**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**AIR QUALITY CONTROL CONSTRUCTION PERMIT**

**Permit AQ0083CPT07 Preliminary Date – Month XX, 2020**

**Rescinds Permit AQ0083CPT06**The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Construction Permit AQ0083CPT07 to the Permittee listed below.

**Operator and Permittee:**  Agrium, U.S. Inc.  
 P.O. Box 575  
 Kenai, Alaska 99611

**Owner:** Agrium U.S. Inc.

**Stationary Source:** Kenai Nitrogen Operations

**Location:** Latitude: 60.6750° North; Longitude: 151.3806° West

**Physical Address:** Mile 21 Kenai Spur Highway  
 Kenai, Alaska 99611

**Permit Contact:** Ted Hartman (913) 302-7469  
 [ted.hartman@nutrien.com](mailto:ted.hartman@nutrien.com)

**Project:** Establish Kenai Nitrogen Operations Facility

The project 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), total particulate matter (PM), particulate matter with an aerodynamic diameter not exceeding 10 microns (PM-10), particulate matter with an aerodynamic diameter not exceeding 2.5 microns (PM-2.5), volatile organic compounds (VOCs), and greenhouse gases (GHGs). As required by AS 46.14.120(c) the Permittee shall comply with the terms and conditions of this permit.

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.

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James R. Plosay, Manager

Air Permits Program

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1. Emission Unit Inventory

**Emission 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 – Stationary Source Emission Units**

|  | **EU ID** | **Tag Number** | **Source Description** | **Fuel Type** | **Rating/size** | **Install Date** |
| --- | --- | --- | --- | --- | --- | --- |
| **Ammonia Plant #4** | 11 | B-609 | Ammonia Tank System Flare |  | 1.25 MMBtu/hr | 1995 |
| 12 | B-201 | Primary Reformer | Fuel Gas & NG | 1350 MMBtu/hr | 1976 |
| 13 | B-200 | Startup Heater | NG | 101 MMBtu/hr | 1976 |
| 14 | D-207 | CO2 Vent | N/A | 90 tons/hr (NH3) | 1976 |
| 15 | H-205 | Organic Sulfur Removal Unit Vent | N/A | N/A | 1976 |
| 16 | H-269 | Amine Fat Flasher Vent | N/A | N/A | 1976 |
| 17 | F-263 | PC Stripper Surge Tank Vent | N/A | N/A | 1976 |
| 19 | C-200 | H2 Vent Stack (dry gas vent) | N/A | N/A | 1976 |
| 20 | H-260 | PC Stripper Steam KO Drum | N/A | N/A | 1976 |
| 21 | F-287 | Ammonia Drain Tank Vent | N/A | N/A | 1976 |
| 22 | B-502 | Plants 4 and 5 Small Flare Pilot | NG& NH3 | 1.25 MMBtu/hr | 1995 |
|  |  | Plants 4 and 5 Small Flare Flaring Event |  | 1,200 lb/hr NH3 |  |
| 23 | B-501 | Plants 4 and 5 Emergency Flare Pilot | NG& NH3 | 0.4 MMBtu/hr | 1995 |
|  |  | Plants 4 and 5 Emergency Flare Flaring Event |  | 30,000 lb/hr NH3 |  |
| **Urea Plant #5** | 35 | C-560A | Granulator A/B Scrubber Exhaust Vent Stack | N/A | 50 tons/hr (urea) | 1976 |
| 36 | C-560B | Granulator C/D Scrubber Exhaust Vent Stack | N/A | 50 tons/hr (urea) | 1976 |
| 37 | D- 515 | Atmospheric Absorber Final Scrubber | N/A | N/A | 1976 |
| 38 | D-511 | Inerts Vent Scrubber | N/A | N/A | 1976 |
| 39 | E-535 | After Condenser Exchanger | N/A | N/A | 1976 |
| 40 | E-711 | Cooling tower | N/A | 15,000 gal/min | 1976 |
| 41-41C | multiple | Tank Scrubber | N/A | N/A | multiple |
| **Utility Plant #3 and # 6** | 44a | 6B-708A | Cleaver Brooks Package Boiler | NG | 243 MMBtu/hr | TBD |
| 47-47D | multiple | Urea and Ammonia Loading Wharf | N/A | 1000 tons/hr | multiple |
| 48a | 6B-708B | Cleaver Brooks Package Boiler | NG | 243 MMBtu/hr | TBD |
| 49a | 6B-708C | Cleaver Brooks Package Boiler | NG | 243 MMBtu/hr | TBD |
| 50 | B-705A | Certified & Nebraska Co. Waste Heat Boiler | NG | 46.7 MMBtu/hr | 1986 |
| 51 | B-705B | Certified & Nebraska Co. Waste Heat Boiler | NG | 46.7 MMBtu/hr | 1986 |
| 52 | B-705C | Certified & Nebraska Co. Waste Heat Boiler | NG | 46.7 MMBtu/hr | 1986 |
| 53 | B-705D | Certified & Nebraska Co. Waste Heat Boiler | NG | 46.7 MMBtu/hr | 1986 |
| 54 | B-705E | Certified & Nebraska Co. Waste Heat Boiler | NG | 46.7 MMBtu/hr | 1986 |
| 55a | GGT-744A | Solar Turbine/Generator Set | NG | 55.4 MMBtu/hr | TBD |
| 56a | GGT-744B | Solar Turbine/Generator Set | NG | 55.4 MMBtu/hr | TBD |
| 57a | GGT-744C | Solar Turbine/Generator Set | NG | 55.4 MMBtu/hr | TBD |
| 58a | GGT-744D | Solar Turbine/Generator Set | NG | 55.4 MMBtu/hr | TBD |
| 59a | GGT-744E | Solar Turbine/Generator Set | NG | 55.4 MMBtu/hr | TBD |
| 60 | F-791 | Deaerator Vent | N/A | N/A | 1986 |
| 61 | F-711 | Degasifier Vent | N/A | N/A | 1976 |
| 65 | GM-616D | Diesel Fired Well Pump | Diesel | 2.7 MMBtu/hr | 1966 |
|  | 66 | G-613B | Gasoline Fired Fire Pump Engine | Gasoline | 2.1 MMBtu/hr | 1978 |

