

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OWNER REQUESTED LIMIT

Owner Requested Limit: AQ0147ORL01

Draft Date – August 2, 2022

Owner/Operator: Alaska Village Electric Cooperative
4831 Eagle Street
Anchorage, AK 99503

Stationary Source: St. Mary's Power Plant

Location: 62° 3' 7.12" N 163°10'19.53" W

Project: Power Plant Upgrade

Permit Contact: Darren Westby, (907) 565-5337, dwestby@avec.org

The above-named owner/operator has submitted a complete request for an owner requested limit (ORL) under 18 AAC 50.225(b) for the St. Mary's Power Plant. The Alaska Department of Environmental Conservation (Department) approves the ORL to restrict the stationary source's potential to emit (PTE). The ORL allows Alaska Village Electric Cooperative to avoid the requirements for a Title V operating permit. The Department certifies that the ORL is effective as of the date noted below.

In accordance with 18 AAC 50.225(f), the owner/operator has agreed to the conditions listed in this ORL.

The owner/operator may revise the terms or conditions of this approval under 18 AAC 50.225 (h)(1) by submitting a request under 18 AAC 50.225(b). The owner/operator may request the Department revoke the limit in accordance with 18 AAC 50.225(h)(2). This limit remains in effect until the Department approves a new limit or revokes it.

I understand and agree to the terms and conditions of this approval.

Owner or Operator

Printed Name

Title

Department approval:

James R. Plosay, Program Manager
Air Permit Program

Owner Requested Limit Effective Date

CONDITIONS:

1. **Owner Requested Limit to stay below 99.9 tons per year (tpy) of nitrogen oxides (NO_x).** The owner/operator shall limit power production of emission units (EUs) listed in Table 1 to no more than 6,213,716 kW-hr for any consecutive 12-month period. Monitor, record, and report as follows:
 - 1.1 Install, maintain, and operate a totaling kilowatt-hour (kWh) meter, accurate to within ± 1 percent for EUs 1a through 4, for monitoring the amount of power produced by EUs 1a through 4.
 - 1.2 Monitor and record the total power produced by EUs 1a through 4 by the end of each calendar day.
 - 1.3 By the end of each calendar month calculate and record
 - a. the monthly combined power production by EUs 1a through 4 during the previous calendar month.
 - b. the sum of the last 12 consecutive records obtained in accordance with Condition 1.3a.
 - 1.4 Report in the operating report described in Condition 3 the records obtained in accordance with Condition 1.3b.
 - 1.5 If the total power production calculated in Condition 1.3b exceeds the limit in Condition 1; report as excess emissions and permit deviation as described in Condition 4.
2. **Recordkeeping Requirements.** Unless otherwise specified in this authorization, keep all records required by this ORL for at least five years from the date of collection.
3. **Annual Operating Reports.** Submit one certified copy, of an **annual operating report** for the stationary source to the Department, in accordance with the submission instructions on the Department's Standard Permit Conditions web page <https://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-xvii-submission-instructions/> by February 1 for the preceding calendar year. Certify the report as specified in 18 AAC 50.205 by having the responsible official sign after the following statement, "*Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.*" Attach copies of all excess emission and deviation forms submitted to Department during the reporting period pursuant to Condition 4.
4. **Excess Emissions and Deviation Reports.** Report excess emissions and deviations as follows:
 - 4.1 **Excess Emissions Reporting.** Report all emissions or operations that exceed emissions limits of this ORL as follows:
 - a. In accordance with 18 AAC 50.240(c), as soon as possible report:

- (i) excess emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions believed to be unavoidable.
 - b. If a continuous or recurring excess emission is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 4.1c.
 - c. Report all other excess emissions not described in Conditions 4.1a and 4.1b within 30 days after the end of the month during which the excess emissions occurred or as part of the next annual operating report in Condition 3, whichever is sooner.
 - d. If requested by the Department, provide a more detailed written report as requested to follow up an excess emissions report.
- 4.2 **Deviations Reporting.** For deviations that are not “excess emissions,” as defined in 18 AAC 50.990, report within 30 days after the end of the month during which the deviation occurred or as part of the next annual operating report in Condition 3, whichever is sooner.
- 4.3 **Notification Form.** When reporting either excess emissions or deviations, use either the Department’s online form, which can be found at the Divisions of Air Quality’s Air Online Services (AOS) system web page <https://dec.alaska.gov/Applications/Air/airtoolsweb/> or the form in Attachment A. of this ORL. Provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department’s Standard Permit Conditions web page <https://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/>.

Statement of Avoided Requirement:

Consistent with the definition of “potential to emit” listed in AS 46.14.990(22), the capacity of the stationary source to emit an air pollutant is verifiable through the monitoring, recordkeeping, and reporting contained in this approval. By limiting the potential to emit of EUs 1a through 4 the owner/operator is avoiding the requirement to obtain an operating permit under AS 46.14.130(c) and 18 AAC 50.326.

Table 1 – EU inventory subject to limits

EU ID	Unit Description	Serial Number	Model Date	Nominal Rating/Size
<i>Existing EUs</i>				
1	Cummins QSZ15 G9	79858749	2004	499 kW
2	Caterpillar 3508B	6PN00782	2001	910 kW
3	Caterpillar 3512A	67Z01055	1993	940 kW
<i>New EUs</i>				
1a	Caterpillar 3456	7WG02468	2004	505 kW
2a	Caterpillar 3456	7WG02469	2004	505 kW
3a	Caterpillar 3516B	S2Z00106	2006	1,765 kW
4	Caterpillar 3516B	S2Z00107	2006	1,765 kW

Table 2 presents details of the EUs, their characteristics, and emissions. Potential emissions are estimated using maximum annual operation for all fuel burning equipment as defined in 18 AAC 50.990(39) subject to any operating limits.

