DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONTROL CONSTRUCTION PERMIT

Construction Permit: AQ1539CPT01 **Preliminary Date – September 11, 2020**

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Construction Permit AQ1539CPT01 to the Permittee listed below.

Permittee:	**Alaska Gasline Development Corporation** 3201 C Street, Suite 200 Anchorage, AK 99503
Stationary Source:	**Liquefaction Plant**
Location:	Nikiski, Alaska Latitude: 60.6655° North; Longitude: 151.3593° West
Project:	Construct Liquefaction Plant
Permit Contact:	Frank Richards (907) 330-6352 FRichards@agdc.us

This permit is classified under 18 AAC 50.306 as a Prevention of Significant Deterioration (PSD) major stationary source for oxides of nitrogen (NOx), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM), particulate matter with an aerodynamic diameter not exceeding a nominal 10 micrometers (PM-10), particulate matter with an aerodynamic diameter not exceeding a nominal 2.5 micrometers (PM-2.5), volatile organic compounds (VOC), and greenhouse gases (GHGs). The project is also classified under 18 AAC 50.316 as a major source of Hazardous Air Pollutants (HAPs) for formaldehyde and ethylbenzene.

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

_____

James R. Plosay, Manager
Air Permits Program

Table of Contents

Abbreviations and Acronyms

AAC.....Alaska Administrative Code
ADEC .....Alaska Department of Environmental Conservation
AAAQS .....Alaska Ambient Air Quality Standard(s)
AOS .....Air Online Services
AS .....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT .....best available control technology
CDX.....Central Data Exchange
CEDRI .....Compliance and Emissions Data Reporting Interface
C.F.R. .....Code of Federal Regulations
CAA.....Clean Air Act
CO .....carbon monoxide
Department .....Alaska Department of Environmental Conservation
dscf .....dry standard cubic foot
EPA .....US Environmental Protection Agency
EU.....emissions unit
FEM.....Federal Equivalent Method
gr/dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
gph.....gallons per hour
GTP .....Gas Treatment Plant
HAPs .....hazardous air pollutants [as defined in AS 46.14.990]
HP.....High Pressure
kPa.....kiloPascals
LP .....Low Pressure
MACT .....maximum achievable control technology [as defined in 40 C.F.R. 63]
MMBtu/hr.....million British thermal units per hour
MMscf .....million standard cubic feet
MR&R .....monitoring, recordkeeping, and reporting
Mscf.....thousand standard cubic
NESHAPs.....National Emission Standards for Hazardous Air Pollutants [as contained in 40 C.F.R. 61 and 63]
NOx .....nitrogen oxides
NO_2.....nitrogen dioxide
NRE.....nonroad engine
NSPS .....New Source Performance Standards [as contained in 40 C.F.R. 60]
O & M .....operation and maintenance
O_2.....oxygen
PM-10.....particulate matter less than or equal to a nominal 10 microns in diameter
PM-2.5.....particulate matter less than or equal to a nominal 2.5 microns in diameter
ppm .....parts per million
ppmv, ppmvd.....parts per million by volume on a dry basis
psia .....pounds per square inch (absolute)
PSD .....prevention of significant deterioration
PTE.....potential to emit
QAPP.....Quality Assurance Project Plan
QA/QC .....Quality Assurance/Quality Control
SIC.....Standard Industrial Classification
SIP .....State Implementation Plan
SPC.....Standard Permit Condition or Standard Operating Permit Condition
SO_2 .....sulfur dioxide
tpy.....tons per year
ULSD .....Ultra-Low Sulfur Diesel
VOC .....volatile organic compound [as defined in 40 C.F.R. 51.100(s)]
vol% .....volume percent
WHRU.....waste heat recovery unit
wt% .....weight percent
wt%S_{fuel} .....weight percent of sulfur in fuel
µg/m^3.....micrograms per cubic meter

Section 1 Emissions Unit Inventory

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

Table 1 – EU Inventory

EU #	EU Description	Fuel	Rating/Max Capacity
1	Simple Cycle Treated Gas Compressor Turbine (Train 1a)	Fuel Gas	1,113[1] MMBtu/hr
2	Simple Cycle Treated Gas Compressor Turbine (Train 1b)	Fuel Gas	1,113[1] MMBtu/hr
3	Simple Cycle Treated Gas Compressor Turbine (Train 2a)	Fuel Gas	1,113[1] MMBtu/hr
4	Simple Cycle Treated Gas Compressor Turbine (Train 2b)	Fuel Gas	1,113[1] MMBtu/hr
5	Simple Cycle Treated Gas Compressor Turbine (Train 3a)	Fuel Gas	1,113[1] MMBtu/hr
6	Simple Cycle Treated Gas Compressor Turbine (Train 3b)	Fuel Gas	1,113[1] MMBtu/hr
7	Combined Cycle Power Generation Combustion Turbine	Fuel Gas	384[1] MMBtu/hr
8	Combined Cycle Power Generation Combustion Turbine	Fuel Gas	384[1] MMBtu/hr
9	Combined Cycle Power Generation Combustion Turbine	Fuel Gas	384[1] MMBtu/hr
10	Combined Cycle Power Generation Combustion Turbine	Fuel Gas	384[1] MMBtu/hr
11	Emergency Firewater Pump RICE	ULSD	575 hp
12	Auxiliary Air Compressor RICE	ULSD	300 hp
13	Thermal Oxidizer	Fuel Gas/ Process Gas	6.0 MMBtu/hr
14	Dry Ground Flare #1	Fuel Gas/ Process Gas	55,000[2] Mscf/hr
15	Wet Ground Flare #1		13,000[3] Mscf/hr
16	Dry Ground Flare #2	Fuel Gas/ Process Gas	55,000[2] Mscf/hr
17	Wet Ground Flare #2		13,000[3] Mscf/hr
18	Dry Ground Flare #3	Fuel Gas/ Process Gas	55,000[2] Mscf/hr
19	Wet Ground Flare #3		13,000[3] Mscf/hr
20	Elevated Low Pressure Flare	Fuel Gas/ Process Gas	990[4] Mscf/hr
21	Gas Condensate Storage Tank	Stabilized NGLs	457,890 gallons
22	Off-Spec Gas Condensate Storage Tank	Stabilized NGLs	126,904 gallons
23	Gas Condensate Loading System	Stabilized NGLs	1,000 gallons
24	Diesel Storage Tank	ULSD	3,520 gallons
25	Air Compressor Diesel Tank	ULSD	342 gallons
26	Firewater Pump Diesel Tank	ULSD	342 gallons

Table Notes:

[1] The capacity listed for EUs 1 through 10 reflects the rating for each unit at the yearly average ambient temperature for the Liquefaction Plant of 40°F.

[2] EUs 14, 16, and 18 have the maximum relief event capacity listed in Table 1. The pilot, purge, and assist rate for these EUs is 6.4 thousand standard cubic feet per hour (Mscf/hr), per unit.

[3] EUs 15, 17, and 19 have the maximum relief event capacity listed in Table 1. The pilot, purge, and assist rate for these EUs is 2.1 Mscf/hr, per unit.

[4] The pilot, purge, and assist rate for low pressure flare is 19.0 Mscf/hr.

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

2. The Permittee shall commence[1] construction of the stationary source authorized under Construction Permit AQ1539CPT01 within 18 months of the issuance of the permit unless granted an extension in writing from the Department.

[1] Commence has the meaning given in 40 C.F.R. 52.21(b)(9).

Section 2 Fee Requirements

3. **Fee Requirements.** The Permittee shall pay to the Department all assessed permit fees. Fee rates are set out in 18 AAC 50.400-420.