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]](#footnote-1) construction of the modification to the stationary source authorized under Construction Permit AQ0083CPT07 within 18 months of the issuance of the permit[[2]](#footnote-2) unless granted an extension in writing from the Department.
3. Fee Requirements
4. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400 – 499.
5. **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.[[3]](#footnote-3) 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:
   1. the stationary source's assessable potential to emit of 1,302 tpy; or
   2. the stationary source’s projected annual rate of emissions that will occur from July 1st to the following June 30th, based upon 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:
      1. an enforceable test method described in 18 AAC 50.220;
      2. material balance calculations;
      3. emission factors from EPA’s publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
      4. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.
6. **Assessable Emission Estimates.** Emission fees will be assessed as follows:
   1. no later than March 31st 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](http://dec.alaska.gov/applications/air/airtoolsweb%20) using the Permittee Portal option and filling out the Emission Fee Estimate form. Alternatively, the report may be submitted by:
      1. Email under a cover letter using [dec.aq.airreports@alaska.gov](http://adecteams.dec.alaska.gov/sites/AQ/ap/LEAN/Shared%20Documents/Action%20Items/Title%20I%20Template/dec.aq.airreports@alaska.gov); or
      2. hard copy to the following address: ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 555 Cordova Street, Anchorage, Alaska 99501.
   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.
   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.
7. State Emission Standards
8. **Industrial Process and Fuel-Burning Equipment Visible Emissions (VE).** The Permittee shall not cause or allow VE, excluding water vapor, emitted from industrial process and fuel burning EUs listed in Table 1 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes in any one hour. Monitor, record, and report as follows:
   1. For EUs 11 through 13, 22, 23, 44a, 48a through 59a, 65, and 66; record the date of initial startup[[4]](#footnote-4) of each EU.
   2. For diesel-fired EU 65, verify initial compliance with Condition 6 no later than 90 days after initial startup of the EU as follows:
      1. Obtain a certified manufacturer’s guarantee that shows that the EUs will comply with Condition 6; or
      2. Conduct VE source test as described in 40 C.F.R. 60, Appendix A-4 Method 9;
      3. Report in the operating report required under Condition 50, the manufacturer guarantee or the VE source test results required in Condition 6.2a or 6.2b.
   3. The Permittee shall use only gas as fuel in EUs 11 through 13, 22, 23, 44a, and 48a through 59a. The Permittee shall certify in each operating report required under Condition 50 that these EUs burned only gas.
9. **Visible Emissions Monitoring.** The Permittee shall observe the exhaust of EUs 35 and 36 for visible emissions using Method 9 Plan described under Condition 7.1.
   1. *Method 9 Plan:* For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, Adopted by Reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.
      1. First Method 9 Observation: Observe exhaust for 18 minutes within 90 days after initial startup. For any EUs replaced, observe exhaust for 18 minutes within 30 days of startup.
      2. Monthly Method 9 Observations: After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that an EU operates.
      3. Semiannual Method 9 Observation: After observing emissions for three consecutive operating months under Condition 7.1b, unless a six-minute average exceeds 15 percent and one or more observations exceed 20 percent, perform 18-minute observations at least semiannually:
         1. Within six months after the preceding observation; or
         2. For an emission unit with intermittent operations, within 30 days after the next scheduled operation immediately following six months after the preceding observation.
      4. Annual Method 9 Observations: After at least two semiannual 18-minute observations, unless a six-minute average exceeds 15 percent and one or more observations exceed 20 percent, perform 18-minute observations:
         1. Within 12 months after the preceding observation; or
         2. For an emission unit with intermittent operations, within 30 days after the next scheduled operation immediately following 12 months after the preceding observation.
      5. Increased Method 9 Frequency: If a six-minute average opacity observed during the most recent set of observations exceeds 15 percent and one or more observations exceeds 20 percent, then increase or maintain the 18-minute observation frequency for that EU to at least monthly, until the criteria in Condition 7.1c for semiannual monitoring are met.
10. **Visible Emissions Recordkeeping.** The Permittee shall keep records as follows:
    1. When using the Method 9 Plan of Condition 7.1:
       1. The observer shall record
          1. the name of the stationary source, EU and location, EU type, observer’s name and affiliation, and the date on the VE Emissions Field Data Sheet in Attachment 1;
          2. the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;
          3. the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
          4. opacity observations to the nearest five percent at 15-second intervals on the VE Observations Record in Attachment 1; and
          5. the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to present the average opacity of emissions for a 15-second period.
       2. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.
       3. Calculate and record the highest 18 consecutive minute average observed.
11. **Visible Emissions Reporting.** The Permittee shall report VE as follows:
    1. In each stationary source operating report required under Condition 50, include for the period covered by the report:
       1. Copies of the observation results (i.e. opacity observations) for the EUs, except for the observations the Permittee has already submitted to the Department; and
       2. A summary to include:
          1. Number of days observations were made;
          2. Highest six-minute average observed; and
          3. Dates when one or more observed six-minute averages exceeded 20 percent.
       3. A summary of any monitoring or recordkeeping required under Condition 7 and Condition 8 that was not done.
    2. Report under Condition 50:
       1. The results of Method 9 observations that exceed an average of 20 percent opacity for any six-minute period; and
       2. Any monitoring under Condition 7 that was not performed when required.
       3. If any fuel is burned other than fuel gas or natural gas in EUs 12, 13, 22, 23, 44a, and 48a through 59a.
12. **Industrial Process and Fuel-Burning Equipment Particulate Matter (PM).** The Permittee shall not cause or allow PM emitted from industrial process and fuel burning EUs 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, under 18 AAC 50.055(b).
    1. For EU 65, obtain a certified manufacturer’s guarantee that the EUs will comply with the particulate matter standard, within 60-days of startup; or
    2. Demonstrate compliance with the PM standard by complying with Condition 6.2.
13. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as sulfur dioxide SO2, from industrial process and fuel burning EUs listed in Table 1 to exceed 500 parts per million by volume (ppmv) averaged over a period of three hours, under 18 AAC 50.055(c).
14. Ambient Air Quality Protection Requirements

**General Requirements**

1. The Permittee shall operate the stationary source as described below:

**Stack Configuration**

* 1. Construct and maintain vertical, uncapped stacks for all EUs listed in Table 1 with stacks, except as noted below:
     1. EUs 13, 41, 41B, 41C, 47C, 47D, 60, 61, 65, and 66 may have capped or horizontal releases; and
     2. This condition does not preclude the use of flapper valve rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume;
  2. Confirm in the first operating report required under Condition 50 that would be due after the installation of each EU that the exhaust stack for that EU listed in Table 1 complies with Condition 12.1 and Condition 12.3.

