DOYON UTILITIES LLC

714 Fourth Avenue, Suite 100 • Fairbanks, AK 99701
PO Box 74040 • Fairbanks, AK 99707
Phone (907) 455-1500 • Fax (907) 455-6788

June 5, 2020

Air Permit Program Permit Intake Clerk
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, Alaska 99501

SUBJECT: Title I Application to Revise Air Quality Control Permit No. AQ1121MSS01 for Doyon Utilities - Fort Wainwright (Privatized Emission Units) per $PM_{2.5}$ Serious SIP

Dear Intake Clerk,

Doyon Utilities, LLC (DU) respectfully submits the enclosed Title I air quality permit application for the Fort Wainwright Privatized Emission Units (DU-FWA) stationary source to establish permit conditions as required by the Fairbanks $PM_{2.5}$ Serious State Implementation Plan (Serious SIP), adopted November 19, 2019 by the Alaska Department of Environmental Conservation (ADEC). DU requests that ADEC issue a separate Title I air quality permit which revises Air Quality Minor Permit No. AQ1121MSS01 by incorporating the applicable SIP limits and SIP Best Available Control Technology (BACT) limits as requested in the permit application. This application is being submitted in accordance with 18 Alaska Administrative Code, Chapter 50 (18 AAC 50) Section 50.508(6) and as required by the Serious SIP.

If you have any questions, please contact Mr. Isaac Jackson at 907-455-1547 or at ijackson@doyonutilities.com.

"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."

Sincerely,

Shayne Coiley
Senior Vice President

Enclosure:
Request to Revise Title I Air Quality Minor Permit No. AQ1121MSS01

Cc: C. Kimball, SLR (w/o attachment)

CO 20-039

Request to Revise Title I Air Quality Minor Permit No. AQ1121MSS01

Fort Wainwright (Privatized Emission Units)

Prepared for:

Doyon Utilities, LLC

May 2020

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Request to Revise Title I Air Quality Minor Permit No. AQ1121MSS01

Prepared for:
Doyon Utilities, LLC
P.O Box 74040
Fairbanks, Alaska 99707

Prepared by:
SLR International Corporation
543 3rd Ave,
Suite 235
Fairbanks, Alaska 99701

May 2020

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Required Elements for Minor Permit Application under 18 AAC 50.508(6)

The following table provides a summary of the required elements for a minor permit establishing for revising or rescinding permit conditions under 18 AAC 50.508(6).

Minor Permit Application Elements

Regulatory Citation	Requirement	Location
18 AAC 50.540(b)	General Information	SSID Form
18 AAC 50.540(k)(1)	Copy of Title I permit	Attachment C
18 AAC 50.540(k)(2)	Explanation of why permit term or condition should be revised or rescinded	Attachment A
18 AAC 50.540(k)(3)	Effect of revising or revoking the permit term or condition on emissions, other permit terms, and compliance monitoring	Attachments A and B
18 AAC 50.540(k)(4)	For a condition that allows an owner or operator to avoid a permit classification, the information required of an applicant for that type of permit, unless the revised condition would also allow the owner or operator to avoid the classification.	Attachment A

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Alaska Department of Environmental Conservation
Air Quality Minor Permit Application

STATIONARY SOURCE IDENTIFICATION FORM

Section 1 Stationary Source Information

Name: Fort Wainwright (Privatized Emission Units)			SIC: 9711
Project Name (if different): Serious $PM_{2.5}$ SIP Requirements	Contact: Josh Van Horn – Fort Wainwright Site Manager		
Physical Address:	City: Fairbanks	State: AK	Zip: 99707
	Telephone (907) 455-1506		
	E-Mail Address: jvanhorn@doyonutilities.com		
UTM Coordinates (m) or Latitude/Longitude:	Northing:	Easting:	Zone:
	Latitude: 64° 50’00’’ North	Longitude: 147° 35’ 00’’ West	

Section 2 Legal Owner

Name: Doyon Utilities, LLC		
Mailing Address: P.O Box 74040		
City: Fairbanks	State: AK	Zip: 99707
Telephone #:(907) 455-1500		
E-Mail Address:		

Section 3 Operator *(if different from owner)*

Name:		
Mailing Address:		
City:	State:	Zip:
Telephone #:		
E-Mail Address:		

Section 4 Designated Agent *(for service of process)*

Name: Kathleen Hook – Director of Environmental Affairs		
Mailing Address: P.O Box 74040		
City: Fairbanks	State: AK	Zip:99707
Telephone #: (907) 455-1540		
E-Mail Address: khook@doyonutilities.com		

Section 5 Billing Contact Person *(if different from owner)*

Name: Kathleen Hook – Director of Environmental Affairs		
Mailing Address: P.O Box 74040		
City: Fairbanks	State: AK	Zip: 99707
Telephone #: (907) 455-1540		
E-Mail Address: khook@doyonutilities.com		

Section 6 Application Contact

Name: Isaac Jackson – Air Permit Coordinator			
Mailing Address: P.O Box 74040	City: Fairbanks	State: AK	Zip: 99707
	Telephone: (907) 455-1547		
	E-Mail Address: ijackson@doyonutilities.com		

Section 7 Desired Process Method *(Check only one – see 18 AAC 50.542(a) for process descriptions and restrictions)*

☐ Fast track for a permit classification under 18 AAC 50.502 [18 AAC 50.542(b)]

☒ Public comment [18 AAC 50.542(d)]

Section 8 Source Classification(s) *(Check all that apply)*

[18 AAC 50.502(b)]

- ☐ Asphalt Plant [≥ 5 ton per hour]
- ☐ Thermal Soil Remediation Unit [≥ 5 ton per hour]
- ☐ Rock Crusher [≥ 5 ton per hour]
- ☐ Incinerator(s) [total rated capacity ≥ 1000 lb/hour]
- ☐ Coal Preparation Plant
- ☐ Port of Anchorage Facility

If you checked any of the above, is (are) the emission unit(s) ☐ new, ☐ relocated*, or ☐ existing?

[18 AAC 50.502(c)(1)]

New or relocated* stationary source with potential emissions greater than:

- ☐ 40 tons per year (tpy) NOx
- ☐ 40 tpy SO_2
- ☐ 15 tpy PM-10
- ☐ 10 tpy PM-2.5
- ☐ 0.6 tpy lead
- ☐ 100 tpy CO in a nonattainment area

[18 AAC 50.502(c)(2)]

Construction or relocation* of a:

- ☐ Portable oil and gas operation
- ☐ ≥ 10 MMBtu/hr fuel burning equipment in a SO_2 special protection area

* *Relocation does NOT include moving equipment from one place to another within your current stationary source boundary.*

Section 9 Modification Classification(s) (*Check all that apply)*

[18 AAC 50.502(c)(3)]

- ☐ NOx Increase > 10 tpy [and existing PTE > 40 tpy]
- ☐ SO_2 Increase > 10 tpy [and existing PTE > 40 tpy]
- ☐ PM-10 Increase > 10 tpy [and existing PTE > 15 tpy]
- ☐ PM-2.5 Increase > 10 tpy [and existing PTE > 10 tpy]
- ☐ CO Increase > 100 tpy [and existing PTE > 100 tpy in a nonattainment area]

[18 AAC 50.502(c)(4)]

- ☐ NOx Increase > 40 tpy [and existing PTE ≤ 40 tpy]
- ☐ SO_2 Increase > 40 tpy [and existing PTE ≤ 40 tpy]
- ☐ PM-10 Increase > 15 tpy [and existing PTE ≤ 15 tpy]
- ☐ PM-2.5 Increase > 10 tpy [and existing PTE ≤ 10 tpy]
- ☐ CO Increase > 100 tpy [and Existing PTE ≤ 100 tpy in a nonattainment area]

Basis for calculating modification:

- ☐ Projected actual emissions minus baseline actual emissions
- ☐ New potential emissions minus existing potential emissions

Section 10 Permit Action Request (*Check all that apply)*

[18 AAC 50.508]

- ☐ Establish Plant-wide Applicability Limitation (PAL)
- ☐ Establish emission reductions to offset nonattainment pollutant
- ☐ Owner Requested Limit* (ORL)
- ☒ Revise or Rescind Title I Permit Conditions *
  Permit Number: AQ1121MSS01 Condition No. N/A
  Date: September 9, 2008

**Which to use? See* http://www.dec.state.ak.us/air/ap/docs/orlrtc.pdf

Section 11 Existing Permits and Limits

For an existing stationary source, do you have an existing:
(Check all that apply)

- ☒ Air quality permit Number(s)*: AQ1121MSS01, AQ1121MSS02, AQ1121MSS03, AQ1121TVP02, Revision 2
- ☐ Owner Requested Limit(s) Permit Number(s):
- ☐ Pre-Approved Emission Limit (PAEL) Number(s)**:

** All active construction, Title V, and minor permit numbers.*
***Optional. Please provide this number if possible.*
http://dec.alaska.gov/Applications/Air/airtoolsweb/

Section 12 Project Description

Provide a short narrative describing the project. Discuss the purpose for conducting this project, what emission units/activities will be added/modified under this project (i.e., project scope), and the project timeline. If the project is a modification to an existing stationary source, describe how this project will affect the existing process. Include any other discussion that may assist the Department in understanding your project or processing your application. Include a schedule of construction.