4. **Assessable Emissions**. The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410.[2] The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of:

   4.1 the stationary source's assessable potential to emit of 41,753 tpy; or

   4.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by the most representative of one or more of the following methods:

      a. an enforceable test method described in 18 AAC 50.220;

      b. material balance calculations;

      c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035;

      d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

5. **Assessable Emission Estimates.** Emission fees will be assessed as follows:

   5.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions via the Department's AOS System at http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option and filling out the Emission Fee Estimate form. Alternatively, the report may be submitted by:

      a. Email under a cover letter using dec.aq.airreports@alaska.gov; or

      b. hard copy to the following address: ADEC Air Permits Program, ATTN: Assessable Emissions Estimate, 555 Cordova Street, Anchorage, Alaska 99501.

[2] If the stationary source has not commenced construction or operation on or before March 31st, submit a transmittal letter certified under 18 AAC 50.205 to the Department's Juneau office, in accordance with Condition 5.1, that identifies the source's assessable emissions for the previous fiscal year to be zero tons per year and provide estimates for when construction and operation will commence.

5.2 The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.

5.3 If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 4.1.

Section 3 State Emission Standards

6. **Visible Emissions for Industrial Process and Fuel-Burning Equipment.** The Permittee shall not cause or allow visible emissions (VE), excluding condensed water vapor, emitted from EUs 1 through 20 listed in Table 1, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

6.1 For EUs 11 and 12, perform an initial Method 9 observation within 60 days of initial startup up of each EU.

a. Record the date of initial startup of EUs 11 and 12.

b. Report the results of the Method 9 observations required by Condition 6.1 and the date of initial startup required by Condition 6.1a in the first operating report due after the observations were performed, as required under Condition 24.

6.2 For EUs 1 through 10 and 13, burn only fuel gas as fuel. Monitoring for these EUs shall consist of a statement in each operating report required under Condition 24 that each of these EUs fired only fuel gas as fuel. Report under Condition 23 if any fuel other than fuel gas is burned.

6.3 For EUs 14 through 20, perform an initial Method 9 observation during the initial daylight flare event.[3] If no event exceeds one hour then the Permittee shall observe the next daylight flare event.

a. Monitor the flare for visible emissions for 18 minutes during flare events using Method 9.

b. Record the following information for observed events:

(i) the flare(s) EU ID number;

(ii) results of the Method 9 observations;

(iii) reason(s) for flaring;

(iv) date, beginning and ending time of event; and

(v) volume of fuel gas and produced gas flared.

c. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 24 an explanation of the reason the event was not monitored.

d. Attach copies of the records required by Condition 6.3b in the first operating

[3] For purposes of this permit, a flare event is flaring of fuel gas and produced gas for greater than one hour as a result of scheduled release operations, i.e. maintenance. It does not include non-scheduled release operations, i.e. process upsets, emergency flaring, or de-minimis venting of gas incidental to normal operations.

report due after the observations were performed, as required under Condition 24.

6.4 Report as excess emissions and permit deviation under Condition 23 whenever the opacity standard in Condition 6 is exceeded or if any of Conditions 6.1 through 6.3 are not met.

7. **Particulate Matter for Industrial Process and Fuel-Burning Equipment.** The Permittee shall not cause or allow particulate matter emitted from EUs 1 through 20 listed in Table 1, to exceed 0.05 grains per dry standard cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

7.1 For EUs 11 and 12, obtain a certified manufacturer's guarantee that the EUs will comply with the particulate matter standard, within 60-days of startup; or

7.2 Demonstrate compliance with the PM standard by complying with Condition 6.1.

8. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EUs 1 through 20 listed in Table 1 to exceed 500 parts per million (ppm) averaged over three hours.

8.1 For EUs 1 through 10 and 13 through 20, demonstrate compliance with the SO_2 standard by complying with Condition 11.2.

8.2 For EUs 11 and 12, demonstrate compliance with the SO_2 standard by complying with Condition 11.1.

Section 4 Ambient Air Quality Protection Requirements

9. The Permittee shall construct and operate the stationary source as described below in order to protect all averaging periods of the NO_2, CO, PM-10, PM-2.5, and SO_2 AAAQS, and the NO_2, PM-10 and PM-2.5 Class II increments:

9.1 **Stack Configuration for Temporary Construction Engines.** Construct and maintain vertical, uncapped exhaust stacks for all reciprocating engines used to provide electrical power to the temporary Liquefaction Plant construction camps. This condition does not preclude the use of flapper-style rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume.

a. Include in each operating report required by Condition 24:

(i) A statement that the temporary camp engine exhaust stacks comply with Condition 9.1, or

(ii) A statement that no temporary camp engines were operated during the reporting period.

b. Report as described in Condition 23 if a requirement under Condition 9.1 was not met.

9.2 **Stack Configuration for Engines.** Construct and maintain vertical, uncapped exhaust stacks for EUs 11 and 12. This condition does not preclude the use of flapper-style rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume.

a. Include in the first operating report required by Condition 24 that would be due after the installation of an EU listed in Condition 9.2, a statement that the exhaust stack for that EU complies with Condition 9.2.

b. Report as described in Condition 23 if a requirement under Condition 9.2 was not met.

9.3 **Stack Height Requirements.** Construct and maintain the exhaust/flare stack heights, as applicable, for the EUs listed in Table 2 so that the height above the facility base elevation equals or exceeds the minimum height listed for that EU.

Table 2: Minimum Stack Height Requirements

EU	Description	Min. Height (m)
1 - 6	Treated Gas Compressor Turbines	64.0
7 – 10	Power Generation Turbines	45.7
20	Elevated Low Pressure Flares	63.4

a. Provide as-built drawings and photographs of each exhaust/flare stack listed in Table 2 in the first operating report required by Condition 24 that would be due after installation of the given EU.

b. Report as described in Condition 23 if a requirement under Condition 9.3 was not met.

10. **Fugitive Particulate Matter Control Requirements.** The Permittee shall protect the 24-hour PM-10 AAAQS, the 24-hour PM-2.5 AAAQS, and the annual PM-2.5 AAAQS while constructing the stationary source by complying with Conditions 10.1 and 10.2 below.

10.1 **Fugitive Dust Control.** During each May, June, July, August, and September, the Permittee shall limit fugitive dust emissions within the Liquefaction Plant project area by applying water/chemical suppressants to the dust emitting surfaces, or by reducing the dust-generating activity, as needed.

Monitor, record, and report as follows:

a. Except as allowed under Condition 10.1b, perform a daily inspection of the active construction areas to determine whether abatement is needed. Require abatement whenever a visible plume of dust has an estimated opacity that exceeds 20 percent at 300 feet or more from the source.

b. The daily inspections required under Condition 10.1a may be suspended on days with measurable precipitation, or on days with no dust-generating construction activities.

c. Record the location, observed activity, and fugitive dust observations of each inspection in a daily log. Record whether abatement was required, and if so, the action that was taken. Note whenever the daily inspections were suspended, as allowed under Condition 10.1b, and if so, why.

d. Record all fugitive dust complaints received by the Permittee, or by the Department and conveyed to the Permittee, utilizing the complaint form in Section 10. Record how the complaint was addressed/resolved.

e. Provide a copy of all fugitive dust complaints recorded under Condition 10.1d to the Department within 30 days of receiving the complaint.

f. Report any abatement actions performed under Condition 10.1 in the operating reports required by Condition 24.

g. Report as described in Condition 23 if a requirement under Condition 10.1 was not met.