**Stack Heights**

* 1. Construct and maintain the stacks for the EUs listed in Table 2 with release points above grade that equal or exceed the height indicated in Table 2, to protect the AAAQS and Class II increments associated with the given EU.

**Table 2 – Required Stack Heights**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU** | **Description** | **Emitted Pollutants** | **Min. Stack Height (ft)** |
| 12 | Primary Reformer | NOx, CO, PM-10, PM-2.5 | 100 |
| 14 | CO2 Vent | CO, NH3 | 154 |
| 19 | H2 Vent Stack | CO, NH3 | 80 |
| 35 - 36 | Granulator Scrubber Exhaust Vents Stack | PM-10, PM-2.5, NH3 | 140 |
| 44a, 48a, 49a | Package Boilers | NOx, CO, PM-10, PM-2.5 | 100 |
| 50 - 54 | Waste Heat Boilers | NOx, CO, PM-10, PM-2.5 | 100 |
| 55a – 59a | Solar Turbine Bypass Stack | NOx, CO, PM-10, PM-2.5 | 60 |

* 1. Provide as-built drawings and photographs of the stack for each EU listed in Table 2 no later than the second operating report required under Condition 50 that would be due after installation of the stack.
  2. Comply with the BACT limits in Section 5, in order to protect the NO2, PM-10, PM-2.5, and CO Alaska Ambient Air Quality Standards (AAAQS) and Class II increments (as applicable).

**Limits to Protect Short-term AAAQS and Class II increments**

1. To protect the 24-hour PM-10 AAAQS and increment, and the 24-hour PM-2.5 AAAQS and increment, the Permittee shall limit the operation of the Gasoline Fired Firewater Pump (EU 66) to no more than four hours per day. Monitor, record, and report as follows:
   1. Monitor and record EU 66’s operating hours each day the unit operates. If EU 66 operates more than four hours per calendar day, report as excess emissions and permit deviation as described in Condition 49.
2. To protect the 1-hour NO2 AAAQS, the 1-hour and 8-hour CO AAAQS, the 24-hour PM-10 AAAQS and increment, and the 24-hour PM-2.5 AAAQS and increment, the Permittee shall not operate more than one Solar Combustion Turbine (EU 55a – 59a) in bypass mode at a time. Monitor, record, and report as follows:
   1. Monitor and record the start and end time (including date) each EU 55a through 59a operate in bypass mode. If more than one of EUs 55a through 59a operate in bypass mode at a time, report as excess emissions and permit deviation as described in Condition 49.
3. To protect the 1-hour NO2 AAAQS, the Permittee shall limit the annual operation of the EUs listed below as follows:
   1. Startup Heater (EU 13): do not operate for more than 200 hours per year;
   2. Diesel Fired Well Pump (EU 65): do not operate for more than 168 hours per year;
   3. Gasoline Fired Firewater Pump (EU 66): do not operate more than 168 hours per year; and
   4. Monitor and record the hours of operation of EUs 13, 65, and 66 as described in Conditions 20 and 22. If the operating hours for EUs 13, 65, or 66 exceed the limits in Condition 15, report as excess emissions and permit deviation as described in Condition 49.

**Limits to Protect Annual AAAQS and Class II increments**

1. To protect the annual NO2 AAAQS, the annual NO2 increment, the annual PM-10 increment, the annual PM-2.5 AAAQS and the annual PM-2.5 increment, the Permittee shall limit the annual operation of the EUs listed below as follows:
   1. Solar Combustion Turbines (EUs 55a – 59a): the total operation in bypass mode shall not exceed 204 hours per year per unit;
   2. Startup Heater (EU 13): do not operate for more than 200 hours per year;
   3. Diesel Fired Well Pump (EU 65): do not operate for more than 168 hours per year; and
   4. Gasoline Fired Firewater Pump (EU 66): do not operate for more than 168 hours per year.
   5. Monitor and record the hours of operation of EUs 13, 55a through 59a, 65, and 66 as described in Conditions 17, 20, and 22. If the operating hours for EUs 13, 55a through 59a, 65, or 66 exceed the limits in Condition 16, report as excess emissions and permit deviation as described by Condition 49.
2. Best Available Control Technology

**BACT Limits**

1. **Turbine Emission Limits:** The Permittee shall limit the emissions from the cogeneration turbines EUs 55a through 59a (including corresponding waste heat boilers EUs 50 through 54) as specified in Table 3, except during the allowable hours as specified in Condition 17.1:

**Table 3 – Cogeneration Turbine BACT Limits for NOx, CO, PM, VOC, and GHGs**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 55a -59a  &  50 - 54 | NOx | 5 ppmvd at 15 % O2 (3-hraverage) | Selective Catalytic Reduction and SoLoNOx Technology on Turbines |
| CO | 50 ppmvd at 15 % O2  (3-hraverage) | Good Combustion Practices |
| VOC | 0.0036 lb/MMBtu (3-hr average) | Good Combustion Practices |
| PM/PM-10/PM-2.5 | 0.0075 lb/MMBtu (3-hr average) | Good Combustion Practices |
| CO2e | 58.4 tons/MMscf (3-hr average) 162,600 tpy combined | Good Combustion Practices  Waste Heat Recovery |