Please use additional copies of this sheet if necessary.

Doyon Utilities, LLC (DU) requests a revision to Title I Air Quality Permit No. AQ1121MSS01 under 18 AAC 50.508(6) for the Fort Wainwright Privatized Emission Units (DU-FWA) stationary source to establish permit conditions as required in the Fairbanks $PM_{2.5}$ Serious State Implementation Plan (Serious SIP), adopted November 19, 2019 by the Alaska Department of Environmental Conservation (ADEC). DU requests that ADEC issue a separate Title I air quality permit (likely AQ1121MSS04) which revises Permit No. AQ1121MSS01 by incorporating the applicable SIP limits and SIP Best Available Control Technology (BACT) limits as requested in Attachment A.

Provided below is a summary of the requested limits to be established as permit conditions. Attachment A also provides the requested monitoring, recordkeeping, and reporting requirement for the proposed limits and permit conditions.

- Limit the sulfur content of the coal received to 0.25% sulfur by weight no later than June 9, 2021, for EU IDs 1 through 6.
- Limit the SO_2 emission rate to 0.12 lb SO_2/MMBtu (3-hr average), for EU IDs 1 through 6 (coal fired boilers) by installing and operating a dry sorbent injection (DSI) controls on EU ID 1 through 6 by October 1, 2023.
- Limit the sulfur content of the liquid fuel burned in EU ID 8 (backup generator engine), EU IDs 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 (emergency engines) to 15 ppmw sulfur (ULSD) beginning no later than June 9, 2021.
- Limit the $PM_{2.5}$ emitted from EU ID 7a to not exceed 0.0025 grains per dry standard cubic feet (gr/dscf) and $PM_{2.5}$ emitted from EU ID 7b, 7c, 51a, and 51b to not exceed 0.02 gr/dscf, each.
- Limit the $PM_{2.5}$ emitted from EU ID 52 (coal storage pile) to 1.42 tons per 12-month rolling period.

Section 12 Project Description Continued

For **PALs under Section 10** of this application, include the information listed in 40 C.F.R. 52.21(aa)(3), adopted by reference in 18 AAC 50.040 [18 AAC 50.540(h)].

Not Applicable

For a **limit to establish offsetting emissions under Section 10** of this application, specify the physical or operational limitations necessary to provide actual emission reductions of the nonattainment air pollutant; including [18 AAC 50.540(i)]:

- A calculation of the expected reduction in actual emissions; and

  Not Applicable

- The emission limitation representing that quantity of emission reduction.

  Not Applicable

Section 12 Project Description Continued

For **ORLs under Section 10** of this application [18 AAC 50.540(j)], include:

A description of each proposed limit, including for each air pollutant a calculation of the effect the limit will have on the stationary source's potential to emit and the allowable emissions [18 AAC 50.225(b)(4)];

Not Applicable

A description of a verifiable method to attain and maintain each limit, including monitoring and recordkeeping requirements [18 AAC 50.225(b)(5)];

Not Applicable

Citation to each requirement that the person seeks to avoid, including an explanation of why the requirement would apply in the absence of the limit and how the limit allows the person to avoid the requirement [18 AAC 50.225(b)(6)];

Not Applicable

A statement that the owner or operator of the stationary source will be able to comply with each limit [18 AAC 50.225(b)(8)];

Not Applicable

Section 12 Project Description Continued

For **revising or rescinding Title I permit conditions under Section 10** of this application [18 AAC 50.540(k)], include:

An explanation of why the permit term or condition should be revised or rescinded [18 AAC 50.540(k)(2)];

Provided in Attachment A

The effect of revising or revoking the permit term or condition on [18 AAC 50. 540 (k)(3)]:

- Emissions;
  Provided in Attachment A

- Other permit terms;
  Provided in Attachment A

- The underlying ambient demonstration, if any;
  Not Applicable (no underlying ambient demonstration exists)

- Compliance monitoring; and
  Provided in Attachment A

For revising a condition that allows avoidance of a permit classification, the information required for that type of permit, unless the revised condition would also allow the owner or operator to avoid the classification. [18 AAC 50.540(k)(4)]

Information required under 18 AAC 50.540(k)(4) is not applicable to this permit application because the requested permit conditions do not avoid a permit classification or request revision of an existing permit condition that avoids a permit classification.

Section 13 Other Application Material

The information listed below must be included in your air quality control minor permit application. *Note: These must be attached in order for your application to be complete.*

If required to submit an analysis of ambient air quality under 18 AAC 50.540(c)(2), or if otherwise requested by the Department:

☐ Attached are maps, plans, and/or aerial photographs as necessary to show the locations and distances of
- emissions units, buildings, emitting activities and boundaries of the associated with the stationary source, and
- nearby or adjacent residences, roads, other occupied structures and general topography within 15 kilometers.

(Indicate compass direction and scale on each.)

☐ Attached is a document (e.g., spreadsheet) showing coordinates and elevations of each modeled unit, along with parameters necessary to characterize each unit for dispersion modeling.

☐ Attached is an electronic copy of all modeling files.

Section 14 Certification

This certification applies to the Air Quality Control Minor Permit Application for the Fort Wainwright (Privatized Emission Units) (Stationary Source Name)

submitted to the Department on: _____.

Type of Application

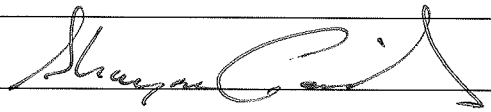
☒ Initial Application

☐ Change to Initial Application

The application is **NOT** complete unless the certification of truth, accuracy, and completeness on this form bears the signature of a **Responsible Official**. Responsible Official is defined in 18 AAC 50.990. (18 AAC 50.205)

CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

"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."

Signature: 	Date: 6/5/2020
Printed Name: Shayne Coiley	Title: Senior Vice President

Section 15 Attachments

☒ Attachments Included. List attachments:

Attachment A – Permit Revision Requests
Attachment B – Emissions Unit Inventory and Emissions Calculations
Attachment C – Copy of Title I Permit

Section 16 Mailing Address

Submit the minor permit application to the Permit Intake Clerk in the Department's Anchorage office. Submitting to a different office will delay processing. The mailing address and phone number for the Anchorage office is:

Permit Intake Clerk
Alaska Department of Environmental Conservation
Air Permit Program
555 Cordova Street
Anchorage, Alaska 99501
(907) 269-6881

Attachment A

Title I Permit Revision Request under 18 AAC 50.508(6)

Attachment A-1: Title I Permit Revision Request under 18 AAC 50.508(6)

Attachment A-2: Coal Sulfur Content SIP Limit Effective No Later than June 9, 2021

Attachment A-3: SO_2 SIP BACT Limit for EU IDs 1 through 6, Effective No Later than October 1, 2023

Attachment A-4: Sulfur Content for Diesel Fuel SIP Limit Effective No Later than June 9, 2021

Attachment A-5: $PM_{2.5}$ SIP Limits for EU IDs 7a – 7c, 51a, 51b, and 52, Effective No Later than June 9, 2021

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Attachment A-1
Title I Permit Revision Request under 18 AAC 50.508(6)

Under 18 Alaska Administrative Code (AAC) 50.540(k), an application for a minor air quality permit to rescind or revise a Title I permit must address certain elements. Each of the required elements is addressed below. Because the state regulations do not provide a clear framework to apply for this Title I permit as required by the $PM_{2.5}$ Nonattainment Serious SIP, the Alaska Department of Environmental Conservation (ADEC) directed DU to submit a Title I application under 18 AAC 50.508(6), during a pre-application teleconference on April 23, 2020. DU requests that ADEC issue a separate minor permit as a revision to Permit No. AQ1121MSS01 which incorporates the requirements presented in Attachment A-2 through A-5.

18 AAC 50.540(k)(1)

Per 18 AAC 50.540(k)(1), a copy of Title I Air Quality Permit No. AQ1121MSS01 is provided in Attachment C.

18 AAC 50.540(k)(2)

DU is not requesting changes to existing permit terms. DU is requesting a new Title I minor permit containing conditions which incorporate the limits adopted in the SIP for the DU-owned emissions units at Fort Wainwright. Provided in Attachment A-2 through A-5 are proposed permit conditions to be incorporated into the new permit for the stationary source to comply with the SIP limits and SIP BACT limit requirements summarized in the Fairbanks $PM_{2.5}$ Serious SIP Vol. II:III.D.7.7 control strategies document.

18 AAC 50.540(k)(3)

Per 18 AAC 50.540(k)(3), the effects on the stationary source's emissions due to the requested permit terms are presented in Attachment B. Attachment B provides the sulfur dioxide (SO_2) potential to emit (PTE) calculations under currently permitted requirements and the SO_2 PTE calculations which incorporate the various SIP requirements. The particulate matter less than 2.5 microns ($PM_{2.5}$) SIP emission limits for EU IDs 7a through 7c, 51a, 51b, and 52 are consistent with existing operations and PTE calculations. Incorporating the $PM_{2.5}$ SIP requirements for these emissions units does not change the $PM_{2.5}$ potential to emit as submitted in the April 2019 Title V operating permit renewal application. The requested permit conditions do not have other effects on other permit terms, underlying ambient demonstration, or the existing compliance monitoring of the existing permit terms due to the proposed changes.

