZZ	EP-4
EU-5-ST	**Diesel Storage Tank:** double-wall aboveground Clawson-manufactured "Fireguard" tank; 5,000-gallon Capacity	2016	*VOC, organic HAP*			EP-5
EU-6-WH	**Natural Gas Fired Water Heater:** Burnham Model 809B (serial # 7713615); Heat Input Capacity: **0.5**28 MMBtu/hr	unknown	*PM, PM10, PM2.5, CO, NOx, SO2 VOC, organic HAP; GHG*			EP-6
EU-7-WH	**Natural Gas Fired Water Heater:** Lochinvar Model CBN500 (Serial No. E06H00187278); Heat Input Capacity: **0.**5 MMBtu/hr	unknown	*PM, PM10, PM2.5, CO, NOx, SO2 VOC, organic HAP; GHG*			EP-7

Power Output calculated using site-rated horsepower (hp) and standard conversion factor: 1 hp = 0.7457 Kilowatt (kW).

Heat Input calculated using flow rate (gallons/hour) multiplied by 0.139 MMBtu/gallon conversion factor for diesel fuel as specified in 2012 URGE test included in permit application.

SECTION II - UNIT-SPECIFIC REQUIREMENTS

(A) Engine-generators EU-1-EG, EU-2-EG, EU-3-EG, EU-4-EG

(1) Emission Limitations

i. The permittee shall not operate the dual fuel fired engine-generator EU-1-EG at a capacity greater than 2,160 site-rated brake horsepower.

ii. The permittee shall not operate the Diesel-Only Fired engine-generator *EU-2-EG* at a capacity greater than 2,880 site-rated brake horsepower.

iii. The permittee shall not operate the dual fuel fired engine-generator *EU-3-EG* at a capacity greater than 800 site-rated brake horsepower.

iv. The permittee shall not operate the dual fuel fired engine-generator *EU-4-EG* at a capacity greater than 1,280 site-rated brake horsepower.

v. The permittee shall operate each engine-generator with a non-resettable, totalizing hour meter for measuring the amount of time each engine-generator is operated.

vi. The permittee shall operate the Diesel-Only Fired engine-generator *EU-2-EG* with only diesel fuel.

vii. The permittee shall operate each engine-generator using diesel fuel that meets the requirements in 40 CFR 80.510(b) for NonRoad (NR) diesel fuel:

   a. Sulfur content: 15 ppm maximum for NR diesel fuel.

   b. Cetane index or aromatic content: minimum cetane index of 40; or a maximum aromatic content of 35 volume percent.

viii. The permittee shall operate each engine-generator with a non-resettable flow meter installed for measuring the amount of diesel fuel being consumed.

ix. The permittee shall operate the three-dual fuel fired engine-generators with a single non-resettable flow meter installed for measuring the combined amount of natural gas being consumed.

x. The permittee shall not emit more than 95 tons of nitrogen oxides (NOx) per year from all four engine-generators (EU-1-EG, EU-2-EG, EU-3-EG, and EU-4-EG), as determined on a 12-month rolling sum basis.

xi. The permittee shall comply with all applicable Emission and Operating Limitations in 40 CFR Part 63 Subpart A and Subpart ZZZZ for each engine.

(2) Monitoring, Recordkeeping and Reporting Requirements

i. The permittee shall maintain for each engine-generator: all specifications and standard procedures for operation and maintenance developed by the manufacturer, vendor, or permittee to verify the specifications, including the maximum design capacity at engine site conditions, and to reference during operation and maintenance procedures.

ii. The permittee shall maintain for each hour meter associated with the operation of each engine-generator: all specifications and standard procedures for operation and maintenance developed by the manufacturer, vendor, or permittee to verify the specifications, including the manufacturer's model number, and to reference during operation and maintenance procedures.

iii. The permittee shall verify that the accuracy of each hour meter is within the manufacturer's design specification at least as frequently as the frequency of the performance tests required by 40 CFR Part 63 Subpart ZZZZ.

iv. For each shipment of diesel fuel received, the Permittee shall obtain and maintain purchase records and a fuel supplier certification, certifying that the diesel fuel received meets the requirements in 40 CFR 80.510(b) for NR diesel fuel.

v. The permittee shall maintain for each flow meter associated with the operation of each engine-generator: all specifications and standard procedures for operation and maintenance developed by the manufacturer, vendor, or permittee to verify the specifications, including the manufacturer's model number, and to reference during operation and maintenance procedures.

vi. The permittee shall calibrate each diesel fuel flow meter associated with the operation of each engine-generator at least at frequently as the frequency of performance tests required by 40 CFR Part 63 Subpart ZZZZ.

vii. The permittee shall maintain for the single flow meter that supplies natural gas to all dual fuel engine-generators: all specifications and standard procedures for operation and maintenance developed by the manufacturer, vendor, or permittee to verify the specifications, including the manufacturer's model number, and to reference during operation and maintenance procedures.