* 1. Limit the number of hours EUs 55a through 59a operate without waste heat boilers (bypassing the selective catalytic reduction control system) to no more than 204 hours per 12 consecutive month period, each. Monitor, record, and report as described below:
     1. Calculate and record monthly, the number of hours each of EUs 55a through 59a operated without a waste heat boiler, for the previous month;
     2. Calculate and record monthly, the number of hours each of EUs 55a through 59a operated without a waste heat boiler for the previous 12 consecutive month period;
     3. Report in the operating report required in Condition 50 for each month covered in the operating report, the total hours each of EUs 55a through 59a operated without a waste heat boiler as recorded in Condition 17.1b.
  2. Install, operate, and maintain SoLoNOx control technology on EUs 55a through 59a, according to the manufacturer’s specification, at all times the units are operating.
  3. Install, operate, and maintain selective catalytic reduction (SCR) on EUs 50 through 59a, according to the manufacture’s specifications, at all times the units are operating, except during the allowable hours as specified in Condition 17.1. For each SCR system, install and operate the SCR units as follows:
     1. Conduct an initial source test in accordance with Section 9, on at least two of EUs 50 through 59a within 180 days from the first of EUs 50 through 59a beginning operation.
     2. Conduct the source test at the maximum achievable load of the EU while the exhaust from the turbine is routed through the waste heat boiler and then through the SCR system (representative of the normal operation scenario).
     3. Limit emissions of ammonia slip downstream of the SCR to no greater than 10 ppmv as measured at maximum achievable load in accordance with Condition 17.2d.
     4. During the source test required by Condition 17.2a, measure the ammonia slip using the U.S. EPA Method 320 or ASTM D6348 for Fourier Transform Infrared Spectroscopy (FTIR), CTM-027, or Bay Area Source Test Procedure ST-1B, as applicable. The test shall be completed at maximum achievable load. The highest ammonia injection rate setting (gallons per hour) of the three runs shall become the maximum ammonia injection rate for the SCR equipped turbines.
     5. Monitor and record the ammonia injection rate in gallons per hour.
     6. Prior to startup of EUs 50 through 59a, the Permittee shall identify parameters and practices that constitute proper SoLoNOx and SCR operation and maintenance to comply with the emission limitation conditions of this permit. The Permittee shall include these operational and maintenance parameters and practices in the KNO O&M list of procedures. As a minimum, these shall include manufacturers’ operating instructions, normal operating parameters, and preventive maintenance procedures. The Permittee shall keep the operational and maintenance parameters and practices within KNO’s O&M procedural library up to date to the extent that they relate to EUs 50 through 59a. The Permittee shall keep the O&M procedures readily available for review by the Department upon request.
     7. Report the results of the source test to the Department in accordance with Condition 66, including the information from Condition 17.2d.
  4. To show compliance with the NOx, emission limits set out in Table 3, the Permittee shall:
     1. Conduct an initial source test in accordance with Section 9, on at least two[[5]](#footnote-5) of EUs 50 through 59a 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.
     2. Conduct the source test for at least two loads representative of the normal operating range of the EU while the exhaust from the turbine is routed through the waste heat boiler and then through the SCR system (representative of the normal operation scenario). 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.
     3. Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the selective catalytic reduction control system.
     4. 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.
     5. During each test run, measure the inlet air temperature and pressure drop across the SCR system.
     6. The Permittee shall report the results of the source test to the Department in accordance with Condition 66.
  5. To show compliance with the CO emission limit set out in Table 3, the Permittee shall:
     1. Conduct an initial source test in accordance with Section 9, on at least two of EUs 50 through 59a within 180 days from the first of EUs 50 through 59a beginning operation.
     2. Conduct the source test for at least two loads representative of the normal operating range of the EU while the exhaust from the turbine is routed through the waste heat boiler and then through the SCR system (representative of the normal operation scenario).
     3. Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the SCR system.
     4. 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.
     5. During each test run, measure the inlet air temperature and pressure drop across the SCR system.
     6. The Permittee shall report the results of the source test to the Department in accordance with Condition 66.
  6. To show compliance with the VOC, PM, PM-10, and PM-2.5 emission limits set out in Table 3, the Permittee shall:
     1. Submit to the Department, a certified manufacturer’s guarantee demonstrating that EUs 50 through 59a will comply with the emission limits in Table 3 at least 60 days before startup of any of EUs 50 through 59a; or
     2. Conduct an initial source test in accordance with Section 9, on at least two of EUs 50 through 59a within 180 days from the first of EUs 50 through 59a beginning operation to demonstrate initial compliance with the VOC, PM, PM-10, and PM-2.5 limits listed in Table 3 as follows:
        1. Conduct the source test for at least two loads representative of the normal operating range of the EU while the exhaust from the turbine is routed through the waste heat boiler and then through the SCR system (representative of the normal operation scenario).
        2. Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the selective catalytic reduction control system.
        3. 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.
        4. During each test run, measure the inlet air temperature and pressure drop across the SCR system.
        5. The Permittee shall report the results of the source test to the Department in accordance with Condition 66.
  7. To show compliance with the GHG emission limit set out in Table 3, the Permittee shall:
     1. Maintain good combustion practices at all times the units are in operation;
     2. Perform regular maintenance according to the manufacturer’s or the operator’s maintenance procedures;
     3. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and
     4. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.
  8. Report as described in Condition 49 if any of:
     1. the operating hours of any of EUs 55a through 59a, for the 12 consecutive month period, exceed the limit in Condition 17.1;
     2. the emission rates determined by the source tests required by Conditions 17.3 through 17.5 exceed the limits in Table 3; or
     3. Conditions 17.1 through 17.6 are not met.

1. **Primary Reformer BACT Limits:** The Permittee shall limit the emissions from EU 12 as specified in Table 4:

**Table 4 –Reformer BACT Limits for NOx, CO, PM, VOC, and GHGs**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 12 | NOx | 17 ppmvd at 3% O2 (30-day average) | Selective Catalytic Reduction |
| CO | 0.043 lb/MMBtu (3-hr average) | Good Combustion Practices |
| VOC | 0.0054 lb/MMBtu (3-hr average) | Good Combustion Practices |
| PM/PM-10/PM-2.5 | 0.0075 lb/MMBtu (3-hr average) | Good Combustion Practices |
| CO2e | 60.4 tons/MMscf (3-hr average) 700,000 tons per year | Good Combustion Practices |