18 AAC 50.540(k)(4)

Information required under 18 AAC 50.540(k)(4) is not applicable to this permit application because the requested permit conditions do not avoid a permit classification.

Attachment A-2
New Permit Condition under 18 AAC 50.508(6)
Coal Sulfur Content SIP Limit Effective No Later Than June 9, 2021

DU is requesting a new permit condition to limit the sulfur content of coal received at the stationary source beginning on or after June 9, 2021, in accordance with the limits summarized in Vol. II: III.D.7.7 Section 7.7.8.3, Table 7.7-11 of the SIP. Calculations demonstrating the effect the limit will have on the stationary source's potential to emit and the allowable emissions are provided in Attachment B. DU will demonstrate compliance with the proposed limit through the monitoring, recordkeeping, and reporting requirements proposed below as a new permit condition.

1. Beginning no later than June 9, 2021, the Permittee shall limit the sulfur content of coal received at the stationary source to no greater than 0.25% sulfur by weight.
    a. Upon receipt of each shipment of coal at the stationary source, beginning no later than June 9, 2021, obtain a certified statement from the supplier with the following information:
        (i) The percent sulfur by weight of the coal;
        (ii) The method of the analysis; and
        (iii) A statement that the analysis was representative of the coal shipped.
    b. If a certificate is not available from the supplier, analyze a representative sample of the fuel to determine the sulfur content using ASTM D2492-90 for coal, adopted by reference in 18 AAC 50.035(c), or another method approved in writing by the Department for coal or other fuels.
    c. The Permittee shall keep records of the sulfur contents of each shipment of fuel under Condition 1.a.
    d. Stockpiled coal present on site before June 9, 2021 may be combusted in EU IDs 1 through 6 at any time, at the discretion of the Permittee.
    e. Report in accordance with the Excess Emissions and Permit Deviation condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 whenever the sulfur content of a shipment of coal, received on or after June 9, 2021, is more than 0.25% sulfur by weight.

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Attachment A-3
New Permit Condition under 18 AAC 50.508(6)
SO_2 SIP BACT Limit for EU IDs 1 through 6
Effective No Later Than October 1, 2023

DU is requesting a new permit condition to limit the sulfur dioxide (SO_2) emission rate for EU IDs 1 through 6 each, effective no later than October 1, 2023 in accordance with the limits summarized in Vol. II: III.D.7.7 Section 7.7.8.3, Table 7.7-11 of the SIP. Calculations demonstrating the effect the limit will have on the stationary source's potential to emit and the allowable emissions are provided in Attachment B. DU will demonstrate compliance with the requested limit through monitoring, recordkeeping, and reporting requirements proposed below as a new permit condition.

Per the SIP, the SO_2 BACT limit of 0.12 pounds per million British thermal units (lb/MMBtu) for each of EU IDs 1 through 6 appears to apply during all periods of operation. The SIP does not provide a separate BACT emission limit or work practice standard during periods of startup and shutdown of EU IDs 1 through 6. Separate BACT requirements are appropriate for these periods because the dry sorbent injection (DSI) systems that will be used to meet the 0.12 lb/MMBtu SO_2 are not fully effective immediately upon boiler start up or during all segments of the boiler shutdown process. As a result, SO_2 emission control for EU IDs 1 through 6 during startup and shutdown operations should have been addressed with a separate SO_2 BACT limit or work practice standard. To address this inadvertent oversight, DU proposes to comply with the 0.12 lb/MMBtu SO_2 limit at all times except during startup and shutdown. During startup and shutdown periods, compliance will be demonstrated by following work practice requirements similar to the requirements in Table 3, Items 5.a, 5.c(2), 5.d, and 6 of 40 CFR 63 Subpart DDDDD. The option 1 definition of startup provided in 40 CFR 63.7575 would be applied. The proposed startup and shutdown permit language is provided in Condition 3 of Attachment A-3. DU also requests the definitions of startup and shutdown are included in the new permit as proposed in Footnotes 1 and 2.

2. No later than October 1, 2023, the SO_2 emissions rate for EU IDs 1 through 6, each, shall not exceed 0.12 lb/MMBtu on a heat input basis, averaged over a 3-hour period, except during startup and shutdown.
    a. The Permittee shall install, operate, and maintain, according to the manufacturer's specifications, a Dry Sorbent Injection (DSI) system on each of EU IDs 1 through 6, beginning no later than October 1, 2023.

(i) Except during startup[1] and shutdown[2] of EU IDs 1 through 6, operate the DSI such that the feed rate of dry sorbent is proportional to the steam production rate at a ratio equal to or greater than the ratio recorded for the most recent source test as required by Condition 2.b.

(ii) Install a monitoring device for the sorbent injection feed rate. Monitor and record the sorbent injection feed rate and the steam production rate electronically in the plant historian.

(iii) Report as required by the Excess Emissions and Permit Deviation condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 if the DSI is not operated according to Condition 2.a.

b. The Permittee shall conduct an annual source test on EU IDs 1 through 6 using the applicable test set out in 40 CFR 60 Appendix A no more than 13 months after the previous source test. The Permittee shall source test downstream of all emission control devices. The Permittee may propose an alternative test method if it can be shown to be of equivalent accuracy and will ensure compliance with the applicable standards or limits.

(i) Conduct the initial source test within 365 days of beginning of operation of the DSI control systems on each of EU IDs 1 through 6.

(ii) Submit to the Department a source test plan in accordance with the Test Plans condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50.

(iii) Each source test shall consist of at least three 1-hour or longer valid test runs. Emissions results shall be reported as the arithmetic average of all valid tests runs and shall be in terms of the emission limit (lb/MMBtu).

(iv) Monitor and record the steam production rates and sorbent injectant rate for each source test run.

(v) The Permittee shall report the results of the source test(s) in accordance with the Test Reports condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50.

(vi) Report in accordance with the Excess Emissions and Permit Deviation condition in the applicable operating permit issued for the

stationary source under AS 46.14.130(b) and 18 AAC 50 if the SO_2 emission rate exceeds 0.12 lb/MMBtu averaged over a 3-hour period.

c. For any of EU IDs 1 through 6, if two consecutive annual source tests demonstrate the SO_2 emissions are less than the emission limit in Condition 2, the Permittee may choose to conduct the source test for SO_2 emissions every third year for that emissions unit. Each such source test must be conducted no more than 37 months after the previous source test.

d. If a source test shows emissions exceeded the emission limit in Condition 2, the Permittee must resume annual SO_2 source testing for that emissions unit.

e. If any of EU IDs 1 through 6 have not operated since the previous compliance demonstration and more than one year has passes since the previous compliance demonstration, complete the subsequent compliance demonstration no later than 180 days after the re-start of the affected emission unit.

3. For EU IDs 1 through 6, comply with the following work practice standards during startup and shutdown operations, as applicable.

   a. Operate the continuous monitoring system (CMS) for the steam production rate and sorbent injection rate during startup.

   b. Operate the CMS for the steam production rate and sorbent injection rate during shutdown.

   c. Collect the monitoring data during periods of startup and shutdown, as specified in Conditions 3.a through 3.e.

   d. Maintain records of the calendar date, time, occurrence, and duration of each startup and shutdown.

   e. Report as required by the Excess Emissions and Permit Deviation condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 if any of the work practice standards during startup or shutdown are not conducted as required in Conditions 3a through 3d.

Footnote 1: Startup means the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler is supplied for heating, and/or producing electricity, or for any other purpose.

Footnote 2: Shutdown means the period in which cessation of operation of a boiler is initiated for any purpose. Shutdown begins when the boiler no longer supplies useful thermal energy (such as heat or steam) for heating and/or generates electricity or when no fuel is being fed to the boiler, whichever is earlier. Shutdown ends when the boiler no longer supplies useful thermal energy (such as steam or heat) for heating purposes and/or generates electricity, and no fuel is being combusted in the boiler.

Attachment A-4
New Permit Condition under 18 AAC 50.508(6)
Sulfur Content for Diesel Fuel SIP Limit No Later Than June 9, 2021

DU is requesting a new permit condition to limit the sulfur content of liquid fuel burned in EU IDs 8, 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 to 15 parts per million by weight (ppmw) sulfur, in accordance with the limits summarized in Vol. II: III.D.7.7 Section 7.7.8.3, Table 7.7-11 of the SIP. Calculations demonstrating the effect the limit will have on the stationary source's potential to emit and the allowable emissions are provided in Attachment B. DU will demonstrate compliance with the requested limit through monitoring, recordkeeping, and reporting requirements proposed below as a new permit condition. The backup generator engine, EU ID 8, and the emergency diesel-fired engines, EU IDs 14, 29a, 30a, 31a, 32a, 33a, and 35 are subject to compliance requirements in 40 CFR 60 Subpart IIII as specified in the Title V permit. EU IDs 9, 22, 23, 34, and 36, emergency diesel-fired engines are subject to compliance requirements in 40 CFR 63 Subpart ZZZZ as specified in the Title V permit.