10.2 **Ambient Air Monitoring**. The Permittee shall establish ambient PM-10 and PM-2.5 monitoring during the construction phase as follows:

a. At least 180 days prior to commencing construction, submit for Department approval a scaled site map(s) that identifies the proposed locations of one or more downwind PM-10 monitoring site and one or more downwind PM-2.5 monitoring site.[4] Site the monitoring stations in areas that would likely

[4] Provide a copy of the monitoring locations proposed under Condition 10.2a to the Permit Intake Clerk in the Department's Anchorage office at 555 Cordova Street, Anchorage, Alaska 99501.

experience the maximum construction-related 24-hour PM-10 and 24-hour PM-2.5 impacts from the Liquefaction Plant project area. Include a written narrative that documents the reasons for selecting the proposed monitoring sites.

b. Within 60 days of the Department's approval of the monitoring locations, submit for Department approval a QAPP for the PM-10/PM-2.5 monitoring effort.[5] The QAPP shall describe the procedures that the Permittee intends to use in order to:

(i) Collect continuous data using FEM continuous monitors;

(ii) Collect data that complies with 18 AAC 50.215(a);

(iii) Obtain data that meet the PSD program QA/QC requirements, including a data capture rate of 80 percent per quarter; and

(iv) Comply with Conditions 10.2c through 10.2e.

c. The Permittee shall initiate their monitoring program prior to beginning onsite construction. Once initiated, monitoring shall continue to occur year-round, throughout the Liquefaction Plant construction phase.

(i) The Permittee may temporarily suspend the monitoring program for a designated period, with written Department approval, during a long-term suspension of all fugitive dust generating construction activities.

(ii) The Permittee may permanently end the monitoring program, with written Department approval, once they have demonstrated to the Department's satisfaction that the fugitive dust generating construction activities have been completed, or upon commissioning[6] of EUs 1 through 20.

d. The Permittee shall establish a manual or automated system that continuously reviews the PM-10 and PM-2.5 monitoring data so that the following actions may be promptly taken during elevated readings:

(i) If the measured PM-10 concentration exceeds 250 µg/m^3 but remains below 500 µg/m^3 during a 1-hour averaging period, or exceeds 75 µg/m^3 but remains below 100 µg/m^3 during a 24-hour averaging period, the permittee shall:

(A) Determine what emission activities are likely causing these elevated concentrations;

[5] Provide a copy of the QAPP proposed under Condition 10.2b to the Permit Intake Clerk in the Department's Anchorage office.

[6] For the purpose of this permit, commissioning of EUs 1 through 20 includes the initial mechanical acceptance of process equipment and electric generating equipment, for a period of time not to exceed 90 days from initial startup of the first EU.

(B) Monitor the weather forecast, and actual wind speed and direction data from the Kenai Municipal Airport, in order to predict the likely need for reducing on-site PM-10 emissions; and

(C) Take the preparatory actions needed to promptly reduce on-site fugitive dust emissions, if such action is subsequently required under Condition 10.2d(ii).

(ii) If the measured PM-10 concentration exceeds 500 µg/m^3 during a 1-hour averaging period, or 100 µg/m^3 during a 24-hour averaging period, the Permittee shall take one or more of the following actions as needed to reduce the measured concentrations or to document the off-site source of the elevated concentrations:

(A) Inspect the immediate vicinity of the monitor(s) for possible causes of the elevated readings, and if warranted, take appropriate abatement action;

(B) Apply focused chemical and/or water treatment or other corrective actions in the active construction areas that are potentially contributing to the elevated PM-10 concentrations;

(C) If necessary, temporarily realign or suspend the construction activities that are likely causing or substantially contributing to these measured concentrations; and/or

(D) If the elevated concentrations appear to be due to natural events, such as wildfire, document the basis for reaching that conclusion, and note whether fugitive dust emissions are being properly controlled.

(iii) If the measured PM-2.5 concentration exceeds 60 µg/m^3 but remains below 120 µg/m^3 during a 1-hour averaging period, or exceeds 15 µg/m^3 but remains below 25 µg/m^3 during a 24-hour averaging period, the permittee shall:

(A) Determine what emission activities are likely causing these elevated concentrations;

(B) Monitor the weather forecast, and actual wind speed and direction data from the Kenai Municipal Airport, in order to predict the likely need for reducing on-site PM-2.5 emissions; and

(C) Take the preparatory actions needed to promptly reduce on-site fugitive dust emissions, if such action is subsequently required under Condition 10.2d(iii).

(iv) If the measured PM-2.5 concentration exceeds 120 µg/m^3 during a 1-hour averaging period, or 25 µg/m^3 during a 24-hour averaging period, the Permittee shall take one or more of the following actions as needed

to reduce the measured concentrations or to document the off-site source of the elevated concentrations:

(A) Inspect the immediate vicinity of the monitor(s) for possible causes of the elevated readings, and if warranted, take appropriate abatement action;

(B) Apply focused chemical and/or water treatment or other corrective actions in the active construction areas that are potentially contributing to the elevated PM-2.5 concentrations;

(C) If necessary, temporarily realign or suspend the construction activities that are likely causing or substantially contributing to these measured concentrations; and/or

(D) If the elevated concentrations appear to be due to natural events, such as wildfire, document the basis for reaching that conclusion, and note whether fugitive dust emissions are being properly controlled.

(v) Notify the Department in accordance with Condition 20 within 24-hours of any actions taken under Condition 10.2d(ii) or if any:

(A) 24-hour average PM-10 concentration exceeds 150 µg/m3,

(B) 24-hour average PM-2.5 concentration exceeds 35 µg/m3, or

(C) Annual average PM-2.5 concentration exceeds 12 µg/m3.

(vi) Report in the operating report required under Condition 24, any actions taken under Condition 10.2d(i), 10.2d(ii), 10.2d(iii), or 10.2d(iv), including mitigative measures taken.

e. Submit annual monitoring reports for Department review and approval as follows:

(i) The monitoring reports shall be submitted no later than 60 days after a block 12-month monitoring period ends;

(ii) Provide a copy of the reports specified in Condition 10.2e to the Permit Intake Clerk in the Department's Anchorage office.

f. Report as described in Condition 23 whenever a measured concentration of PM-10 or PM-2.5 exceed the values listed in Condition 10.2d(v)(A) through 10.2d(v)(C), or if a requirement under Condition 10.2 is not met.

11. **Fuel Sulfur Limits.** To protect the one-hour, three-hour, 24-hour, and annual SO_2 AAAQS; and the three-hour, 24-hour, and annual SO_2 Class II increments, the Permittee shall:

11.1 Combust only diesel fuel that meets the ULSD specifications (i.e., less than 0.0015 percent sulfur by weight) in EUs 11 and 12.

Monitor, record, and report as follows:

a. Obtain and keep certified receipts from fuel suppliers that confirms that all diesel fuel combusted in EUs 11 and 12 meets the specifications of ULSD.

b. Report in each operating report required by Condition 24, a statement indicating whether all fuel combusted in EUs 11 and 12 during the reporting period was ULSD.

c. Report as described in Condition 23 if:

(i) fuel combusted in EUs 11 and 12 exceeds the ULSD specifications; or

(ii) Conditions 11.1a or 11.1b are not met.

11.2 Limit the total sulfur content of the fuel gas fired in EUs 1 through 10 and 13 through 20 to no more than 16 ppmv.

Monitor, record, and report as follows:

a. Analyze a representative sample of the fuel burned by EUs 1 through 10 and 13 through 20, at least monthly to determine the sulfur content using either ASTM D4084, D5504, D4810, D4913, D6228 or GPA Standard 2377, or a listed method approved in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1); or

b. A current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel does not exceed the limit in Condition 11.2.

c. Keep records of the sulfur content analysis required under Condition 11.2a, or records specifying the maximum total sulfur content of the fuel required under Condition 11.2b.

d. Include copies of the records required by Condition 11.2c with the operating report required by Condition 24 for the period covered by the report.

e. Report as excess emissions in accordance with Condition 23, whenever the sulfur content of the fuel gas fired in EUs 1 through 10 and 13 through 20, exceed 16 ppmv.