* 1. The Permittee shall develop a preventative maintenance plan within 180 days of initial startup and submit it to the Department with the first operating report required under Condition 50.
  2. Install, operate, and maintain selective catalytic reduction (SCR) on EU 12, according to the manufacture’s specifications, at all times the unit is in operation. Install and operate the SCR unit as follows:
     1. Conduct an initial source test in accordance with Section 9, on EU 12 within 180 days from the EU beginning operation.
     2. Conduct the source test at the maximum achievable load of the EU.
     3. Limit emissions of ammonia slip downstream of the SCR to no greater than 10 ppmv as measured at maximum achievable load in accordance with Condition 18.2d.
     4. During the source test required by Condition 18.2a, measure the ammonia slip using the U.S. EPA Method 320 or ASTM D6348 for Fourier Transform Infrared Spectroscopy (FTIR), CTM-027, or Bay Area Source Test Procedure ST-1B, as applicable. The test shall be completed at maximum achievable load. The highest ammonia injection rate setting (gallons per hour) of the three runs shall become the maximum ammonia injection rate for EU 12.
     5. Monitor and record the ammonia injection rate in gallons per hour.
     6. Prior to startup of EU 12, the Permittee shall identify parameters and practices that constitute proper SCR operation and maintenance to comply with the emission limitation conditions of this permit. The Permittee shall include these operational and maintenance parameters and practices in the KNO O&M list of procedures. As a minimum, these shall include manufacturers’ operating instructions, normal operating parameters, and preventive maintenance procedures. The Permittee shall keep the operational and maintenance parameters and practices within KNO’s O&M procedural library up to date to the extent that they relate to EU 12. The Permittee shall keep the O&M procedures readily available for review by the Department upon request.
     7. Report the results of the source test to the Department in accordance with Condition 66, including the information from Condition 18.2d.
  3. To show compliance with the NOx emission limit set out in Table 4, the Permittee shall:
     1. Conduct an initial source test in accordance with Section 9, on EU 12 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 reformer.
     2. Conduct the source test for at least two loads representative of the normal operating range of the EU while the exhaust from the reformer is routed through the SCR system (representative of the normal operation scenario). 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.
     3. Conduct the source test using Method 7 of 40 C.F.R. 60, Appendix A, and 40 C.F.R. 60.46(b) & (d). Source test downstream of the selective catalytic reduction control system.
     4. For Method 7 of 40 C.F.R. 60, Appendix A; Method 7A, 7C, 7D, or 7E may be used. If Method 7C, 7D, or 7E of appendix A is used, the sampling time for each run shall be at least one hour and the integrated sampling approach shall be used to determine the O2 concentration (%O2) for the emission rate correction factor.
     5. 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.
     6. During each test run, measure the inlet air temperature and pressure drop across the SCR system.
     7. The Permittee shall report the results of the source test to the Department in accordance with Condition 66. Install, certify, maintain, and operate a NOx continuous emissions monitoring system (CEMS) consisting of a NOx monitor and a diluent gas (oxygen (O2) or carbon dioxide (CO2)) monitor, to determine the hourly NOx emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu).
     8. Each NOX and diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B of 40 C.F.R. 60, except the 7-day calibration drift is based on unit operating days, not calendar days. The relative accuracy test audit (RATA) of the CEMS shall be performed on a ppm or lb/MMBtu basis.
     9. As specified in §60.13(e)(2), during each full unit operating hour, both the NOx monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOx emission rate for the hour.
     10. The owner or operator shall develop and keep on-site a quality assurance (QA) plan for the NOx and O2 CEMS.
  4. Continuous emission monitoring to identify excess emissions:
     1. All CEMS data shall be reduced to hourly averages as specified in 40 C.F.R. 60.13(h).
     2. For each unit operating hour in which a valid hourly average, as described in Condition 18.3i, is obtained for both NOx and diluent monitors, the data acquisition and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 in Appendix A of Part 60.
     3. Calculate the hourly average NOx emission rates, in units of the emission standards under §60.44.
     4. Use the calculated hourly average emission rates from Condition 18.4c to assess excess emissions on a 30-day average.
     5. Each NOx CEMS must meet all applicable quality assurance and data recovery requirements of 40 C.F.R. 60.13.
  5. Reporting Requirements:
     1. For all reports required under §60.7(c), report in accordance with Conditions 33 and 34.
  6. Excess Emissions of NOX and Downtime for CEMS:
     1. For EU 12:
        1. An excess emission for any unit is when the 30-day rolling average NOx emission rate exceeds the applicable emission limit in Condition 18. For the purposes of this condition, a “30-day rolling average NOx emission rate” is the arithmetic average of all hourly NOx emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated for each operating day as the average of all hourly NOx emissions rates for the preceding 30 unit operating days if a valid NOx emission rate is obtained for at least 75 percent of all operating hours.
        2. Note: The NOx BACT limit for EU 12, as specified in Table 4, is valid at all times, except during startup and shutdown when the catalyst is below normal operating temperature, including while performing the NOX performance tests and RATA’s required by 40 C.F.R. 60.
        3. A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOx concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.
        4. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.
        5. Note: Condition 18.6a(iv) does not include the BACT limit, it is only referring to the standards under 40 C.F.R. 60 Subpart D.
  7. Maintain the NOx and oxygen CEMS sampling probe in the exhaust stack of the reformer furnace. Continuously monitor and record the rolling 30-day average NOx concentration in parts per million, dry basis, by volume (ppmvd) and oxygen concentration measurements. Correct each rolling 30-day average NOx concentration to 3 percent O2.
  8. In each operating report under Condition 50, the Permittee shall attach:
     1. The maximum rolling 30-day average NOx emission concentration corrected to 3 percent O2 obtained from each CEMS required under Condition 18.3a;
     2. The date time, and duration, and rolling 30-day average NOx emission concentration corrected to 3 percent O2 for any period exceeding the limit in Table 4 or a copy of the excess emission report filed under Condition 18.12.
  9. If the rolling 30-day average NOx emissions exceed the limit in Table 4, the Permittee shall report as an excess emission under Condition 49.
  10. To show compliance with the CO emission limit set out in Table 4, the Permittee shall:
      1. Conduct an initial source test in accordance with Section 9, within 180 days from beginning operation of EU 12.
      2. Conduct the source test for at least two loads representative of the normal operating range of the EU while the exhaust from the reformer is routed through the SCR system (representative of the normal operation scenario).
      3. Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the SCR system.
      4. 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.
      5. During each test run, measure the inlet air temperature and pressure drop across the SCR system.
      6. The Permittee shall report the results of the source test to the Department in accordance with Condition 66.
  11. To show compliance with the VOC, PM, PM-10, and PM-2.5 emission limits set out in Table 4, the Permittee shall:
      1. Submit to the Department, a certified manufacturer’s guarantee demonstrating that EU 12 will comply with the emission limits in Table 4 at least 60 days before startup of the EU; or
      2. Conduct an initial source test in accordance with Section 9, within 180 days from beginning operation of EU 12 to demonstrate initial compliance with the VOC, PM, PM-10, and PM-2.5 emission limits listed in Table 4 as follows:
         1. Conduct the source test for at least two loads representative of the normal operating range of the EU while the exhaust from the reformer is routed through the SCR system (representative of the normal operation scenario).
         2. Use the applicable test method set out in 40 C.F.R. 60, Appendix A. Source test downstream of the SCR system.
         3. 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.
         4. During each test run, measure the inlet air temperature and pressure drop across the SCR system.
         5. The Permittee shall report the results of the source test to the Department in accordance with Condition 66.
  12. Report as excess emissions and permit deviation as described in Condition 49 if any of the emission rates determined in the source test required by Condition 18.10, exceed the limit in Table 4.
  13. To show compliance with the GHG emission limit set out in Table 4, the Permittee shall:
      1. Maintain good combustion practices at all times the unit is in operation;
      2. Perform regular maintenance according to the manufacturer’s or the operator’s maintenance procedures;
      3. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and
      4. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.
  14. Report as described in Condition 49 if any of:
      1. the emission rates determined by the source tests required by Conditions 18.10 through 18.11 exceed the limits in Table 4; or
      2. Conditions 18.1 through 18.13 are not met.