4. No later than June 9, 2021, the Permittee shall limit the sulfur content of fuel oil combusted in EU IDs 8, 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 to no greater than 15 ppmw (ULSD).
    a. For each shipment of fuel, keep receipts that specify fuel grade, date, and quantity of fuel received.
    b. Include a statement in the operating report affirming that EU IDs 8, 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 only burned ULSD during the reporting period.
    c. Report in accordance with the Excess Emissions and Permit Deviation condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 whenever the sulfur content of the liquid fuel burned in any of EU IDs 8, 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 exceeds 15 ppmw S.

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Attachment A-5
New Permit Condition under 18 AAC 50.508(6)
$PM_{2.5}$ SIP Limit for EU IDs 7a through 7c, 51a, 51b, and 52
Effective No Later Than June 9, 2021

DU is requesting new permit conditions to limit the $PM_{2.5}$ emission rate for EU IDs 7a, 7b, 7c, 51a, 51b, and 52 in accordance with the limits summarized in Vol. II: III.D.7.7 Section 7.7.8.3, Table 7.7-11 of the SIP. These limits do not change the stationary source's potential to emit. DU will demonstrate compliance with the requested limits through monitoring, recordkeeping, and reporting requirements proposed below as new permit conditions.

The SIP requires complying with the facility's existing fugitive dust plan as part of monitoring, recordkeeping, and reporting requirements for the coal dust collectors (i.e., EU IDs 7a, 7b, and 7c) and the ash dust collectors (i.e., EU IDs 51a and 51b). These emissions units are not fugitive emissions sources. Because these sources do not emit fugitive emissions, the proposed condition language requires operation of the existing fabric filters during all times on EU IDs 7a, 7b, 7c, 51a, and 51b to comply with the $PM_{2.5}$ SIP emission limits.

5. No later than June 9, 2021, the permittee shall limit the $PM_{2.5}$ emissions from EU ID 7a to not exceed 0.0025 grains per dry standard cubic feet (gr/dscf) and from EU ID 7b, 7c, 51a, and 51b to not exceed 0.02 gr/dscf, each.
    a. Operate and maintain existing fabric filters at all times while EU IDs 7a, 7b, 7c, 51a, and 51b are operating.
    b. Keep records of the date and time identifying each time period that a fabric filter is not operated or maintained according to manufacturer specifications.
    c. Report in accordance with the Excess Emissions and Permit Deviation condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 if the requirements in Condition 5.a. are not met.
6. No later than June 9, 2021, limit the $PM_{2.5}$ emissions from EU ID 52 to 1.42 tons per 12-month rolling period
    a. Comply with the Permittee's Dust Control Plan.

b. Keep records in accordance with the recordkeeping requirements for the Reasonable Precautions to Prevent Fugitive Dust condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50.

c. Report in accordance with the Excess Emissions and Permit Deviation condition in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 if the Permittee deviates from the Dust Control Plan requirements in Condition 6.a.

Attachment B

Potential to Emit SO_2 Calculations Tables

Table B-1. Air Quality Minor Permit Emissions Summary

Table B-2. Emission Unit Parameters

Table B-3. Existing Potential to Emit Calculations - Sulfur Dioxide (SO_2) Emissions

Table B-4. Potential to Emit Calculations Effective June 9, 2021 - Sulfur Dioxide (SO_2) Emissions

Table B-5. Potential to Emit Calculations Effective October 1, 2023 - Sulfur Dioxide (SO_2) Emissions

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Table B-1. Air Quality Minor Permit Emissions Summary
Doyon Utilities - Fort Wainwright (Privatized Emission Units)

Pollutant	Existing Potential to Emit (PTE) (tpy)[a]	PTE beginning June 9, 2021 (tpy)[b,d]	PTE beginning October 1, 2023 (tpy)[c,e]
SO_2	1,765	1,470	305

Notes:
a. The detailed existing PTE calculations are provided in Table B-3.
b. The detailed PTE calculations beginning June 9, 2021 are provided in Table B-4.
c. The detailed PTE calculations beginning October 1, 2023 are provided in Table B-5.
d. The PTE beginning June 9, 2021 incorporates the SO_2 SIP requirements which limit the coal sulfur content received at the facility to 0.25 wt. pct. and require EU IDs 8, 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 to burn ULSD.

e. The PTE beginning October 1, 2023 incorporates the SO_2 BACT limit of 0.12 lb/MMBtu for each of EU IDs 1 through 6 which requires dry sorbent injection (DSI) emission controls to be installed and operating on EU IDs 1 though 6.

f. The $PM_{2.5}$ SIP emission limits for EU IDs 7a through 7c, 51a, 51b, and 52 are consistent with existing operations and PTE calculations. Incorporating the PM2.5 SIP requirements for these emissions units does not change the $PM_{2.5}$ potential to emit as submitted in the April 2019 Title V operating permit renewal application.

g. The permit conditions requested in this minor permit application do not change the NO_x, CO, PM_{10}, $PM_{2.5}$, HAPs, and greenhouse gas emissions potential to emit calculations submitted in the April 2019 Title V operating permit renewal application.

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Table B-2. Emission Unit Parameters
Doyon Utilities - Fort Wainwright (Privatized Emission Units)

Emission Unit			Fuel	Electrical Output	Rating	Allowable Operations without SIP Limit	Allowable Operations with SIP Limit
ID	Name	Description	Type	Rating			
Significant Emission Units							
1	Coal-Fired Boiler 3	Central Heat and Power Plant (CHPP)	Coal	N/A	230 MMBtu/hr	336,000 tpy[d]	336,000 tpy[d]
2	Coal-Fired Boiler 4	CHPP	Coal	N/A	230 MMBtu/hr		
3	Coal-Fired Boiler 5	CHPP	Coal	N/A	230 MMBtu/hr		
4	Coal-Fired Boiler 6	CHPP	Coal	N/A	230 MMBtu/hr		
5	Coal-Fired Boiler 7	CHPP	Coal	N/A	230 MMBtu/hr		
6	Coal-Fired Boiler 8	CHPP	Coal	N/A	230 MMBtu/hr		
7a	South Coal Handling Dust Collector (DC-01)	Airlanco 169-AST-8	N/A	N/A	13,150 acfm[a]	2,195 hr/yr[g]	2,195 hr/yr[g]
7b	South Underbunker Dust Collector (DC-02)	Airlanco 16-AST	N/A	N/A	884 acfm[a]	100 hr/yr[h]	100 hr/yr[h]
7c	North Coal Handling Dust Collector (NDC-1)	Dustex C67-10-547	N/A	N/A	9,250 acfm[a]	45 hr/yr[i]	45 hr/yr[i]
8	Backup Generator Engine	Caterpillar 3516C	Distillate	2,000 kW	2,937 hp[b]	500 hr/yr[e]	500 hr/yr[e]
9	Emergency Generator Engine	Detroit 6V92	Distillate	250 kW	353 hp[c]	500 hr/yr[f]	500 hr/yr[f]
14	Emergency Generator Engine	Cummins QSL-G2 NR3	Distillate	200 kW	320 hp[b]	500 hr/yr[f]	500 hr/yr[f]
22	Emergency Generator Engine	Cummins	Distillate	25 kW	35 hp[c]	500 hr/yr[f]	500 hr/yr[f]
23	Emergency Generator Engine	John Deere 6068HF150	Distillate	110 kW	155 hp[c]	500 hr/yr[f]	500 hr/yr[f]
29a	Emergency Generator Engine	John Deere 4045TF290	Distillate	N/A	74 hp	500 hr/yr[f]	500 hr/yr[f]
30a	Emergency Generator Engine	Caterpillar C4.4	Distillate	60 kW	91 hp[n]	500 hr/yr[f]	500 hr/yr[f]
31a	Emergency Generator Engine	John Deere 4045TF290	Distillate	N/A	74 hp	500 hr/yr[f]	500 hr/yr[f]
32a	Emergency Generator Engine	Caterpillar C4.4	Distillate	60 kW	91 hp[n]	500 hr/yr[f]	500 hr/yr[f]
33a	Emergency Generator Engine	Caterpillar C4.4	Distillate	N/A	75 hp	500 hr/yr[f]	500 hr/yr[f]
34	Emergency Pump Engine	Detroit Diesel 10447000	Distillate	N/A	220 hp	500 hr/yr[f]	500 hr/yr[f]
35	Emergency Pump Engine	John Deere 4045DF120	Distillate	N/A	55 hp	500 hr/yr[f]	500 hr/yr[f]
36	Emergency Pump Engine	Detroit Diesel 4031-C	Distillate	N/A	220 hp	500 hr/yr[f]	500 hr/yr[f]
37	Emergency Generator Engine	Caterpillar C4.4	Distillate	N/A	75 hp	500 hr/yr[f]	500 hr/yr[f]
51a	Fly Ash Dust Collector (DC-1)	United Conveyor Corp. 32242	N/A	N/A	3,620 acfm[a]	4,380 hr/yr[k]	4,380 hr/yr[k]
51b	Bottom Ash Dust Collector (DC-2)	United Conveyor Corp. 32242	N/A	N/A	3,620 acfm[a]	4,380 hr/yr[k]	4,380 hr/yr[k]
52	Coal Storage Pile	CHPP	N/A	N/A	N/A	84,676 tpy[l]	84,676 tpy[l]
Insignificant Emission Units							
N/A	Fly and Bottom Ash Bin Vent Filter	United Conveyor Corp 96TB-BVT-25:S6	N/A	N/A	1,460 acfm[a]	4,380 hr/yr[k]	4,380 hr/yr[k]
N/A	Ash Loadout to Truck	N/A	N/A	N/A	N/A	23,520 tpy[m]	23,520 tpy[m]
N/A	Aboveground Storage Tanks	N/A	Diesel	N/A	N/A	N/A	N/A
N/A	Underground Storage Tanks	N/A	Diesel	N/A	N/A	N/A	N/A

Notes:

[a] Rating for dust collectors and vent filters is the manufacturer's design inlet gas flow rate in cubic feet per minute.