12. To protect the one-hour and annual NO_2 AAAQS, the one-hour and annual SO_2 AAAQS, the annual PM-2.5 AAAQS, the annual NO_2 Class II increment, the annual SO_2 Class II increment, the annual PM-10 Class II increment, and the annual PM-2.5 Class II increment, the Permittee shall limit the operation of EUs 11 and 12 to no more than 500 hours each, in any 12 consecutive month period. Monitor, record, and report in accordance with Conditions 15.1b(i) through 15.1b(iv). Report as described in Condition 23 if any of EUs 11 or 12 exceed 500 hours in any 12 consecutive month period, or if a requirement under Condition 15.1b is not met.

Section 5 Best Available Control Technology

13. **Compressor Turbines BACT Emission Limits:** Limit the emissions from the simple cycle gas compressor turbines EUs 1 through 6 as specified in Table 3:

Table 3: Compressor Turbines (EUs 1 through 6) – BACT Limits

Pollutant	BACT Control	BACT Emission Limits
NOx	Dry Low NOx Good Combustion Practices	9 ppmvd at 15% O_2
CO	Oxidation Catalyst Good Combustion Practices	5 ppmvd at 15% O_2
PM, PM-10, and PM-2.5	Clean Fuel Good Combustion Practices	0.0070 lb/MMBtu[1]
SO_2	Clean Fuel Good Combustion Practices	Burn Gas with total Sulfur Content of ≤ 16 ppmv
VOC	Oxidation Catalyst Good Combustion Practices	0.0022 lb/MMBtu[1]
GHG	Clean Fuel Good Combustion Practices	117.1 lb/MMBtu[1]

[1.] Emission limits are based on heat input in MMBtu/hr.

13.1 For EUs 1 through 6, the Permittee shall:

a. Install, operate, and maintain dry low NOx combustors and catalytic oxidation emissions controls on EUs 1 through 6, according to the manufacturer's specifications, at all times the units are operating, except for short periods of startup, shutdown, and malfunction.

b. During periods of startup, shutdown, and malfunction operate EUs 1 through 6 according to manufacturer's specifications and good combustion practices.

c. Perform regular maintenance according to the manufacturer's or the operator's maintenance procedures.

d. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.

e. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

13.2 To show compliance with the NOx emission limit set out in Table 3, the Permittee shall:

a. Submit to the Department vendor verification that the simple cycle turbines will comply with the NOx limit in Table 3 at least 60 days before startup of any of EUs 1 through 6.

b. Conduct an initial source test in accordance with Section 8 on at least two of EUs 1 through 6,[7] within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup of the turbine, to demonstrate initial compliance with the NOx limit listed in Table 3 as follows:

(i) Conduct the source test for at least three loads representative of the normal operating range of the EU. One load must be within plus or minus 25 percent of 100 percent of peak load. The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice.

(ii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the catalytic oxidation control system.

(iii) Each source test shall consist of at least three 20-minute or longer valid test runs at each load. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of lb/MMBtu as well as the appropriate units for the corresponding pollutant listed in Table 3.

(iv) During each test run, measure the inlet air temperature and pressure drop across the oxidation catalyst.

(v) The Permittee shall report the results of the source test to the Department in accordance with Condition 39.

13.3 To show compliance with the CO and VOC emission limits set out in Table 3, the Permittee shall:

a. Submit to the Department vendor verification that the catalytic oxidation control system will comply with the CO and VOC limits established in Table 3 at least 60 days before startup of any of EUs 1 through 6.

b. Conduct an initial source test in accordance with Section 8 on two of EUs 1 through 6, within 180 days from the first of EUs 1 through 6 beginning operation, to demonstrate initial compliance with the CO and VOC limits listed in Table 3 as follows:

(i) Conduct the source test for at least three loads representative of the normal operating range of the EU.

(ii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the catalytic oxidation control system.

(iii) Each source test shall consist of at least three 20-minute or longer valid test runs at each load. Emission results shall be reported as the arithmetic

[7] 40 C.F.R. 60 Subpart KKKK requires initial and annual performance testing on each turbine subject to the new source performance standards of Subpart KKKK unless a waiver is granted by EPA.

average of all valid test runs and shall be in terms of lb/MMBtu as well as the appropriate units for the corresponding pollutant listed in Table 3.

(iv) During each test run, measure the inlet air temperature and pressure drop across the oxidation catalyst.

(v) The Permittee shall report the results of the source test to the Department in accordance with Condition 39.

c. Monitor the oxidation catalyst operating parameters as follows:

(i) Install temperature sensing devices to monitor the inlet air temperature of each installed oxidation catalyst.

(A) Monitor exhaust temperature at the inlet to each oxidation catalyst unit at least once per hour during all periods of operation. Record for each calendar day the minimum and maximum inlet gas temperature of each oxidation catalyst unit. Data capture and recording may be electronic.

(B) Report the minimum and maximum daily inlet gas temperature of each oxidation catalyst unit for each calendar month in the operating report required by Condition 24.

(ii) Install gauges before and after the oxidation catalyst controls to monitor the pressure drop across each installed oxidation catalyst unit.

(A) Maintain the oxidation catalyst such that the pressure drop across each oxidation unit is within the acceptable range identified in the manufacturer's specifications, or within the range determined by the most recent source tests under Conditions 13.2b(iv), 13.3b(iv), and 13.4b(iv).

(B) If the pressure drop exceeds the acceptable differential identified in the manufacturer's specifications, the oxidation catalyst unit shall be inspected, cleaned, or replaced, as necessary.

13.4 To show compliance with the PM, PM-10, and PM-2.5 emission limits set out in Table 3, the Permittee shall:

a. Submit to the Department, a certified manufacturer's guarantee demonstrating that EUs 1 through 6 will comply with the emission limits in Table 3 at least 60 days before startup of any of EUs 1 through 6; or

b. Conduct an initial source test in accordance with Section 8, on two of EUs 1 through 6 within 180 days from the first of EUs 1 through 6 beginning operation to demonstrate initial compliance with the PM, PM-10, and PM-2.5 limits listed in Table 3 as follows:

(i) Conduct the source test for at least three loads representative of the normal operating range of the EU.

(ii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the catalytic oxidation control system.

(iii) Each source test shall consist of at least three 20-minute or longer valid test runs at each load. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of lb/MMBtu.

(iv) During each test run, measure the inlet air temperature and pressure drop across the oxidation catalyst.

(v) The Permittee shall report the results of the source test to the Department in accordance with Condition 39.

13.5 To show compliance with the SO_2 emission limit set out in Table 3, the Permittee shall:

a. Monitor, record, and report in accordance with Condition 11.2.

b. Maintain good combustion practices at all times the units are in operation.

13.6 To show compliance with the GHG emission limit set out in Table 3, the Permittee shall:

a. Perform regular maintenance according to the manufacturer's or the operator's maintenance procedures;

b. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and

c. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

13.7 Report as described in Condition 23 if:

a. any of the emission rates determined by the source tests required by Conditions 13.2 through 13.4 exceed the limits in Table 3;

b. the inlet gas temperature of an oxidation catalyst unit is outside the acceptable range identified in the manufacturer's specifications, or outside the range determined by the most recent source tests under Conditions 13.2b(iv), 13.3b(iv), and 13.4b(iv);

c. the pressure drop across an oxidation catalyst unit is outside the acceptable range identified in the manufacturer's specifications, or outside the range determined by the most recent source tests under Conditions 13.2b(iv), 13.3b(iv), and 13.4b(iv); or

d. Conditions 13.1 through 13.6 are not met.