Table 2 – Emissions Summary, in Tons per Year (TPY)

EU ID	Unit ID/ Description	Maximum Rating or Capacity		Operating Limits		NOx		CO			VOC		PM-2.5 / PM-10			SO ₂				
						EF ¹		PTE (tpy)	EF ¹		PTE (tpy)	EF ¹		PTE (tpy)	EF ¹		PTE (tpy)	EF ¹		PTE (tpy)
1A	Caterpillar 3456	505	kW	6,213,716	kW-hr/yr	0.032	lb/kW-hr	99.9	0.007	lb/kW-hr	21.9 ²	0.001	lb/kW-hr	3.12 ²	0.001	lb/kW-hr	3.12 ²	0.005	lb/kW-hr	15.6 ²
2A	Caterpillar 3456	505	kW			0.032	lb/kW-hr		0.007	lb/kW-hr		0.001	lb/kW-hr		0.001	lb/kW-hr				
3A	Caterpillar 3516B	1765	kW			0.032	lb/kW-hr		0.007	lb/kW-hr		0.001	lb/kW-hr		0.001	lb/kW-hr				
4	Caterpillar 3516B	1765	kW			0.032	lb/kW-hr		0.007	lb/kW-hr		0.001	lb/kW-hr		0.001	lb/kW-hr				
Total Potential to Emit							99.9			21.9			3.12			3.12			15.6	

Item

- 1 AP-42, Table 3.4-1
- 2 CO, VOC, PM-2.5/PM-10, and SO₂ PTE determined using 3,538 hr/yr operation of either EU 3A or 4 to determine max PTE for each pollutant while staying under the 99.9 tpy NO_x limit

Attachment A. Notification Form¹

St. Mary's Power Plant

Stationary Source Name

Alaska Village Electric Cooperative

Company Name

AQ0147ORL01

Air Quality Permit Number.

When did you discover the Excess Emissions/ORL Deviation?

Date: ____ / ____ / ____

Time: ____ : ____

When did the event/deviation occur?

Begin: Date: ____ / ____ / ____ Time: ____ : ____ (please use 24-hr clock)

End: Date: ____ / ____ / ____ Time: ____ : ____ (please use 24-hr clock)

What was the duration of the event/deviation? ____ : ____ (hrs:min) or ____ days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification (Please check only 1 box and go to the corresponding section.):

☐ Excess Emissions - Complete Section 1 and Certify

Note: All "excess emissions" are also "ORL deviations." However, use only Section 1 for events that involve excess emissions.

☐ Deviation from ORL Conditions - Complete Section 2 and Certify

Note: Use only Section 2 for ORL deviations that do not involve excess emissions.

☐ Deviation from COBC², CO³, or Settlement Agreement - Complete Section 2 and Certify

¹ Form based on SPC IV (revised as of July 22, 2020).

² Compliance Order By Consent

³ Compliance Order

Section 1. Excess Emissions

(a) **Was the exceedance** ☐ Intermittent or ☐ Continuous

(b) **Cause of Event** (Check one that applies. Complete a separate form for each event, as applicable.):

- | | |
|----------------------------------------------------|----------------------------------------------------------------------|
| <input type="checkbox"/> Start Up/Shut Down | <input type="checkbox"/> Natural Cause (weather/earthquake/flood) |
| <input type="checkbox"/> Control Equipment Failure | <input type="checkbox"/> Scheduled Maintenance/Equipment Adjustments |
| <input type="checkbox"/> Bad fuel/coal/gas | <input type="checkbox"/> Upset Condition |
| <input type="checkbox"/> Other _____ | |

(c) **Description**

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance. Attach supporting information if necessary.

(d) **Emissions Units (EU) Involved:**

Identify the emissions units involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

EU ID	EU Name	ORL Condition Exceeded/Limit/Potential Exceedance

(e) **Type of Incident:** (Please check all that apply and provide the value requested, if any):

☐ Opacity _____%

☐ Venting _____(gas/scf)

☐ Control Equipment Down

☐ Fugitive Emissions

☐ Emission Limit Exceeded

☐ Marine Vessel Opacity

☐ Flaring

☐ Other: _____

(f) **Corrective Actions:**

Describe actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence. Attach supporting information if necessary.

(g) **Unavoidable Emissions:**

Do you intend to assert that these excess emissions were unavoidable? ☐ YES ☐ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ YES ☐ NO

Certify Report (go to end of form)

Section 2. Permit Deviations

(a) **ORL Deviation Type:** (Check all boxes that apply per event. Complete a separate form for each event, as applicable.)

- ☐ Emissions Unit-Specific Requirements
- ☐ Stationary Source-Wide Specific Requirements
- ☐ Monitoring/Recordkeeping/Reporting Requirements
- ☐ General Source Test Requirements
- ☐ Compliance Certification Requirements
- ☐ Standard/Generally Applicable Requirements
- ☐ Other: _____

(b) **Emissions Units (EU) Involved:**

Identify the emissions units involved in the event, using the same identification number and name as in the ORL. List the corresponding ORL condition and the deviation.

EU ID	EU Name	Permit Condition /Potential Deviation

(c) **Description of Potential Deviation:**

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation. Attach supporting information if necessary.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence. Attach supporting information if necessary.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title _____ Date _____

Signature: _____ Phone number _____