[b] Engine rating from vendor data.

[c] Engine rating in hp calculated from electrical output assuming 95% efficiency (hp=kW*1.341/.95).

[d] Maximum annual coal consumption, combined for Emissions Units 1 through 6, per AQ1121TVP02 Revision 2 Condition 12.1.

[e] Maximum annual operation for Emissions Unit 8, per AQ1121TVP02 Revision 2 Condition 14.

[f] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency engine could be expected to operate per year.

[g] EU ID 7a is the dust collector for the primary coal handling system. Annual operation for EU ID 7a is estimated assuming the unit operates 98% of the annual coal operating hours, 2,240 hr/yr.

[h] Estimated time North coal handling system is in use.

[i] Underbunker dust collector only operates when emptying coal bunker for unscheduled boiler shutdown or bunker fire.

[k] Average run time for DC-1 and DC-2 is 12 hours/day per reasonable inquiry of plant operations.

[l] Maximum annual coal stock pile throughput for FY 2014 through FY2017.

[m] Ash load operations assume the ash content of the coal is 7 wt. pct.

[n] Engine rating in hp calculated from electrical output using the manufacturer provided efficiency of 88%.

Conversion factors:

Engine horsepower	1.341	hp/kw
EU IDs 9, 22, and 23 drive shaft efficiency	95%	Per Alan Schuler at ADEC
EU IDs 30a and 32a drive shaft efficiency	88%	Per vendor information

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Table B-3. Existing Potential to Emit Calculations - Sulfur Dioxide (SO_2) Emissions
Doyon Utilities - Fort Wainwright (Privatized Emission Units)

Emission Unit ID	Emission Unit Name	Fuel Type	Fuel Sulfur Content	Factor Reference	SO_2 Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation	Potential SO_2 Emissions
Significant Emission Units								
1	Coal-Fired Boiler 3	Coal	0.3 wt. pct.[a]	AP-42 Table 1.1-3	10.5 lb/ton-coal	230 MMBtu/hr	336,000 tpy	1,764 tpy
2	Coal-Fired Boiler 4	Coal	0.3 wt. pct.[a]	AP-42 Table 1.1-3	10.5 lb/ton-coal	230 MMBtu/hr		
3	Coal-Fired Boiler 5	Coal	0.3 wt. pct.[a]	AP-42 Table 1.1-3	10.5 lb/ton-coal	230 MMBtu/hr		
4	Coal-Fired Boiler 6	Coal	0.3 wt. pct.[a]	AP-42 Table 1.1-3	10.5 lb/ton-coal	230 MMBtu/hr		
5	Coal-Fired Boiler 7	Coal	0.3 wt. pct.[a]	AP-42 Table 1.1-3	10.5 lb/ton-coal	230 MMBtu/hr		
6	Coal-Fired Boiler 8	Coal	0.3 wt. pct.[a]	AP-42 Table 1.1-3	10.5 lb/ton-coal	230 MMBtu/hr		
7a	South Coal Handling Dust Collector (DC-01)	N/A	N/A	N/A	N/A	13,150 acfm	2,195 hr/yr	0 tpy
7b	South Underbunker Dust Collector (DC-02)	N/A	N/A	N/A	N/A	884 acfm	100 hr/yr	0 tpy
7c	North Coal Handling Dust Collector (NDC-1)	N/A	N/A	N/A	N/A	9,250 acfm	45 hr/yr	0 tpy
8	Backup Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	2,937 hp	500 hr/yr	7.9E-03 tpy
9	Emergency Generator Engine	Distillate	0.50 wt. pct.	Mass balance	70.5 lb/1000 gal	353 hp	500 hr/yr	3.2E-01 tpy
14	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	320 hp	500 hr/yr	8.6E-04 tpy
22	Emergency Generator Engine	Distillate	0.50 wt. pct.	Mass balance	70.5 lb/1000 gal	35 hp	500 hr/yr	3.2E-02 tpy
23	Emergency Generator Engine	Distillate	0.50 wt. pct.	Mass balance	70.5 lb/1000 gal	155 hp	500 hr/yr	1.4E-01 tpy
29a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	74 hp	500 hr/yr	2.0E-04 tpy
30a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	91 hp	500 hr/yr	2.6E-04 tpy
31a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	74 hp	500 hr/yr	2.0E-04 tpy
32a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	91 hp	500 hr/yr	2.6E-04 tpy
33a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	75 hp	500 hr/yr	2.3E-04 tpy
34	Emergency Pump Engine	Distillate	0.50 wt. pct.	Mass balance	70.5 lb/1000 gal	220 hp	500 hr/yr	2.0E-01 tpy
35	Emergency Pump Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	55 hp	500 hr/yr	1.5E-04 tpy
36	Emergency Pump Engine	Distillate	0.50 wt. pct.	Mass balance	70.5 lb/1000 gal	220 hp	500 hr/yr	2.0E-01 tpy
37	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	75 hp	500 hr/yr	2.3E-04 tpy
51a	Fly Ash Dust Collector (DC-1)	N/A	N/A	N/A	N/A	3,620 acfm	4,380 hr/yr	0 tpy
51b	Bottom Ash Dust Collector (DC-2)	N/A	N/A	N/A	N/A	3,620 acfm	4,380 hr/yr	0 tpy
52	Coal Storage Pile	N/A	N/A	N/A	N/A	N/A	84,676 tpy	0 tpy
Significant Emission Units Total Assessable Potential to Emit - SO_2								**1,764.9 tpy**
Insignificant Emission Units								
N/A	Fly and Bottom Ash Bin Vent Filter	N/A	N/A	N/A	N/A	1,460 acfm	4,380 hr/yr	0 tpy
N/A	Ash Loadout to Truck	N/A	N/A	N/A	N/A	N/A	23,520 tpy	0 tpy
N/A	Aboveground Storage Tanks	Diesel	N/A	N/A	N/A	N/A	N/A	0 tpy
N/A	Underground Storage Tanks	Diesel	N/A	N/A	N/A	N/A	N/A	0 tpy
Insignificant Emission Units Total Assessable Potential to Emit - SO_2								**0 tpy**
Total Assessable Potential to Emit - SO_2								**1,764.9 tpy**

Notes:

[a] Maximum sulfur content based on the historic average coal sulfur content from Usibelli Coal Mine.

[b] For engines subject to 40 CFR 60 Subpart IIII, fuel used must meet the requirements of 40 CFR 80.510(b).

Conversion factors:

Diesel Heating Value	137,000	Btu/gal	*From AP 42, Appendix A, Page A-5*
Density of Diesel	7.05	lb/gal	*From AP 42, Appendix A, Page A-7, density for Distillate Oil*
Engine Heat Rate	7,000	Btu/hp-hr	*Average brake-specific fuel consumption (BSFC) from AP 42, Table 3.3-1, footnote a*
EU IDs 30a and 32a Fuel Consumption Rate	5.0	gal/hr	*From vendor information.*
EU IDs 33a and 37 Fuel Consumption Rate	4.4	gal/hr	*From vendor information.*
Weight	2,000	lb/ton	

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Table B-4. Potential to Emit Calculations Effective June 9, 2021 - Sulfur Dioxide (SQ) Emissions
Doyon Utilities - Fort Wainwright (Privatized Emission Units)