1. **Package Boilers BACT Limits:** The Permittee shall limit the emissions from EUs 44a, 48a, and 49a as specified in Table 5:

**Table 5 – Package Boilers BACT Limits for NOx, CO, PM, VOC, and GHGs**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 44a, 48a, & 49a | NOx | 0.01 lb/MMBtu (30-day rolling average) | Selective Catalytic Reduction |
| CO | 50 ppmvd at 3% O2 (3-hr average) | Good Combustion Practices |
| VOC | 0.0054 lb/MMBtu (3-hr average) | Good Combustion Practices |
| PM/PM-10/PM-2.5 | 0.0075 lb/MMBtu) (3-hr average) | Good Combustion Practices |
| CO2e | 60.2 tons/MMscf (3-hr average) 376,500 tons per year (combined) | Good Combustion Practices |

* 1. The Permittee shall develop a preventative maintenance plan within 180 days of initial startup and submit it to the Department with the first operating report required under Condition 50.
  2. To show compliance with the NOx emission limit set out in Table 5, the Permittee shall:
     1. Install, certify, maintain, and operate a NOx CEMS consisting of a NOx monitor and a diluent gas (O2 or CO2) monitor, to determine the hourly NOx emission rate in ppm or lb/MMBtu.
     2. Each NOX and diluent CEMS must be installed and certified according to PS 2 in appendix B of 40 C.F.R. 60, except the 7-day calibration drift is based on unit operating days, not calendar days. The RATA of the CEMS shall be performed on a ppm or lb/MMBtu basis.
     3. Conduct an initial source test in accordance with Section 9 on EUs 44a, 48a, and 49a using the CEMS for monitoring NOx under 40 C.F.R. 60.48b 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 boilers.
     4. For the initial compliance test, NOX from the EUs are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NOX emission standards. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.
     5. As specified in §60.13(e)(2), during each full unit operating hour, both the NOx monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NOx emission rate for the hour.
     6. The owner or operator shall develop and keep on-site a QA plan for the NOx CEMS.
     7. The Permittee shall report the results of the source test to the Department in accordance with Condition 66.
  3. Continuous emission monitoring to identify excess emissions:
     1. All CEMS data shall be reduced to hourly averages as specified in 40 C.F.R. 60.13(h).
     2. For each unit operating hour in which a valid hourly average, as described in Condition 19.2e, is obtained for both NOx and diluent monitors, the data acquisition and handling system must calculate and record the hourly NOx emission rate in units of ppm or lb/MMBtu, using the appropriate equation from Method 19 in Appendix A of Part 60.
     3. Calculate the hourly average NOx emission rates, in units of the emission standards under §60.44, using ppm.
     4. Use the calculated hourly average emission rates from Condition 19.3c to assess excess emissions on a 30-day rolling average.
     5. Each NOx CEMS must meet all applicable quality assurance and data recovery requirements of 40 C.F.R. 60.13.
  4. Reporting Requirements:
     1. For all reports required under §60.7(c), report in accordance with Conditions 33 and 34.
  5. Excess Emissions of NOX and Downtime for CEMS:
     1. For EUs 44a, 48a, and 49a:
        1. An excess emission for any unit is when the 30-day rolling average NOX emission rate exceeds the applicable emission limit in Condition 19. For the purposes of this condition, a “30-day rolling average NOx emission rate” is the arithmetic average of all hourly NOx emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the two unit operating hours immediately preceding that unit operating hour. A new 30-day average is calculated for each operating hour as the average of all hourly NOx emissions rates for the preceding 3 unit operating hours if a valid NOx emission rate is obtained for at least 75 percent of all operating hours.

*NOTE: The NOX BACT limit for EUs 44a, 48a, and 49a, as specified in Table 5, is valid at all times, including while performing the NOX performance tests and RATA’s required by 40 C.F.R. 60.*

* + - 1. A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOX concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.
      2. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

*Note: Condition 19.5a(iii) does not include the BACT limit, it is only referring to the standards under 40 C.F.R. 60 Subpart Db.*

* 1. Maintain the NOx and oxygen CEMS sampling probe in each exhaust stack of the package boilers. Continuously monitor and record the rolling 30-day average NOx concentration in parts per million, dry basis, by volume (ppmvd) and oxygen concentration measurements. Correct each rolling 30-day average NOx concentration to 3 percent O2.
  2. Record the starting and ending times of each startup period for the package boilers. Maintain a log to document date, time, and duration.
  3. In each operating report under Condition 50, the Permittee shall attach:
     1. The maximum rolling 30-day average NOx emission concentration corrected to 3 percent O2 obtained from each CEMS required under Condition 19.2a;
     2. The date, time, and duration of each startup period for the package boilers;
     3. The date time, and duration, and rolling 30-day average NOx emission concentration corrected to 3 percent O2 for any period exceeding the limit in Table 5 or a copy of the excess emission report filed under Condition 49.
  4. If the rolling 30-day average NOx emissions exceed the limit in Table 5, the Permittee shall report as an excess emission under Condition 49.
  5. To show compliance with the CO, VOC, PM, PM-10, and PM-2.5 emission limits set out in Table 5, the Permittee shall:
     1. Submit to the Department, a certified manufacturer’s guarantee demonstrating that EUs 44a, 48a, and 49a will comply with the emission limits in Table 5 at least 60 days before startup of any of EUs 44a, 48a, and 49a; or
     2. Conduct an initial source test in accordance with Section 9, on at least one of EUs 44a, 48a, and 49a within 180 days from the first of EUs 44a, 48a, and 49a beginning operation to demonstrate initial compliance with the CO, VOC, PM, PM-10, and PM-2.5 limits listed in Table 5 as follows:
        1. Conduct the source test for at least two loads representative of the normal operating range of the EU.
        2. Use the applicable test method set out in 40 C.F.R. 60, Appendix A.
        3. 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.
        4. The Permittee shall report the results of the source test to the Department in accordance with Condition 66.
  6. To show compliance with the GHG emission limit set out in Table 5, the Permittee shall:
     1. Maintain good combustion practices at all times the units are in operation;
     2. Perform regular maintenance according to the manufacturer’s or the operator’s maintenance procedures;
     3. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and
     4. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.
  7. Report as described in Condition 49 if any of:
     1. the emission rates determined by the source tests required by Conditions 4.1 through 19.11 exceed the limits in Table 5; or
     2. Conditions 19.1 through 19.11 are not met.