14. **Power Generation Turbines BACT Emission Limits:** Limit the emissions from the combined cycle power generation turbines EUs 7 through 10 as specified in Table 4:

Table 4: Power Generation Turbines (EUs 7 through 10) – BACT Limits

Pollutant	BACT Control	BACT Emission Limits
NOx	Dry Low NOx Good Combustion Practices	9 ppmvd at 15% O_2
CO	Oxidation Catalyst Good Combustion Practices	5 ppmvd at 15% O_2
PM, PM-10, and PM-2.5	Clean Fuel Good Combustion Practices	0.0070 lb/MMBtu[1]
SO_2	Clean Fuel Good Combustion Practices	Burn Gas with total Sulfur Content of ≤ 16 ppmv
VOC	Clean Fuel Good Combustion Practices	0.0022 lb/MMBtu[1]
GHG	Clean Fuel Good Combustion Practices	117.1 lb/MMBtu[1]

[1.] Emission limits are based on heat input in MMBtu/hr.

14.1 For EUs 7 through 10, the Permittee shall:

a. Install, operate, and maintain dry low NOx combustors and catalytic oxidation emissions controls on EUs 7 through 10, according to the manufacturer's specifications, at all times the units are operating, except for short periods of startup, shutdown, and malfunction.

b. During periods of startup, shutdown, and malfunction operate EUs 7 through 10 according to manufacturer's specifications and good combustion practices.

c. Perform regular maintenance according to the manufacturer's or the operator's maintenance procedures.

d. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format.

e. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

14.2 To show compliance with the NOx emission limit set out in Table 4, the Permittee shall:

a. Submit to the Department vendor verification that the combined cycle turbines will comply with the NOx limit in Table 4 at least 60 days before startup of any of EUs 7 through 10.

b. Conduct an initial source test in accordance with Section 8 on at least two of EUs 7 through 10,[7] within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup of the turbine, to demonstrate initial compliance with the NOx limit listed in Table 4 as follows:

(i) Conduct the source test for at least three loads representative of the normal operating range of the EU. One load must be within plus or minus 25 percent of 100 percent of peak load. The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice.

(ii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the catalytic oxidation control system.

(iii) Each source test shall consist of at least three 20-minute or longer valid test runs at each load. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of lb/MMBtu as well as the appropriate units for the corresponding pollutant listed in Table 4.

(iv) During each test run, measure the inlet air temperature and pressure drop across the oxidation catalyst.

(v) The Permittee shall report the results of the source test to the Department in accordance with Condition 39.

14.3 To show compliance with the CO and VOC emission limits set out in Table 4, the Permittee shall:

a. Submit to the Department vendor verification that the catalytic oxidation control system will comply with the CO and VOC limits established in Table 4 at least 60 days before startup of any of EUs 7 through 10.

b. Conduct an initial source test in accordance with Section 8 on two of EUs 7 through 10, within 180 days from the first of EUs 7 through 10 beginning operation, to demonstrate initial compliance with the CO and VOC limits listed in Table 4 as follows:

(i) Conduct the source test for at least three loads representative of the normal operating range of the EU.

(ii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the catalytic oxidation control system.

(iii) Each source test shall consist of at least three 20-minute or longer valid test runs at each load. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of lb/MMBtu as well as the appropriate units for the corresponding pollutant listed in Table 4.

(iv) During each test run, measure the inlet air temperature and pressure drop across the oxidation catalyst.

(v) The Permittee shall report the results of the source test to the Department in accordance with Condition 39.

c. Monitor the oxidation catalyst operating parameters as follows:

(i) Install temperature sensing devices to monitor the inlet air temperature of each installed oxidation catalyst.

(A) Monitor exhaust temperature at the inlet to each oxidation catalyst unit at least once per hour during all periods of operation. Record for each calendar day the minimum and maximum inlet gas temperature of each oxidation catalyst unit. Data capture and recording may be electronic.

(B) Report the minimum and maximum daily inlet gas temperature of each oxidation catalyst unit for each calendar month in the operating report required by Condition 24.

(ii) Install gauges before and after the oxidation catalyst controls to monitor the pressure drop across each installed oxidation catalyst unit.

(A) Maintain the oxidation catalyst such that the pressure drop across each oxidation unit is within the acceptable range identified in the manufacturer's specifications, or within the range determined by the most recent source tests under Conditions 14.2b(iv), 14.3b(iv), and 14.4b(iv).

(B) If the pressure drop exceeds the acceptable differential identified in the manufacturer's specifications, the oxidation catalyst unit shall be inspected, cleaned, or replaced, as necessary.

14.4 To show compliance with the PM, PM-10, and PM-2.5 emission limits set out in Table 4, the Permittee shall:

a. Submit to the Department, a certified manufacturer's guarantee demonstrating that EUs 7 through 10 will comply with the emission limits in Table 4 at least 60 days before startup of any of EUs 7 through 10; or

b. Conduct an initial source test in accordance with Section 8, on two of EUs 7 through 10 within 180 days from the first of EUs 7 through 10 beginning operation to demonstrate initial compliance with the PM, PM-10, and PM-2.5 limits listed in Table 4 as follows:

(i) Conduct the source test for at least three loads representative of the normal operating range of the EU.

(ii) Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the catalytic oxidation control system.

(iii) Each source test shall consist of at least three 20-minute or longer valid test runs at each load. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of lb/MMBtu heat input.

(iv) During each test run, measure the inlet air temperature and pressure drop across the oxidation catalyst.

(v) The Permittee shall report the results of the source test to the Department in accordance with Condition 39.

14.5 To show compliance with the SO_2 emission limit set out in Table 4, the Permittee shall:

a. Monitor, record, and report in accordance with Condition 11.2.

b. Maintain good combustion practices at all times the units are in operation.

14.6 To show compliance with the GHG emission limit set out in Table 4, the Permittee shall:

a. Perform regular maintenance according to the manufacturer's or the operator's maintenance procedures;

b. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and

c. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

14.7 Report as described in Condition 23 if:

a. any of the emission rates determined by the source tests required by Conditions 14.2 through 14.4 exceed the limits in Table 4;

b. the inlet gas temperature of an oxidation catalyst unit is outside the acceptable range identified in the manufacturer's specifications, or outside the range determined by the most recent source tests under Conditions 14.2b(iv), 14.3b(iv), and 14.4b(iv).;

c. the pressure drop across an oxidation catalyst unit is outside the acceptable range identified in the manufacturer's specifications, or outside the range determined by the most recent source tests under Conditions 14.2b(iv), 14.3b(iv), and 14.4b(iv).; or

d. Conditions 14.1 through 14.6 are not met.