viii. The permittee shall maintain an operational log that includes the following records in a hard copy or electronic form suitable and readily available for expeditious review:

   a. Hour meter readings at the beginning and end of operations each month for each of the engine-generators.
   b. Time of operation (hours/month) for each of the engine-generators.
   c. Diesel fuel flow meter readings at the beginning and end of operations each month for each of the engine-generators.
   d. Diesel fuel consumed each month (gallons/month) for each of the engine-generators.

e. Natural gas flow meter readings at the beginning and end of operations each month from the single meter that supplies natural gas to all dual fuel engine-generators.
f. Natural gas fuel consumed (MMscf) each month as determined from the single flow meter that supplies natural gas to all dual fuel engine-generators.
g. Date and description of all maintenance, repair, rebuild or replacement activities conducted for each emission unit listed in SECTION I (B).
h. Date and description of all maintenance, repair, rebuild or replacement activities conducted for each emissions control and monitoring device associated with each emission unit listed in SECTION I (B).
i. For scheduled maintenance activities, specify the elapsed time, hours of operation, or other applicable measure since the activity was last performed.
j. For scheduled maintenance activities, specify the elapsed time, hours of operation, or other applicable measure until the next activity is scheduled to be performed.

ix. Within fifteen days of the end of each month, the permittee shall calculate and record the NOx emissions from all engine-generators for the month, using the following equation:

NOx Emissions (lbs./month) based on hours of operation =

0.0291 lbs./hp-hr * [2,160 hp (EU-1-EG # Hours) + 2,880 hp (EU-2-EG # Hours) + 800 hp (EU-3-EG # Hours) + 1,280 hp (EU-4-EG # Hours)]

Where

0.0291 lbs./hp-hr is the Emission Factor derived from performance testing of a similar engine-generator using diesel fuel
 # Hours refers to the number of hours that a specific engine-generator (EU-1-EG, EU-2-EG, EU-3-EG, or EU-4-EG) is operated for the month

x. If an hour meter fails on any individual engine-generator, within fifteen days of the end of the month, the permittee shall calculate and record the NOx emissions from all engine-generators, using the following equation:

NOx Emissions (lbs./month) based on fuel usage =

4.16 lbs./MMBtu * [F_D (gallons) * 0.139 MMBtu/gallon + F_{NG} (MMscf) * 1,000 MMBtu/MMscf]

Where

4.16 lbs./MMBtu is the Emission Factor derived from performance testing of a similar engine-generator using diesel fuel.
F_D is the combined amount of diesel fuel (gallons/month) used by all engine-generators for the month

0.139 MMBtu/gallon is the heat value of diesel fuel as provided in 2012 permit application

F_{NG} is the combined amount of natural gas (MMscf/month) used by all engine-generators

1,000 MMBtu/MMscf is the heat value of diesel fuel as provided in 2012 permit application

xi. Within fifteen days of the end of each month, the permittee shall calculate and record the NOx emissions from all engine-generators on a 12-month rolling sum basis, determined by adding the NOx emissions from all engine-generators for the month and then adding the NOx emissions from all engine-generators for the previous 11 months.

xii. The permittee shall comply with all applicable Compliance, Testing, Notifications, Reports, and Records requirements in 40 CFR Part 63 Subpart A and Subpart ZZZZ for each engine.

SECTION III - FACILITY-WIDE REQUIREMENTS

(A) Startup, Shutdown, Maintenance and Malfunction.

(1) At all times, including periods of startup, shutdown, maintenance and malfunction, the permittee shall operate each emission unit, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions and considering the manufacturer's recommended operating procedures. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA, which may include, but is not limited to, monitoring results, review of installation, operation and maintenance procedures, and inspection of the source. Emissions during the processes of startups, shutdowns, maintenance, and malfunctions shall be included in calculating the total tons per year emitted from all emission units listed in SECTION I (B) at this facility.

(B) Records Retention Requirements.

(1) The permittee shall keep all records required by this permit, including the following, on-site for a minimum of five (5) years, and readily available for inspection by the reviewing authority.

i. All specifications and standard procedures for operation and maintenance developed by the manufacturer, vendor, or permittee for all emission units listed in SECTION I (B) at this facility and associated emission control and monitoring devices.

ii. All information pertaining to any maintenance, repair, rebuild or replacement activities conducted for each emission unit listed in SECTION I (B).

iii. All information pertaining to any maintenance, repair, rebuild or replacement activities conducted for each emissions control and monitoring device associated with each emission unit listed in SECTION I (B).

iv. All information used to calculate the NOx emissions from all engine-generators for each month

v. All information used to calculate the NOx emissions from all engine-generators on a 12-month rolling sum basis for each month.

(2) The permittee shall keep all records legible and maintained in an orderly manner.

(C) Reporting Requirements.