Emission Unit ID	Emission Unit Name	Fuel Type	Fuel Sulfur Content	Factor Reference	SO_2 Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation	Potential SO_2 Emissions
Significant Emission Units								
1	Coal-Fired Boiler 3	Coal	0.25 wt. pct.[a]	AP-42 Table 1.1-3	8.75 lb/ton-coal	230 MMBtu/hr	336,000 tpy	1,470 tpy
2	Coal-Fired Boiler 4	Coal	0.25 wt. pct.[a]	AP-42 Table 1.1-3	8.75 lb/ton-coal	230 MMBtu/hr		
3	Coal-Fired Boiler 5	Coal	0.25 wt. pct.[a]	AP-42 Table 1.1-3	8.75 lb/ton-coal	230 MMBtu/hr		
4	Coal-Fired Boiler 6	Coal	0.25 wt. pct.[a]	AP-42 Table 1.1-3	8.75 lb/ton-coal	230 MMBtu/hr		
5	Coal-Fired Boiler 7	Coal	0.25 wt. pct.[a]	AP-42 Table 1.1-3	8.75 lb/ton-coal	230 MMBtu/hr		
6	Coal-Fired Boiler 8	Coal	0.25 wt. pct.[a]	AP-42 Table 1.1-3	8.75 lb/ton-coal	230 MMBtu/hr		
7a	South Coal Handling Dust Collector (DC-01)	N/A	N/A	N/A	N/A	13,150 acfm	2,195 hr/yr	0 tpy
7b	South Underbunker Dust Collector (DC-02)	N/A	N/A	N/A	N/A	884 acfm	100 hr/yr	0 tpy
7c	North Coal Handling Dust Collector (NDC-1)	N/A	N/A	N/A	N/A	9,250 acfm	45 hr/yr	0 tpy
8	Backup Generator Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	2,937 hp	500 hr/yr	7.9E-03 tpy
9	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c]	Mass balance	0.2 lb/1000 gal	353 hp	500 hr/yr	9.5E-04 tpy
14	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	320 hp	500 hr/yr	8.6E-04 tpy
22	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c]	Mass balance	0.2 lb/1000 gal	35 hp	500 hr/yr	9.5E-05 tpy
23	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c]	Mass balance	0.2 lb/1000 gal	155 hp	500 hr/yr	4.2E-04 tpy
29a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	74 hp	500 hr/yr	2.0E-04 tpy
30a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	91 hp	500 hr/yr	2.6E-04 tpy
31a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	74 hp	500 hr/yr	2.0E-04 tpy
32a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	91 hp	500 hr/yr	2.6E-04 tpy
33a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	75 hp	500 hr/yr	2.3E-04 tpy
34	Emergency Pump Engine	Distillate	0.0015 wt. pct.[c]	Mass balance	0.2 lb/1000 gal	220 hp	500 hr/yr	5.9E-04 tpy
35	Emergency Pump Engine	Distillate	0.0015 wt. pct.[b,c]	Mass balance	0.2 lb/1000 gal	55 hp	500 hr/yr	1.5E-04 tpy
36	Emergency Pump Engine	Distillate	0.0015 wt. pct.[c]	Mass balance	0.2 lb/1000 gal	220 hp	500 hr/yr	5.9E-04 tpy
37	Emergency Generator Engine	Distillate	0.0015 wt. pct.[b]	Mass balance	0.2 lb/1000 gal	75 hp	500 hr/yr	2.3E-04 tpy
51a	Fly Ash Dust Collector (DC-1)	N/A	N/A	N/A	N/A	3,620 acfm	4,380 hr/yr	0 tpy
51b	Bottom Ash Dust Collector (DC-2)	N/A	N/A	N/A	N/A	3,620 acfm	4,380 hr/yr	0 tpy
52	Coal Storage Pile	N/A	N/A	N/A	N/A	N/A	84,676 tpy	0 tpy
Significant Emission Units Total Assessable Potential to Emit - SO_2								**1,470 tpy**
Insignificant Emission Units								
N/A	Fly and Bottom Ash Bin Vent Filter	N/A	N/A	N/A	N/A	1,460 acfm	4,380 hr/yr	0 tpy
N/A	Ash Loadout to Truck	N/A	N/A	N/A	N/A	N/A	23,520 tpy	0 tpy
N/A	Aboveground Storage Tanks	Diesel	N/A	N/A	N/A	N/A	N/A	0 tpy
N/A	Underground Storage Tanks	Diesel	N/A	N/A	N/A	N/A	N/A	0 tpy
Insignificant Emission Units Total Assessable Potential to Emit - SO_2								**0 tpy**
Total Assessable Potential to Emit - SO_2								**1,470 tpy**

Notes:

[a] The PTE beginning June 9, 2021 incorporates the SO_2 SIP requirements which limit the coal sulfur content received at the facility to 0.25 wt. pct.

[b] For engines subject to 40 CFR 60 Subpart IIII, fuel used must meet the requirements of 40 CFR 80.510(b).

[c] The PTE beginning June 9, 2021 incorporates the SO_2 SIP requirements which limit EU IDs 8, 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 to burn ULSD.

Conversion factors:

Diesel Heating Value	137,000	Btu/gal	*From AP 42, Appendix A, Page A-5*
Density of Diesel	7.05	lb/gal	*From AP 42, Appendix A, Page A-7, density for Distillate Oil*
Engine Heat Rate	7,000	Btu/hp-hr	*Average brake-specific fuel consumption (BSFC) from AP 42, Table 3.3-1, footnote a*
EU IDs 30a and 32a Fuel Consumption Rate	5.0	gal/hr	*From vendor information.*
EU IDs 33a and 37 Fuel Consumption Rate	4.4	gal/hr	*From vendor information.*
Weight	2,000	lb/ton	

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Table B-5. Potential to Emit Calculations Effective October 1, 2023 - Sulfur Dioxide (SO_2) Emissions
Doyon Utilities - Fort Wainwright (Privatized Emission Units)

Emission Unit ID	Emission Unit Name	Fuel Type	Fuel Sulfur Content	Factor Reference	SO_2 Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation	Potential SO_2 Emissions
Significant Emission Units								
1	Coal-Fired Boiler 3	Coal	0.25 wt. pct.[b]	SIP BACT Limit	0.12 lb/MMBtu[a]	230 MMBtu/hr	336,000 tpy	305 tpy
2	Coal-Fired Boiler 4	Coal	0.25 wt. pct.[b]	SIP BACT Limit	0.12 lb/MMBtu[a]	230 MMBtu/hr		
3	Coal-Fired Boiler 5	Coal	0.25 wt. pct.[b]	SIP BACT Limit	0.12 lb/MMBtu[a]	230 MMBtu/hr		
4	Coal-Fired Boiler 6	Coal	0.25 wt. pct.[b]	SIP BACT Limit	0.12 lb/MMBtu[a]	230 MMBtu/hr		
5	Coal-Fired Boiler 7	Coal	0.25 wt. pct.[b]	SIP BACT Limit	0.12 lb/MMBtu[a]	230 MMBtu/hr		
6	Coal-Fired Boiler 8	Coal	0.25 wt. pct.[b]	SIP BACT Limit	0.12 lb/MMBtu[a]	230 MMBtu/hr		
7a	South Coal Handling Dust Collector (DC-01)	N/A	N/A	N/A	N/A	13,150 acfm	2,195 hr/yr	0 tpy
7b	South Underbunker Dust Collector (DC-02)	N/A	N/A	N/A	N/A	884 acfm	100 hr/yr	0 tpy
7c	North Coal Handling Dust Collector (NDC-1)	N/A	N/A	N/A	N/A	9,250 acfm	45 hr/yr	0 tpy
8	Backup Generator Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	2,937 hp	500 hr/yr	7.9E-03 tpy
9	Emergency Generator Engine	Distillate	0.0015 wt. pct.[d]	Mass balance	0.2 lb/1000 gal	353 hp	500 hr/yr	9.5E-04 tpy
14	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	320 hp	500 hr/yr	8.6E-04 tpy
22	Emergency Generator Engine	Distillate	0.0015 wt. pct.[d]	Mass balance	0.2 lb/1000 gal	35 hp	500 hr/yr	9.5E-05 tpy
23	Emergency Generator Engine	Distillate	0.0015 wt. pct.[d]	Mass balance	0.2 lb/1000 gal	155 hp	500 hr/yr	4.2E-04 tpy
29a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	74 hp	500 hr/yr	2.0E-04 tpy
30a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	91 hp	500 hr/yr	2.6E-04 tpy
31a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	74 hp	500 hr/yr	2.0E-04 tpy
32a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	91 hp	500 hr/yr	2.6E-04 tpy
33a	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	75 hp	500 hr/yr	2.3E-04 tpy
34	Emergency Pump Engine	Distillate	0.0015 wt. pct.[d]	Mass balance	0.2 lb/1000 gal	220 hp	500 hr/yr	5.9E-04 tpy
35	Emergency Pump Engine	Distillate	0.0015 wt. pct.[c, d]	Mass balance	0.2 lb/1000 gal	55 hp	500 hr/yr	1.5E-04 tpy
36	Emergency Pump Engine	Distillate	0.0015 wt. pct.[d]	Mass balance	0.2 lb/1000 gal	220 hp	500 hr/yr	5.9E-04 tpy
37	Emergency Generator Engine	Distillate	0.0015 wt. pct.[c]	Mass balance	0.2 lb/1000 gal	75 hp	500 hr/yr	2.3E-04 tpy
51a	Fly Ash Dust Collector (DC-1)	N/A	N/A	N/A	N/A	3,620 acfm	4,380 hr/yr	0 tpy
51b	Bottom Ash Dust Collector (DC-2)	N/A	N/A	N/A	N/A	3,620 acfm	4,380 hr/yr	0 tpy
52	Coal Storage Pile	N/A	N/A	N/A	N/A	N/A	84,676 tpy	0 tpy
Significant Emission Units Total Assessable Potential to Emit - SO_2								**305 tpy**
Insignificant Emission Units								
N/A	Fly and Bottom Ash Bin Vent Filter	N/A	N/A	N/A	N/A	1,460 acfm	4,380 hr/yr	0 tpy
N/A	Ash Loadout to Truck	N/A	N/A	N/A	N/A	N/A	23,520 tpy	0 tpy
N/A	Aboveground Storage Tanks	Diesel	N/A	N/A	N/A	N/A	N/A	0 tpy
N/A	Underground Storage Tanks	Diesel	N/A	N/A	N/A	N/A	N/A	0 tpy
Insignificant Emission Units Total Assessable Potential to Emit - SO_2								**0 tpy**
Total Assessable Potential to Emit - SO_2								**305 tpy**

Notes:

[a] The PTE beginning October 1, 2023 incorporates the SO_2 BACT limit of 0.12 lb/MMBtu for each of EU IDs 1 through 6 which requires dry sorbent injection (DSI) emission controls to be installed and operating on EU IDs 1 though 6.

