

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONTROL MINOR PERMIT

Minor Permit: AQ0196MSS09
Revises Minor Permit: AQ0196MSS04

Preliminary - August 05, 2021

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0196MSS09 to the Permittee listed below.

Permittee: **Kotzebue Electric Association**
P.O. Box 44
Kotzebue, AK 99752

Stationary Source: Kotzebue Power Plant

Project: Minor permit to revise NOx emissions limit on EU ID 16.

Location: Latitude: 66.893561, Longitude: -162.595961

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This project is classified under 18 AAC 50.508(6) for revising or rescinding the terms and conditions of a Title I permit.

This permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50. As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this permit.

James R. Plosay, Manager
Air Permits Program

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Section 1 Emissions Unit Inventory

Emissions Unit Authorization. The Permittee is authorized to install and operate the emissions units (EUs) listed in Table 1 in accordance with the minor permit application and the terms and conditions of this permit. The information in Table 1 is for identification purposes only, unless otherwise noted in the permit. The specific EU descriptions do not restrict the Permittee from replacing an EU identified in this section.

Table 1 – Emissions Unit Inventory

EU ID	EU Description	Make/Model	Rating	Installation Date
7B	Diesel Electric Generator	Caterpillar 3516	1,135 kW	1987
10	Diesel Electric Generator	GM EMD 20-710-G4	3,080 kW	1992
14	Diesel Electric Generator	GM EMD 16-710-G4	2,865 kW	1994
15	Diesel Electric Generator	GM EMD 16-710-G4	2,865 kW	2005
16	Diesel Electric Generator	GM EMD 8-710-GC	1,441 kW	2012
17	Diesel Electric Generator	Caterpillar C27	725 kW	2015

Note:

All EUs were authorized under previous Title I permits.

1. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement EU, including any applicable minor or construction permit requirements.

Section 2 Fee Requirements

2. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.
3. **Assessable Emissions.** For each period from July 1 through the following June 30, the Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions, as determined by the Department under 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year (tpy) or greater. The quantity for which fees will be assessed is the lesser of the stationary source's:
 - 3.1 assessable potential to emit of 600 tpy; or
 - 3.2 projected annual rate of emissions, in tpy, based upon actual annual emissions for the most recent calendar year, or another 12-month period approved in writing by the Department, when demonstrated by credible evidence of actual emissions, based upon the most representative information available from one or more of the following methods:
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035;
 - d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.
4. **Assessable Emissions Estimates.** The Permittee shall comply as follows:
 - 4.1 No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions, as determined in Condition 3.2. Submit actual emissions estimates in accordance with the submission instructions on the Department's Standard Permit Condition web page: <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-i-submission-instructions/>
 - 4.2 The Permittee shall include with the assessable emissions report all the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.
 - 4.3 If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit in Condition 3.1.

Section 3 Revisions to Minor Permit AQ0196MSS04

5. Condition 12 of Minor Permit AQ0196MSS04 is rescinded.
6. Conditions 13.2 and 13.3 of Minor Permit AQ0196MSS04 are rescinded and replaced by Conditions 6.1 through 6.3 of this permit.
 - 6.1 Monitor and record the average electrical kilowatts (kWe) generated by EU IDs 7B, 10, and 14 through 17 each minute of operation and sum the kWe-hrs for each of EU IDs 7B, 10, and 14 through 17 for all periods of operation each month.
 - 6.2 Monitor and record hours of operation for each of EU IDs 7B, 10, and 14 through 17 on a daily basis.
 - 6.3 By the 15th day of each month, calculate and record:
 - a. NO_x emissions from each of EU IDs 7B, 10, and 14 through 17 using the kWe-hrs recorded under Condition 6.1 for the previous calendar month and the appropriate emission factor¹ as follows:

EU ID	Emission Factor (lb/kWe-hr)
7B	0.031
10	0.023
14	0.025
15	0.026
16	0.018
17	0.007

- b. NO_x emissions using the hours of operation recorded under Condition 6.2, **only** when kWe-hr data is unavailable for one or more of EU IDs 7B, 10, and 14 through 17, and the appropriate emission factor¹ as follows:

EU ID	Emission Factor (lb/hr)
7B	35.74
10	68.08
14	70.99
15	73.86
16	24.64
17	5.02

¹ If an updated emission factor from a Department accepted NO_x source test is available and testing was conducted at 95 percent or greater of allowable or maximum load, the Permittee shall use the emission rate measured during the most recent source test conducted for each of EU IDs 7B, 10, and 14 through 17. The Permittee shall begin using the emission factor on the first day of the month in which the source test results were accepted by the Department.

Section 4 Owner Requested Limit (ORL) to Avoid PSD Modification under 18 AAC 50.306

7. **ORL to Avoid PSD Review.** Limit the NO_x emissions from EU ID 16 to less than or equal to 79.3 tons in any consecutive 12-month period.
 - 7.1 Monitor in accordance with Conditions 6.1 and 6.2.
 - 7.2 By the 15th day of each month, calculate and record:
 - a. the consecutive 12-month NO_x emissions from EU ID 16, in tons, using the data recorded under Condition 6.1, or Condition 6.2 when kWe-hr data is unavailable, and the appropriate emission factor in Condition 6.3.
 - 7.3 Include copies of the records required under Condition 7.2a in each operating report required by the applicable operating permit issued to the stationary source under AS 46.14 and 18 AAC 50.
 - 7.4 Notify the Department, as described in the applicable operating permit issued to the stationary source under AS 46.14 and 18 AAC 50, if the consecutive 12-month NO_x emissions calculated under Condition 7.2a exceeds the limit in Condition 7.

Section 5 Standard Permit Conditions

- 8.** The Permittee must comply with each permit term and condition. Non-compliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
 - 8.1** an enforcement action; or
 - 8.2** permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
- 9.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
- 10.** 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 the permit.
- 11.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 12.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

Section 6 Permit Documentation

<u>Date</u>	<u>Document Details</u>
December 29, 2011	Department receives complete application to install EU ID 16.
July 5, 2012	Department issues Minor Permit AQ0196MSS03 to authorize EU ID 16 with PSD avoidance limit for NOx.
October 3, 2014	Department receives application to install EU ID 17.
January 14, 2015	Department receives request to revise the NOx PSD avoidance limit in Minor Permit AQ0196MSS03.
March 9, 2015	Department receives complete application to revise the NOx PSD avoidance limit in Minor Permit AQ0196MSS03.
March 17, 2015	Department sends completeness determination and requests additional information regarding KEA's PSD applicability analysis and emissions calculations.
March 31, 2015	Department receives response from KEA agreeing to revise monitoring conditions rather than revise PSD avoidance limit for EU ID 16.
March 1, 2016	Department issues Minor Permit AQ0196MSS04 that rescinds Minor Permit AQ0196MSS03 and carries forward PSD avoidance limit for EU ID 16. Condition 12 of AQ0196MSS04 revises monitoring requirements for demonstrating compliance with 45 tpy NOx limit.
April 8, 2021	Department meets with KEA and SLR to discuss new permit application.
April 22, 2021	Department receives application to revise Minor Permit AQ0196MSS04.
April 26, 2021	Department receives electronic spreadsheet with details of emissions calculations.