(1) Annual Reports. Once each year no later than April 1st, the permittee shall submit a written annual report to EPA covering the period from January 1 to December 31 of the previous year that includes the following:

i. An evaluation of the permittee's compliance with each requirement in SECTION II.
ii. A copy of the operational log required in SECTION II (A) (2) viii.

iii. The NOx emissions from all engine-generators for each month.
iv. The 12-month rolling sums of NOx emissions from all engine-generators for each month.
v. The report shall include emissions from startups, shutdowns, and malfunctions.
vi. All reports shall be certified to truth and accuracy by the person primarily responsible for Clean Air Act compliance for the permittee.

(2) Deviation Reporting. The permittee shall promptly submit a written report to EPA any deviations of permit requirements, including those attributable to upset conditions, the probable cause of such deviation, and any corrective actions or preventative measures taken.

A "prompt" deviation report is one that is postmarked as follows:

i. Within 30 days from the discovery of any deviation of the emission limits or operational limits that are left uncorrected for more than 24 hours after discovering the deviation; and

ii. By April 1st for the discovery of a deviation of recordkeeping or other permit conditions during the preceding calendar year that do not affect the permittee's ability to meet the emission limits.

SECTION IV – GENERAL PERMIT REQUIREMENTS

(A) Definitions

(1) Terms and conditions in this permit have the meaning assigned to them in 40 CFR 49.152 unless other regulations or statutes are referenced or applicable.

(B) Issuance and Effective Date of Permit

(1) EPA is issuing this permit pursuant to the Federal Minor New Source Review Program in Indian Country, 40 CFR 49.151-49.161.

(2) The Effective Date is specified on the first page of this permit.

(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, 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 prior to beginning 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.

(E) Modifications to Existing Permitted Emissions Units/Limits

(1) For proposed modifications, as defined at 40 CFR 49.152(d), that would increase an emissions unit's allowable emissions of pollutants above its existing permitted annual allowable emissions limit, the permittee shall first obtain a permit modification pursuant to the TMNSR regulations approving the increase. For a proposed modification that is not otherwise subject to review under the PSD or TMNSR regulations, such proposed increase in the annual allowable emissions limit shall be approved through an administrative permit revision as provided at 40 CFR 49.159(f).

(F) 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 serve as grounds for:

i. An enforcement action under Section 113 of the CAA; or
ii. Termination, revocation and reissuance, or modification of this synthetic minor permit.

(2) This permit currently requires monthly calculations of emissions. Should EPA determine that calculated emissions are approaching or exceeding an emission limit, or should EPA determine that the permittee is failing to maintain adequate monitoring and recordkeeping requirements, EPA may revise, reopen or modify the permit to require daily calculations of emissions and/or require additional control technologies, and emission reduction measures. A revision that requires more frequent reporting of daily calculations of emissions is an administrative permit revision under the TMNSR program, 40 CFR 149.159(f) (2).

(3) 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.

(4) Compliance with the terms of this permit does not relieve or exempt the permittee from compliance with other applicable Clean Air Act requirements or other applicable federal requirements, tribal, state or local laws or regulations.

(G) National Ambient Air Quality Standards (NAAQS)/Prevention of Significant Deterioration (PSD) Protection [40 CFR 49.155 (a) (7) (ii)]

(1) The permitted source must not cause or contribute to a NAAQS violation or, in an attainment area, must not cause or contribute to a PSD increment violation.

(H) Submittals

(1) Unless otherwise directed by the 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:

Tribal Air Enforcement Coordinator
Air Compliance and Enforcement Section (ACES)
Air Permitting and Compliance Branch
Air and Waste Management Division
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, KS 66219

(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:

Tribal Air Permits Coordinator
Air Permitting and Compliance Branch (APCO)
Air and Waste Management Division
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, KS 66219

(3) A copy of the written annual report required under SECTION III (C)(1) shall be submitted to:

Environmental Director
Omaha Tribe of Nebraska
P.O. Box 368
100 Main Street
Macy, NE 68039

(J) 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.

(K) Entry and Inspection

(1) Upon presentation of proper credentials, you, as the permittee, shall allow a representative of the EPA to:

i. Enter upon your premises where a source is located or emissions-related activity is conducted or where records are required to be kept under the conditions of the permit;
ii. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
iii. Inspect, during normal business hours or while the source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under the permit;
iv. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
v. Record any inspection by use of written, electronic, magnetic and photographic media.

(L) 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.

(M) Reservation

(1) The permit does not convey any property rights of any sort or any exclusive privilege.

(N) Permit Revision, Reopening, Revocation and Reissuance, or Termination

(1) EPA may revise, reopen, revoke and reissue, or terminate this permit for cause. The EPA may reopen this permit for a cause on its own initiative, e.g., if this permit contains a material mistake or the permittee fails to assure compliance with the applicable requirements.

(2) The filing by the permittee of a request 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.

(3) The permittee shall furnish to the reviewing authority, within a reasonable time, any information that the reviewing authority 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, you must also submit a claim of confidentiality in accordance with 40 CFR Part 2, Public Information, Subpart B—Confidentiality of Business Information.