[b] The coal sulfur content received at the facility is limited to 0.25 wt. pct. beginning on June 9, 2021 per Table B-4.

[c] For engines subject to 40 CFR 60 Subpart IIII, fuel used must meet the requirements of 40 CFR 80.510(b).

[d] EU IDs 8, 9, 14, 22, 23, 29a, 30a, 31a, 32a, 33a, and 34 through 36 are required to combust ULSD beginning on June 9, 2021 per Table B-4.

Conversion factors:

Diesel Heating Value	137,000	Btu/gal	*From AP 42, Appendix A, Page A-5*
Density of Diesel	7.05	lb/gal	*From AP 42, Appendix A, Page A-7, density for Distillate Oil*
Engine Heat Rate	7,000	Btu/hp-hr	*Average brake-specific fuel consumption (BSFC) from AP 42, Table 3.3-1, footnote a*
EU IDs 30a and 32a Fuel Consumption Rate	5.0	gal/hr	*From vendor information.*
EU IDs 33a and 37 Fuel Consumption Rate	4.4	gal/hr	*From vendor information.*
Coal Heating Value	7,560	Btu/lb	*From http://www.usibelli.com/coal/data-sheet*
Weight	2,000	lb/ton	

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Attachment C
Copy of Title I Permit No. AQ1121MSS01

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DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit No.: AQ1121MSS01 Final – September 9, 2008
Rescinds Permit No. 0031-AC059 Revision 1

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit No. AQ1121MSS01 to the Permittee listed below.

Permittee:	United States Army Garrison Alaska (USAG-AK) Fort Wainwright ATTN: IMPC-FWA-PW 1060 Gaffney Road #4500 Fort Wainwright, Alaska 99703 (907) 361-7287
Owner and Operator:	Same as Permittee
Stationary Source:	Fort Wainwright (Privatized Emission Units)
Location:	64° 50' N; 147° 35' W
Physical Address:	1060 Gaffney Road #4500 Fort Wainwright, Alaska 99703
Permit Contact:	Michael Meeks Michael.Meeks@us.army.mil (907) 361-7287
Project:	Permit split.

This project is classified under 18 AAC 50.508(6) to revise or rescinds terms and conditions of a Title I permit issued under 18 AAC 50, and also under 18 AAC 50.502(b)(5) because the source operates a coal preparation plant. This permit satisfies the obligation of the Permittee to obtain a minor permit under this provision. The Permittee shall operate the Fort Wainwright (Privatized Emission Units) in accordance with the terms and conditions of this permit, and as described in the permit application listed in Section 4 except as specified in this permit. As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this minor permit.

The Permittee may operate under the provisions of this minor permit upon issuance.

Sally A. Ryan

John F. Kuterbach
Manager, Air Permits Program

Table of Contents

Section 1 Permit Terms and Conditions

1. **Emission Unit (EU) Authorization.** This permit authorizes the Permittee to operate the emission units listed in Table 1.

Table 1 –Emission Unit Inventory

Emission Unit ID Number	Source Description	Rating/size[a]	Fuel Type	Install Date
Central Heating and Power Plant				
1	Coal Fired Boiler 3	230 MMBtu/hr	Coal	1953
2	Coal Fired Boiler 4	230 MMBtu/hr	Coal	1953
3	Coal Fired Boiler 5	230 MMBtu/hr	Coal	1953
4	Coal Fired Boiler 6	230 MMBtu/hr	Coal	1953
5	Coal Fired Boiler 7	230 MMBtu/hr	Coal	1953
6	Coal Fired Boiler 8	230 MMBtu/hr	Coal	1953
7	Coal Preparation Plant	150 TPH	N/A	2001

Table Notes:
a - MMBtu/hr is heat input.

1.1 Except as noted elsewhere in this permit, the information in Table 1 is for identification purposes only. The specific unit descriptions do not restrict the permittee from replacing an emission unit identified in Table 1. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement emission unit, including any applicable minor or construction permit requirements.

Industrial Processes and Fuel-Burning Equipment, Emission Units 1 through 6 and 7

2. **Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 6 and 7 to reduce visibility through the exhaust effluent by more than 20 percent for more than three minutes in any one hour. For EU IDs 1 through 6, an additional three minutes in any one hour is allowed if the visible emissions are caused by startup, shutdown, soot blowing, or grate cleaning, as those terms are defined in 18 AAC 50.990 and the Permittee monitors visible emissions using a continuous opacity monitoring system (COMS).

2.1 For EU IDs 1 through 6:

a. Install and operate using baghouse control devices.

b. Monitor and record visible emissions as provided in Section 2. Monitor and record opacity for each successive 10-second period using Continuous Opacity Monitors (COMS) that meet 40 CFR 60.13(e)(1) monitoring specifications and per performance specification 1, 40 CFR 60, Appendix B operate and maintain the COMS as set out in Title V Permit No. AQ1121TVP01

c. Except during COMS breakdowns, repairs, calibration checks, and zero and span adjustments, complete one cycle of sampling and analysis for each successive 10-second period of source operation. From this data, calculate and record an average opacity for successive and discrete one-minute periods (one minute block averages). In determining compliance during operating periods of startup, shutdown, sootblowing, or grate cleaning, exclude a maximum of 6 consecutive one-minute block average opacities measured by the COMS in any one hour that are greater than 20%. In determining compliance under other operating periods exclude a maximum of 3 consecutive one-minute block average opacities measured by the COMS in any one hour that are greater than 20%.

d. Attach to the Operating Report required by Condition 14, a print out from the COMS data acquisition system the date, time, and opacity reading of each 10second value that is in excess of 20% opacity. Report non-compliance according to Condition 13 if the total number f 10-second values that exceed 20% opacity is greater than 18 per hour.

e. Attach a copy of the performance specification report, with calculations, to the Operating Report for that quarter which the operator completed verification of on-site specifications as set out in 40 CFR 60, Appendix B PS-1.

3. **Particulate Matter (PM).** The Permittee shall not cause or allow particulate matter emitted from EU IDs 1 through 6 and 7 to exceed 0.10 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. For EU IDs 1 through 6, the Permittee will comply with this standard by meeting the owner-requested limit of 0.05 gr/dscf as listed in Condition 8.

4. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound concentrations, expressed as SO_2, from any EU ID 1 through 6 to exceed 500 ppm averaged over three hours.

4.1 For EU IDs 1 through 6, use only coal for fuel.

4.2 Upon receipt of each shipment of coal at the stationary source,

a. obtain a sulfur content certificate from the fuel supplier or if a certificate is not available from the supplier, analyze a representative sample of the coal to determine the sulfur content using ASTM method D2492-90, D3176-89, or D4239-00 for coal and

b. whenever the sulfur content of a shipment of coal is more than 0.4%, calculate the three-hour exhaust concentration expected to result from combusting the shipment using the mass-balance method contained in Condition 4.3.

4.3 At least once each year, and when required by Condition 4.2b, calculate sulfur-compound emissions, expressed as sulfur dioxide, averaged over three hours as follows:

a. Obtain a representative sample of each fuel that is burned using the applicable procedures set forth in 40 CFR §60, Appendix A, RM 19;

b. Conduct an ultimate analysis of the representative sample using the procedures established in ASTM D3176-89 to determine the weight percents, dry basis, of sulfur (**wt%S_{coal}**), carbon (**wt%C_{coal}**), hydrogen (**wt%H_{coal}**), nitrogen (**wt%N_{coal}**), and oxygen (**wt%O_{coal}**);

c. For the same boiler load used in the calculation, determine the volume percent of oxygen in the exhaust (**vol%$_{dry}O_{2,exhaust}$**) with an oxygen analyzer or by an ORSAT analysis; and

d. Calculate the three-hour exhaust concentration of SO_2 using the following equations. The data in percentages must be entered into the equations without dividing the percentages by 100, for example, if **wt%S_{coal}** = 1.0%, then enter 1.0 into the equations, not 0.01, and if **vol%$_{dry}O_{2,exhaust}$** = 3.00%, then enter 3.00, not 0.03.

$A = 31{,}200 \times$ [**wt%S_{coal}**] $= 31{,}200 \times$ _____ = _____

$B = 0.148 \times$ [**wt%S_{coal}**] $= 0.148 \times$ _____ = _____

$C = 0.396 \times$ [**wt%C_{coal}**] $= 0.396 \times$ _____ = _____

$D = 0.933 \times$ [**wt%H_{coal}**] $= 0.933 \times$ _____ = _____

$E = 0.036 \times$ [**wt%N_{coal}**] $= 0.036 \times$ _____ = _____

$F = 0.118 \times$ [**wt%O_{coal}**] $= 0.118 \times$ _____ = _____

$G = B + C + D + E - F =$ _____ + _____ + _____ + _____ − _____ = _____

$H = 21 -$ [**vol%$_{dry}O_{2,\ exhaust}$**] $= 21 -$ _____ = _____

$I =$ [**vol%$_{dry}O_{2,\ exhaust}$**] $\div H =$ _____ ÷ _____ = _____

$J = 1 + I = 1 +$ _____ = _____

$K = G \times J =$ _____ × _____ = _____

SO_2 concentration = A ÷ ***K*** = _____ ÷ _____ = _____ ppmv

Owner Requested Limits to Avoid Classification as a PSD Major Modification for Previous Air Quality Construction Permit 0031-AC059

5. **Nitrogen Oxides.** The Permittee shall avoid classification as a Prevention of Significant Deterioration major modification for NO_X as follows:

5.1 Limit the annual coal consumption to a cumulative total of 336,000 tons per consecutive 12-month period for EU IDs 1 through 6.

a. Monitor and record the cumulative total monthly coal consumption for each of EU IDs 1 though 6, and calculate and record the cumulative 12 consecutive month total coal consumption.

b. Report in the Operating Report required by Condition 14, the cumulative monthly and 12 consecutive month total coal consumption for EU IDs 1 through 6.