15. **Limited Use Diesel-Fired Engines BACT Emission Limits:** Limit the emissions from the limited use diesel-fired engines EUs 11 and 12 as specified in Table 5:

Table 5: Diesel-Fired Engines (EUs 11 and 12) – BACT Limits

Pollutant	EU	BACT Control	BACT Emission Limits	
NOx	11	Good Combustion Practices	3.6 g/hp-hr	500 hours each in any 12 consecutive month period
	12		0.45 g/hp-hr	
CO	11	Good Combustion Practices	3.3 g/hp-hr	
	12		3.3 g/hp-hr	
PM, PM-10, and PM-2.5	11	Good Combustion Practices & ULSD	0.19 g/hp-hr	
	12		0.022 g/hp-hr	

Pollutant	EU	BACT Control	BACT Emission Limits	
SO_2	11 – 12	Good Combustion Practices & ULSD	Diesel sulfur content of ≤ 15 ppmw (ULSD)	
VOC	11	Good Combustion Practices	0.19 g/hp-hr	
	12		0.22 g/hp-hr	
GHG	11 – 12	Good Combustion Practices	163.6 lb/MMBtu	

15.1 To show compliance with the emission limits for EUs 11 and 12 in Table 5, the Permittee shall:

a. At all times operate the EUs according to manufacturer's specifications and good combustion practices;

b. Limit the operation of each of EUs 11 and 12 to no more than 500 hours in any 12 consecutive month period. Monitor, record, and report as follows:

(i) Install, operate, and maintain an hour meter on each EU;

(ii) Record the hour meter reading for each EU on the last day of each month;

(iii) By the 15th day of each month, calculate and record:

(A) the number of hours that each EU operated during the previous month, if the meter is not operational assume continuous operation for that period; and

(B) the total number of hours each EU operated during the previous 12 consecutive months;

(iv) Report in each operating report required by Condition 24 the following information for each month of the reporting period:

(A) the hour meter reading obtained under Condition 15.1b(ii) for each EU; and

(B) the values determined under Condition 15.1b(iii) for each EU; and

c. Verify initial compliance with the NOx + VOC, CO, PM, PM-10, and PM-2.5 emission limits for EUs 11 and 12, established in Table 5 by either:

(i) Obtaining a certified manufacturer's guarantee that each diesel engine will comply with the NOx + VOC, CO, PM, PM-10, and PM-2.5 emission limits established in Table 5. Submit the emissions data to the Department in the first operating report required by Condition 24 after each of EUs 11 and 12 become fully operational; or

(ii) Conducting an initial source test in accordance with Section 8, for NOx + VOC, CO, PM, PM-10, and PM-2.5 within 180 days of each of EUs 11 and 12 beginning operation.

d. Verify compliance with the SO_2 emission limit listed in Table 5 by complying with Condition 11.1;

e. Perform regular maintenance following the manufacturer's or the operator's maintenance procedures;

f. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and

g. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

15.2 Report as described in Condition 23 if:

a. any of EUs 11 and 12 exceed 500 hours per 12 consecutive month period;

b. any of the emission rates determined by the source tests required by Conditions 15.1c(ii) exceed the limits in Table 5; or

c. any of Conditions 15.1a through 15.1g are not met.

16. **Vent Gas Disposal (Thermal Oxidizer) BACT Emission Limits:** Limit the emissions from thermal oxidizer EU 13 as specified in Table 6:

Table 6: EU 13 – BACT Limits

Pollutant	BACT Control	BACT Emission Limits
NOx	Low NOx Burners, Proper Equipment Design, & Good Combustion Practices	0.055 lb/MMBtu
CO	Proper Equipment Design Good Combustion Practices	0.082 lb/MMBtu
PM, PM-10, and PM-2.5	Proper Equipment Design Good Combustion Practices	0.0075 lb/MMBtu
SO_2	Proper Equipment Design Good Combustion Practices	Burn Gas with total Sulfur Content of ≤ 16 ppmv
VOC	Proper Equipment Design Good Combustion Practices	0.0054 lb/MMBtu
GHG	Proper Equipment Design Good Combustion Practices	117.1 lb/MMBtu

16.1 To show compliance with the emission limits for EU 13 in Table 6, the Permittee shall:

a. Install, operate, and maintain low NOx burners according to the manufacturer's specifications, at all times the unit is operating;

b. During periods of startup, shutdown, and malfunction operate EU 13 according to manufacturer's specifications and good combustion practices;

c. Verify initial compliance with the NOx, CO, VOC, PM, PM-10, and PM-2.5 emission limits established in Table 6 as follows:

(i) Obtain a certified manufacturer's guarantee that the thermal oxidizer will comply with the emission limits established in Table 6. Submit the emissions data to the Department in the first operating report required by Condition 24 after EU 13 commences operation; or

(ii) Conduct a source test in accordance with Section 8 for NOx, CO, VOC, PM, PM-10, and PM-2.5 within 180 days of startup of EU 13.

d. To show compliance with the SO_2 emission limit set out in Table 6, the Permittee shall comply with Condition 11.2. Report as described in Condition 23 whenever the sulfur content of the fuel gas fired in EU 13 exceeds 16 ppmv.

e. Perform regular maintenance according to the manufacturer's or the operator's maintenance procedures;

f. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and

g. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

17. **Vent Gas Disposal (Flares) BACT Emission Limits:** Limit the emissions from flares EUs 14 through 19 as specified in Table 7 and from EU 20 as specified in Table 8

Table 7: EUs 14 through 19 – BACT Limits

Pollutant	EU	BACT Control	BACT Emission Limits	
NOx	14 – 19	Proper flare work practice requirements and establishing a flaring minimization plan	0.068 lb/MMBtu	500 hours per 12-month rolling period per unit of flaring during startup, shutdown, and maintenance events[8]
CO			0.31 lb/MMBtu	
PM, PM-10, and PM-2.5			40 µg/L (0.028 lb/MMBtu)	
SO_2			Burn Gas with total Sulfur Content of ≤ 16 ppmv	
VOC			0.66 lb/MMBtu	
GHG			117.1 lb/MMBtu	

[8] This 500 hour flaring limit does not include pilot and purge, emergency, or process upset flaring.

Table 8: EU 20 – BACT Limits

Pollutant	EU	BACT Control	BACT Emission Limits	
NOx	20	Proper flare work practice requirements and establishing a flaring minimization plan	0.068 lb/MMBtu	144 hours per 12-month rolling period of flaring during startup, shutdown, and maintenance events[9]
CO			0.31 lb/MMBtu	
PM, PM-10, and PM-2.5			40 µg/L (0.028 lb/MMBtu)	
SO_2			Burn Gas with total Sulfur Content of ≤ 16 ppmv	
VOC			0.66 lb/MMBtu	
GHG			117.1 lb/MMBtu	

17.1 To show compliance with the work practice and flaring minimization BACT limits for EUs 14 through 20 indicated in Table 7 and Table 8, the Permittee shall comply with the following flare minimization practices to reduce emissions during startups, shutdowns, and maintenance events:

a. Flare Minimization Plan: Prior to operation of the flare EUs, the Permittee shall develop and keep on-site a flare minimization plan; and

b. The Permittee shall train all operators responsible for the day-to-day operation of the flares on the flare minimization practices and the specific procedures to follow during process startup, shutdown, and other flaring events.

c. Flares shall be designed and operated during startups, shutdowns, and other maintenance events, in accordance with the general control device and work practice requirements specified in 40 C.F.R. 60.18(c) through (f).

17.2 Limit the number of hours EUs 14 through 19 flare to no more than 500 hours each, and EU 20 flares to no more than 144 hours, during startup, shutdown, and maintenance events, in any 12 consecutive months.[8,9]

Monitor, record, and report as follows:

a. Calculate and record monthly, the number of hours EUs 14 through 20 flared during startups, shutdowns, and other maintenance events for the previous month;

b. Calculate and record monthly, the number of hours EUs 14 through 20 flared during startups, shutdowns, and other maintenance events for the previous 12 consecutive months;

[9] This 144 hour flaring limit does not include pilot and purge, emergency, or process upset flaring.

c. Report in the operating report required in Condition 24, for each month covered in the report, the total hours that each of EUs 14 through 20 flared for the previous 12 consecutive months; and

d. Report as described in Condition 23 whenever the flaring hours calculated under Condition 17.2b exceed the limits in Condition 17.2.

17.3 To show compliance with the SO_2 emission limit set out in Table 7 and Table 8, the Permittee shall comply with Condition 11.2. Report as described in Condition 23 whenever the sulfur content of the fuel gas fired in EUs 14 through 20 exceeds 16 ppmv.