1. **Startup Heater BACT Limits:** The Permittee shall limit the emissions from EU 13 as specified in Table 6:

**Table 6 – Startup Heater BACT Limits for NOx, CO, PM, VOC, and GHGs**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 13 | NOx | 0.098 lb/MMBtu | Good Combustion Practices and Limited Use |
| CO | 0.082 lb/MMBtu | Good Combustion Practices and Limited Use |
| VOC | 0.0054 lb/MMBtu | Good Combustion Practices and Limited Use |
| PM/PM-10/PM-2.5 | 0.0075 lb/MMBtu | Good Combustion Practices and Limited Use |
| CO2e | 60.4 tons/MMscf 1,200 tons per year | Good Combustion Practices and Limited Use |

* 1. Limit the hours of operation that EU 13 operates to no more than 200 hours per 12 consecutive month period. Monitor, record, and report as described below:
     1. Monitor and record the startup and shutdown dates and times that EU 13 operates.
     2. By the 15th day of each month, calculate and record:
        1. the hours EU 13 operated for the previous month; and
        2. the total hours EU 13 operated during the previous 12 consecutive month period.
     3. Report in each operating report required by Condition 50, for each month covered in the report, the values determined under Conditions 20.1b(i) and 20.1b(ii).
     4. Report as excess emissions as described in Condition 49 whenever the values determined under Condition 20.1b(ii) exceed the limit in Condition 20.
  2. To show compliance with the NOx, CO, VOC, PM, PM-10, PM-2.5, and GHG emission limits set out in Table 6, the Permittee shall:
     1. Maintain good combustion practices at all times the unit is in operation;
     2. Perform regular maintenance according to the manufacturer’s or the operator’s maintenance procedures;
     3. Keep records of any maintenance that would have a significant effect on emissions. The records may be kept in electronic format; and
     4. Keep a copy of either the manufacturer’s or the operator’s maintenance procedures.
  3. Report as described in Condition 49 if any of:
     1. the operating hours of EU 13 during any 12 consecutive month period, exceed the limit in Condition 20.1;
     2. Conditions 20.1 through 20.2 are not met.

1. **Flares BACT Limits:** The Permittee shall limit the emissions from EUs 11, 22, and 23 as specified in Table 7.

**Table 7 – Flares BACT Limits for NOx, CO, PM, VOC, and GHGs**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 11, 22, & 23 | NOx | 0.068 lb/MMBtu SSM venting limited to 168 hours/year (each) | Work Practice Requirements and Limited Use |
| CO | 0.31 lb/MMBtu SSM venting limited to 168 hours/year (each) | Work Practice Requirements and Limited Use |
| VOC | 0.66 lb/MMBtu SSM venting limited to 168 hours/year (each) | Work Practice Requirements and Limited Use |
| PM/PM-10/PM-2.5 | 0.0075 lb/MMBtu SSM venting limited to 168 hours/year (each) | Work Practice Requirements and Limited Use |
| CO2e | 60.2 tons/MMscf 1,500 tons per year (combined) | Work Practice Requirements and Limited Use |

* 1. To show compliance with the work practice BACT limits indicated in Table 7, the Permittee shall comply with the following flare minimization practices to reduce emissions during startups, shutdowns, and other maintenance events:
     1. Flare Use Minimization: The Permittee shall limit periods when the backup storage compressor and the ammonia refrigeration compressor are offline at the same time to the extent practicable;
     2. 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; and
     3. 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) and (f).
  2. Limit the number of hours EUs 11, 22, and 23 vent during startup, shutdown, and maintenance events, to no more than 168 hours per 12 consecutive month period, each.
  3. Monitor, record, and report as follows: 
     1. Calculate and record monthly, the number of hours each EU 11, 22, and 23 operated during startups, shutdowns, and other maintenance events for the previous month;
     2. Calculate and record monthly, the number of hours each EU 11, 22, and 23 operated during startups, shutdowns, and other maintenance events for the previous 12 consecutive month period;
     3. Report in the operating report required in Condition 50, for each month covered in the report, the total hours each EU 11, 22, and 23 operated as recorded in Condition 21.3b;
     4. A certification in each operating report that the source complied with the requirements in Conditions 21.1a and 21.1b; and
     5. Report as excess emissions as described in Condition 49 whenever the total operating hours of EU 11, 22, or 23 as recorded in Condition 21.3c, exceed the limit in Condition 21.2.