5.2 Conduct two NO_X source tests on each of EU IDs 1 through 6. Conduct the first source test within 180 days prior to shutdown for the emission reduction project and the upgrade project. Conduct the second emission source test within 60 days after achieving the maximum firing rate, but no later than 180 days after startup upon completion of project tasks for that boiler. Conduct each test burning coal at the maximum burning or operating capacity of the unit. Source test in accordance with the monitoring, recording, and reporting requirements set forth in Section 2. Determine the NO_X emission factors for each unit, before and after the projects, using exhaust properties determined by both Method 19 and exhaust gas measurements as set out in Section 2.

5.3 If emission factors derived from the second emission source test in Condition 5.2 are greater than those of the first source test, then submit to the Department within 30 days of test date an analysis demonstrating that project emissions burning the amount of coal in Condition 5.1 will not increase in excess of 40 tons per year of NO_X.

5.4 The Permittee shall not perform fire-fighting training on wooden structures.

Owner Requested Revised Permit Limits established in Permit No. 9331-AA003

6. The Permittee shall limit the monthly-average steam production to 150,000 pounds per hour for each of six (6) boilers, EU IDs 1 through 6.

6.1 Calculate and record the average daily steam production rate (lb/hr) based on the hours of operation per day and steam production readings recorded at no less than 10-minute intervals.

6.2 Report the maximum monthly average steam production rate (lb/hr) for each of EU IDs 1 through 6. Report as excess emissions under Condition 13 for any period in which operations deviate from Condition 6.

7. The Permittee shall not use coal containing greater than 30 percent fines content (material passing through the No. 8 sieve) by weight for EU IDs 1 through 6.

7.1 Analyze a representative sample of coal for each shipment delivered to the facility to determine the fines content using an approved ASTM method such as ASTM D197-87.

7.2 Report in the Operating Report required by Condition 14, results of each analysis conducted pursuant to Condition 7.1.

8. The Permittee shall limit PM-10 emissions to 0.05 grains per dry standard cubic foot from EU IDs 1 through 6.

8.1 Conduct an emission source test on each of EU IDs 1 through 6 subject to the schedule for the second test set out in Condition 5.2.

8.2 Monitor, record, and report according to Section 2.

Section 2 General Record Keeping, Reporting, and Compliance Requirements

9. **Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the 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." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

10. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 9.

11. **Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

12. **Record Keeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including

    12.1 Copies of all reports and certifications submitted pursuant to this section of the permit.

    12.2 Records of all monitoring required by this permit, and information about the monitoring including:

        a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

        b. sampling dates and times of sampling or measurements;

        c. the operating conditions that existed at the time of sampling or measurement;

        d. the date analyses were performed;

        e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

13. **Excess Emissions and Permit Deviation Reports.**

13.1 Except as provided in Condition 16, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs or is discovered, except as provided in Conditions 13.1c(ii) and 13.1c(iii);

(ii) if continuous or recurring excess emissions are not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 13.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

13.2 The Permittee must report using either the Department's on-line form, or if the Permittee prefers, the form contained in Section 3 of this permit. The Permittee must provide all information called for by the form that is used.

13.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

14. **Operating Reports.** During the life of this permit, the Permittee shall submit to the Department an original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year, and by February 1 for the period July 1 to December 31 of the previous year.

14.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

14.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 14.1, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date of such actions; or

b. When excess emissions or permit deviations have already been reported under Condition 13, the Permittee may cite the date or dates of those reports.

15. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

15.1 enter upon the premises where an emission unit subject to the permit is located or where records required by the permit are kept;

15.2 have access to and copy any records required by the permit;

15.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

15.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

16. **Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

16.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 13.

16.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to

identify emissions that the Permittee believes have caused or are causing a violation of Condition 16.

16.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 16; or

b. the Department notifies the Permittee that it has found a violation of Condition 16.

16.4 The Permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 16; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

16.5 With each operating report under Condition 14, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

16.6 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

17. **Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

18. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

19. **Test Plans.** Except as provided in Condition 22, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 17 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

20. **Test Notification.** Except as provided in Condition 22, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

21. **Test Reports.** Except as provided in Condition 22, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 9. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

22. **Test Exemption.** The Permittee is not required to comply with Conditions 19, 20, and 21 (Test Plans, Test Notification and Test Reports) when exhaust is observed for visible emissions using Method 9.

Section 3 ADEC Notification Form

Stationary Source Name _____ Air Quality Permit Number _____

Company Name _____

When did you discover the Excess Emissions/Permit Deviation?

Date: _____ / _____ / _____ Time: _____ : _____

When did the event/deviation occur?

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

End Date: _____ / _____ / _____ Time: _____ : _____ (please use 24hr 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.

☐ Deviation from Permit Condition - Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

Section 1. Excess Emissions

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

(b) Cause of Event (Check one that applies):

☐ Start Up /Shut Down ☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure ☐ Scheduled Maintenance/Equipment Adjustment

☐ Bad fuel/coal/gas ☐ Upset Condition ☐ Other _____

(c) Description

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:

Identify the emission unit 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.

Unit ID	Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) Type of Incident (Please Check only one).

☐ Opacity _____ % ☐ Venting _____ (gas/scf) ☐ Control Equipment Down

☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Flaring

☐ Marine Vessel Opacity ☐ Other: _____

(f) 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) Permit Deviation Type (check one only box, corresponding with the section in the permit).

☐ Emission Unit Specific

☐ Failure to monitor/report

☐ General Source Test/Monitoring Requirements

☐ Recordkeeping/Reporting/Compliance Certification

☐ Standard Conditions Not Included in Permit

☐ Generally Applicable Requirements

☐ Reporting/Monitoring for Diesel Engines

☐ Insignificant Emission Unit

☐ Record Keeping Failure

☐ Stationary Source Wide

☐ Other Section _____ (title of section and section number of your permit).

(b) Emission Unit Involved.

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

Unit ID	Unit 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.

(d) Corrective Actions:
Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

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: _____

To Submit this Report:

Fax to: 907-451-2187;
Email to: DEC.AQ.Airreports@alaska.gov - *if emailed, the report must be certified within the Operating Report required for the same reporting period per Condition 14;*
Mail to: ADEC, Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643;
Phone Notification: 907-451-5173 - p*hone notifications require a written follow-up report within the deadline listed in Condition 13; OR*
Online Submission: - *if submitted online, the report must be certified within the Operating Report required for the same reporting period per Condition 14.*

Section 4 Permit Documentation

April 30, 1993	Air Quality Control Permit to Operate No. 9331-AA003.
September 20, 1996	Air Pollution Emission Statement No. 43-EL-5680-96.
June 27, 2000	Letter from Jim Baumgartner (ADEC) to Brian Taylor (US Army) regarding Bassett Hospital Site Preparation Work.
July 21, 2000	US Army submitted historical data for the IRP Sites (on two CD-ROMs).
August 15, 2000	Letter from Jim Baumgartner (ADEC) to Debra Breindel (US Army) regarding Projected VOC Emissions for 2000 at Fort Wainwright IRP Sites
September 11, 2000	US Army Response to Letter regarding Projected VOC Emissions for 2000 at Fort Wainwright IRP Sites.
September 29, 2000	Manuals for the Oxidizer units used at Fort Wainwright.
October 2, 2000	US Army submitted construction permit application, New Source Review/Prevention of Significant Deterioration Evaluation for Modification to the US Army's Ft. Wainwright, Alaska Facility.
October 11, 2000	The CHPP Emission Reduction and Upgrade Project's bid documents (on two CD-ROMs).
October 22, 2000	ADEC letter to US Army finding application complete and requesting additional information.
November 15, 2000	US Army response to ADEC Completeness Review Comments.
February 1, 2001	Air Quality Construction Permit 0031-AC059.
February 1, 2001	Technical Analysis Report (TAR) for Air Quality Construction Permit 0031-AC059.
July 2, 2001	Air Quality Construction Permit 0031-AC059, Revision 1. (TAR for Permit 0031-AC059 still provides the technical analysis for this permit.)
October 30, 2001	Letter from ADEC to the Directorate fo Public Works at Fort Wainwright allowing a revised method for demonstrating compliance with the sulfur compound emission limit
April 4, 2008	US Army Garrison Alaska submitted an application for revision to Air Quality Construction Permit 0031-AC059, Revision 1. The application requested to split the emission units into two separate minor permits.