18. **Fuel Tanks BACT Emission Limits:** Limit the emissions from fuel tanks EUs 21 through 26 as specified in Table 9:

Table 9: EUs 21 through 61 – BACT Limits

Pollutant	EU	BACT Control	BACT Emission Limit
VOC	21 – 23	Capture and Recovery through Vapor Balance System and Route to Thermal Oxidizer	N/A
	24 – 26	Submerged Fill	0.01 tpy

18.1 To show compliance with the VOC emission limit for gas condensate storage tanks EUs 21 and 22 and gas condensate loading system EU 23 set out in Table 9, the Permittee shall install, operate, and maintain capture and recovery through a vapor balance system and combustion of vapors in a thermal oxidizer (EU 13), at all times the units are operating.

18.2 To show compliance with the VOC emission limit for diesel fuel tanks EUs 24 through 26 set out in Table 9, the Permittee shall install, operate, and maintain tanks with submerged fill design.

18.3 Compliance with the VOC limit in Table 9 shall be demonstrated by supplying the Department with as built schematics and photographs of the capture and recovery vapor balance system, demonstrating compliance with Condition 18.1 in the first operating report required under Condition 24 after installation of the tanks and control system.

Section 6 Recordkeeping, Reporting, and Certification Requirements

19. **Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification 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 emissions 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.

    19.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if

        a. A certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and

        b. The person providing the electronic signature has made an agreement with the certifying authority described in Condition 19.1a that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

20. **Submittals.** The Permittee shall submit reports, compliance certifications, and/or other submittals required by this permit, via the Department's website (AOS System at http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option).

    20.1 Upon approval by the Department, the Permittee can submit reports by alternative methods, certified in accordance with Condition 19, and submitted by email under a cover letter using dec.aq.airreports@alaska.gov; or by letter, or form if the Permittee does not have the technical ability to submit the records using the Department's website.

21. **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, 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.

22. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five-years after the date of collection, including:

    22.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

    22.2 records of all monitoring required by this permit, and information about the monitoring including (if applicable):

        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.

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

23.1 Except as provided in Condition 25 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 caused emissions in excess of a technology based emissions standard;

c. report all other excess emissions and permit deviations

(i) within 30 days after the end of the month during which the emissions or deviation occurred, except as provided in Condition 23.1c(iii); or

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 23.1c(i); and

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

23.2 When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's on-line form, which can be found at http://dec.alaska.gov/applications/air/airtoolsweb, or if the Permittee prefers, the form contained in Attachment 2 of this permit. The Permittee must provide all information called for by the form that is used.

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

24. **Operating Reports.** Submit to the Department an operating report by August 1 for the period January 1 through June 30 of the current year and by February 1 for the period July

1 through December 31 of the previous year. The report shall be submitted under a cover letter certified in accordance with Condition 19.

24.1 The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report.

24.2 When excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 24.1, the Permittee shall identify

a. the date of the deviation;

b. the equipment involved;

c. the permit condition affected;

d. a description of the excess emissions or permit deviation; and

e. any corrective action or preventative measures taken and the date of such actions; or

24.3 When excess emissions or permit deviations have already been reported under Condition 23 the Permittee shall cite the date or dates of those reports.

25. **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.

25.1 If emissions present a potential threat to health or safety, the Permittee shall report any such emissions according to Condition 23.

25.2 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 25.

25.3 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 investigation because of complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 25; or

b. the Department notifies the Permittee that it has found a violation of Condition 25.

25.4 The Permittee shall keep records of

a. the date and 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 25; and

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

25.5 Report in each operating report required by Condition 24 a brief summary report for complaints 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.

25.6 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.

26. **Emission Inventory Reporting.** The Permittee shall submit to the Department reports of actual emissions,[10] by emissions unit, of CO, NH_3, NOx, PM_{10}, $PM_{2.5}$, SO_2, VOCs and Lead (Pb) (and lead compounds) using the form in Attachment 3 of this permit, as follows:

26.1 Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:

a. 250 TPY of NH_3, PM_{10}, $PM_{2.5}$, or VOCs; or

b. 2,500 TPY of CO, NOx, or SO_2.

26.2 Every third year by April 30, if the stationary source's potential to emit for the previous calendar year (except actual emissions for Pb) equals or exceeds:

a. 0.5 TPY of actual Pb, or

b. 1,000 TPY of CO; or

c. 100 TPY of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NOx, or VOCs.

26.3 For reporting under Condition 26.2, the Permittee shall report in 2021 for calendar year 2020, 2024 for calendar year 2023, etc., in accordance with the Environmental Protection Agency schedule.

26.4 Include in the report required by this condition, the required data elements contained within the form in Attachment 3 or those contained in Tables 2a and 2b of Appendix

[10] If the stationary source has not commenced construction or operation by the end of the calendar year, submit a transmittal letter to the Department's Anchorage office certified in accordance with Condition 20, which identifies the source's emissions inventory for the previous fiscal year to be zero tons per year and provide estimates for when construction and operation will commence.

A to Subpart A of 40 C.F.R. 51 and Emission Inventory Instructions available in Air Online Services (AOS) system for each emissions unit.

a. Submit the report through electronic online submission via the Department's AOS system at http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option.

b. If the AOS system is not available, the report may be submitted by

(i) email using dec.aq.airreports@alaska.gov; or

(ii) hard copy to the following address: ADEC Air Permits Program, ATTN: Emissions Inventory, 555 Cordova Street, Anchorage, Alaska 99501.

Section 7 Standard Permit Conditions

27. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

    27.1 an enforcement action; or

    27.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.

28. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

29. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

30. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

31. The permit does not convey any property rights of any sort, nor any exclusive privilege.

32. 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

    32.1 enter upon the premises where an emissions unit subject to this permit is located or where records required by the permit are kept;

    32.2 have access to and copy any records required by this permit;

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

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

Section 8 General Source Test Requirements

33. **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.

34. **Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

    34.1 at a point or points that characterize the actual discharge into the ambient air; and

    34.2 at the maximum rated burning or operating capacity of the emissions unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

35. **Reference Test Methods.** The Permittee shall use the following references for test methods when conducting source testing for compliance with this permit:

    35.1 Conduct source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) in accordance with the methods and procedures specified in 40 CFR 60.

    35.2 Conduct source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) in accordance with the methods and procedures specified in 40 CFR 61.

    35.3 Conduct source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) in accordance with the methods and procedures specified in 40 CFR 63.

    35.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in 40 C.F.R. 60, Appendix A, Reference Method 9. The Permittee may use the form in Attachment 1 of this permit to record data.

    35.5 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

    35.6 Source testing for emissions of PM-10 and PM-2.5 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

    35.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

36. **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.

37. **Test Plans.** 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 emissions 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 33 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.

38. **Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and time the source test will begin.

39. **Test Reports.** Within 60 days after completing a source test, the Permittee shall submit one certified copy 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 19. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

Section 9 Permit Documentation

Date	Document Details
May 1, 2018	Construction Permit application received.
June 29, 2018	Department sends incompleteness letter to Permittee
September 24, 2018	Department receives additional application information
October 17, 2019	Department receives ambient monitoring data
January 14, 2020	Department receives additional application information
April 28, 2020	Deparment sends information request to Permittee
May 5, 2020	Department receives information request response from Permittee
June 18, 2020	Deparment sends information request to Permittee
July 1, 2020	Department receives information request response from Permittee

Section 10 Complaint Form

COMPLAINT FORM

Date Time:

Activities Involved:

Provide a description of reported complaint. Attach sheets as necessary.

If applicable, operational conditions which contributed to the complaint:

If applicable, ambient conditions which contributed to the complaint:

If applicable, describe measures taken to immediately address the complaint.

If applicable, describe measures taken to address preventing the condition which generated the complaint.

If applicable, describe any reason that you feel the complaint may not be a violation:

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	Signature	Date

Attachment 1 – Visible Emissions Form

VISIBLE EMISSION OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources." Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under additional information. Following are brief descriptions of the type of information that needs to be entered on the form: for a more detailed discussion of each part of the form, refer to "Instructions for Use of Visible Emission Observation Form."

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where VE observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clineometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check "yes" if visible water vapor is present.
- If Present, is Plume…: check "attached" if water droplet plume forms prior to exiting stack, and "detached" if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.

  Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.
- Observer's Signature, Date: sign and date after performing VE observation.
- Organization: observer's employer.
- Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY DIVISION - VISIBLE EMISSIONS OBSERVATION FORM

Page No._____

Source Name	Type of Source			Observation Date			Start Time		End Time
				Sec / Min	0	15	30	45	Comments
Address				1					
City	State	Zip		2					
Phone # (Key Contact)	Source ID Number			3					
Process Equipment	Operating Mode			4					
Control Equipment	Operating Mode			5					
Describe Emission Point				6					
Height above ground level	Height relative to observer	Inclinometer Reading		7					
Distance From Observer	Direction From Observer Start	End		8					
Describe Emissions & Color Start	End			9					
Visible Water Vapor Present? If yes, determine approximate distance from the									
No Yes stack exit to where the plume was read				10					
Point in Plume at Which Opacity Was Determined				11					
Describe Plume Background	Background Color			12					
Start	Start								
End	End			13					
Sky Conditions: Start				14					
Wind Speed	Wind Direction From Start	End		15					
Ambient Temperature	Wet Bulb Temp	RH percent		16					
NOTES: 1 Stack or Point Being Read	2 Wind Direction From			17					
3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks				18					
				19					
				20					
				21					
				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				Range of Opacity					
				Minimum			Maximum		
I have received a copy of these opacity observations				Print Observer's Name					
Print Name:				Observer's Signature			Date		
Signature:									
Title	Date			Organization					
				Certified By:			Date		

Attachment 2 - ADEC Notification Form

Excess Emissions and Permit Deviation Reporting
State of Alaska Department of Environmental Conservation
Division of Air Quality

Liquefaction Plant	AQ1539CPT01
Stationary Source Name	**Air Quality Permit**
Alaska Gasline Development Corporation	
Company Name	**Date**

When did you discover the Excess Emissions/Permit Deviation?

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

When did the event/deviation?

Begin Date: _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

End Date _____ / _____ / _____ Time: _____ : _____ (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

☐ Deviation from permit conditions complete Section 2 and certify

☐ Deviation 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 Adjustments

☐ 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) **Emission unit(s) Involved:**

Identify the emission 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	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 ☐ Record Keeping Failure
☐ Marine Vessel Opacity ☐ Failure to monitor/report ☐ Flaring
☐ 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 only one box corresponding with the section in the permit)

☐ Emission Unit Specific
☐ 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
☐ Stationary Source-Wide
☐ Other Section: (title of section and section # of your permit)

(b) **Emission unit(s) Involved:**

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

EU ID	Emission 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: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To submit this report:

1. Department's Air Online Services using the Permittee Portal option:
   http://dec.alaska.gov/applications/air/airtoolsweb
   If submitted online, report must be submitted by an authorized E-Signer for the stationary source.

Or

2. Fax to: 907-451-2187

Or

3. Email to: DEC.AQ.Airreports@alaska.gov

Or

4. Mail to: ADEC
   Air Permits Program
   610 University Avenue
   Fairbanks, AK 99709-3643

Or

5. Phone Notifications: 907-451-5173
   Phone notifications require a written follow-up report.

Attachment 3 - Emission Inventory Form

ADEC Reporting Form **Emission Inventory Reporting** **State of Alaska Department of Environmental Conservation** **Division of Air Quality**	**Emission Inventory Year- [ ]**
Mandatory information is highlighted in bright yellow. Make additional copies as needed.	
Stationary Source Detail	
Inventory start date	
Inventory end date	
ADEC ID or Permit Number	
EPA ID:	
Census Area/ Community	
Facility Name	
Facility Physical Location	**Address:**
	City, State, Zip Code:
	Latitude: / **Longitude:**
	Legal Description:
Owner Name & Address & contact number	**Owner Name:**
	Owner Address:
	Phone Number:
Mailing Contact Information	**Mailing Address:**
Line of Business (NAICS)	
Line of Business (SIC)	
Facility Status:	

Emissions Unit Data			
Specifications			
ID		**Design Capacity**	
Description			
Emissions Unit Status			
Manufacturer		**Manufactured Year**	
Model Number		**Serial Number**	
Regulations			
Regulation/Description:			
Control Equipment (List All if applicable):			
ID			
System Description	-		
Equipment Type(s)			
Manufacturer			
Model			
Control Efficiency (%)			
Capture Efficiency (%)			
Pollutants Controlled		**Reduction Efficiency (%):**	
		Reduction Efficiency (%):	

Processes	
Process	**Primary Process**
SCC Code	(ex. 20100201)
	>
	>
	>
	>
Material Processed	
Period Start	
Period End	
Throughput (units)	
Summer %	
Fall %	
Winter %	
Spring %	
Operational Schedule	
Days/Week	
Hours/Day	
Weeks/Year	
Hours/Year	

Fuel Characteristics			
Heat Content	Elem. Sulfur Content (%)	H2S Sulfur Content	Ash Content (if applicable)
Heating			
Heat Input	Heat Output	Heat Values Convention	

Emissions Operating Type:					
Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	EF Origin	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM_{10} Primary (PM_{10}-PRI)					
$PM_{2.5}$ Primary (PM_{25}-PRI)					
Sulfur Dioxide (SO_2)					
Ammonia (NH_3)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					
Emissions' Release Point					
Release Point ID					
Apportion%					

Process	Secondary Process
SCC Code	(ex. 20100201)
	>
	>
	>
	>
Material Processed	
Period Start	
Period End	
Throughput (units)	
Summer %	
Fall %	
Winter %	
Spring %	
Operational Schedule	
Days/Week	
Hours/Day	
Weeks/Year	
Hours/Year	

Fuel Characteristics			
Heat Content	Elem. Sulfur Content (%)	H2S Sulfur Content	Ash Content (if applicable)

Heating		
Heat Input	Heat Output	Heat Values Convention

Emissions Operating Type:					
Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	EF Origin	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM_{10} Primary (PM_{10}-PRI)					
$PM_{2.5}$ Primary (PM_{25}-PRI)					
Sulfur Dioxide (SO_2)					
Ammonia (NH_3)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					
Emissions' Release Point					
Release Point ID					
Apportion%					

Stack Detail (Release Point)	
> Specifications	
ID	
Type	
Description	
Stack Status	
> Stack Parameters	
Stack Height (ft)	
Stack Diameter (ft)	
Exit Gas Temp (F)	
Exit Gas Velocity (fps)	
Exit Gas Flow Rate	
> Geographic Coordinate	
Latitude	
Longitude	

Datum	
Accuracy (meters)	
Base Elevation (meters)	

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_____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To submit this report:

1. Department's Air Online Services using the Permittee Portal option:
   http://dec.alaska.gov/applications/air/airtoolsweb
   Or
2. Fax to: 907-269-7508
   Or
3. Email to: DEC.AQ.Airreports@alaska.gov
   Or
4. Mail to: ADEC Division of Air Quality
   ATTN: Emissions Inventory
   555 Cordova Street
   Anchorage, AK 99501