1. **Pump Engines BACT Limits:** The Permittee shall limit the emissions from EUs 65 and 66 as specified in Table 8:

**Table 8 – Pump Engines BACT Limits for NOx, CO, PM, VOC, and GHGs**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 65 | NOx | 4.41 lb/MMBtu | Good Combustion Practices Limited Use |
| CO | 0.95 lb/MMBtu | Good Combustion Practices Limited Use |
| VOC | 0.36 lb/MMBtu | Good Combustion Practices  Limited Use |
| PM/PM-10/PM-2.5 | 0.31 lb/MMBtu | Good Combustion Practices Limited Use |
| CO2e | 164 lb/MMBtu  37.42 tons per year | Good Combustion Practices Limited Use |
| 66 | NOx | 1.63 lb/MMBtu | Good Combustion Practices Limited Use |
| CO | 0.99 lb/MMBtu | Good Combustion Practices and Limited Use |
| VOC | 3.03 lb/MMBtu | Good Combustion Practices and Limited Use |
| PM/PM-10/PM-2.5 | 0.10 lb/MMBtu | Good Combustion Practices and Limited Use |
| CO2e | 156 lb/MMBtu  27.5 tons per year | Good Combustion Practices and Limited Use |

* 1. Limit the hours of operation for each of EUs 65 and 66 to no more than 168 hours, per 12 consecutive month period.
  2. Monitor and record the startup and shutdown dates and times that EUs 65 and 66 operate.
  3. By the 15th day of each month, calculate and record the:
     1. hours that each of EUs 65 and 66 operated for the previous month; and
     2. the total hours that each of EUs 65 and 66 operated during the previous 12 consecutive month period.
  4. Report in each operating report required by Condition 50, for each month covered in the report, the values determined under Conditions 22.3a and 22.3b.
  5. Report as excess emissions as described in Condition 49 whenever the values determined under Condition 22.3b exceed the limit in Condition 22.1.

1. **CO2 Vent BACT Limits:** The Permittee shall limit the emissions from EU 14 as specified in Table 9:

**Table 9 – CO2 Vent BACT Limits for VOC and GHGs**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 14 | CO | 2.9 lb/hour (hourly max) | Good Operational Practices |
| VOC | 11.4 lb/hour (hourly max) | Good Combustion Practices |
| CO2e | 845,486 tons/year | Good Combustion Practices |

* 1. Within 180 days from initial startup of EU 14, the Permittee shall demonstrate compliance with the CO2e limit listed Table 9, using the procedures of 40 C.F.R. Part 98 Subpart G.
  2. Report in the operating report required in Condition 50 the emission rates determined by the 40 C.F.R. Part 98 Subpart G procedures in Condition 23.1.
  3. Report as excess emissions and permit deviation as described in Condition 49 if the emission rate determined in Condition 23.2, exceed the CO2e limit in Table 9.

1. **H2 Vent BACT Limits:** The Permittee shall limit the startup, shutdown, and maintenance emissions from EU 19 as specified in Table 10:

**Table 10 – H2 Vent BACT Limit for CO**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 19 | CO | 15,222 lb/startup | Limited Use |

* 1. Limit the hours EU 19 operates to no more than 200 hours per 12 consecutive month period.
  2. Monitor, record, and report as described below:
     1. Calculate, record and report monthly, the number of hours EU 19 operated for the previous month;
     2. Calculate and record monthly, the number of hours EU 19 operated for the previous 12 consecutive month period;
     3. Report in the operating report required in Condition 50, for each month covered in the report, the total hours EU 19 operated as recorded in Condition 24.2b; and
     4. Report as excess emissions as described in Condition 49 whenever the total operating hours of EU 19, as recorded in Condition 24.2c, exceed the limit in Condition 24.1.

1. **Urea Granulation BACT Limits:** The Permittee shall limit the emissions from EUs 35 and 36 as specified in Table 11:

**Table 11 – Urea Granulation BACT Limits for PM, and VOC**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 35 & 36 | VOC | 90% Control of Methanol, or Methanol Concentration of < 2ppmvd (whichever is less restrictive) | Wet Scrubber |
| PM/PM-10/PM-2.5 | 0.2 lb/ton of urea produced | Wet Scrubber |

* 1. Install, operate, and maintain wet scrubbers on EUs 35 and 36, according to the manufacture’s specifications, at all times the process is in operation.
  2. Within 180 days from initial startup of the first of EUs 35 or 36, the Permittee shall conduct source tests in accordance with Section 9 of this permit to demonstrate initial compliance with the VOC and particulate limits listed in Table 11.
  3. Conduct the tests on one of EUs 35 or 36 at the maximum achievable load for that unit, representative of the normal operating range of the EUs.
  4. Report in the operating report required in Condition 50 the worst case emission rates determined in the source tests required by Condition 25.2.
  5. Report as excess emissions and permit deviation as described in Condition 49 if any of the emission rates determined in the source tests required by Condition 25.2 exceed the limits in Table 11, or if EUs 35 or 36 operate without the use of wet scrubber(s).

1. **UF-85 Storage Tank BACT Limits:** The Permittee shall limit the emissions from EU 41A as specified in Table 12:

**Table 12 – UF-85 Tank BACT Limits for VOC**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 41A | VOC | 0.00004 lb/hr | Wet Scrubber |

* 1. Install, operate, and maintain wet scrubbers on EU 41A, according to the plant’s appropriate standard operating procedure, at all times the tank is being filled.
  2. Compliance with the VOC limit shall be demonstrated by submitting a certificate of compliance with Condition 26.1, with each operating report required under Condition 50.

1. **MDEA Storage Tanks BACT Limits:** The Permittee shall limit the emissions from EUs 41B and 41C as specified in Table 13:

**Table 13 – MDEA Tanks BACT Limits for VOC**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 41B & 41C | VOC | 0.002 tons per year (combined) | Submerged Fill Design |

* 1. Install, operate, and maintain tanks with submerged fill design on EUs 41B and 41C, according to the manufacture’s specifications, at all times the tanks are in operation.
  2. Compliance with the VOC limit shall be demonstrated by submitting a certificate of compliance with Condition 27.1, with each operating report required under Condition 50.

1. **Urea Ship Loading BACT Limits:** The Permittee shall limit the emissions from EU 47 as specified in Table 14:

**Table 14 – Ship Loading BACT Limits for PM, PM-10, and PM-2.5**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 47 | PM | 0.0013 lb/ton of urea | Use of UF-85  (Hardening Agent),  Product Coolers on Granulation Urea Process Lines  Loading into Partial Enclosure  Telescoping Chute |
| PM-10 | 0.0011 lb/ton of urea |
| PM-2.5 | 0.0004 lb/ton of urea |

* 1. PM emissions from ship loading operations shall be controlled by hardening the urea granules with UF-85 and product coolers, by minimizing drop heights with a telescoping chute, and by loading into a partially enclosed ship hold at all times.
  2. Compliance with the PM, PM-10, and PM-2.5 limits shall be demonstrated by submitting a certificate of compliance with Condition 28.1, with each operating report required by Condition 50.

1. **Urea Handling Units BACT Limits:** The Permittee shall limit the emissions from EUs 47C through 47D as specified in Table 15:

**Table 15 – Urea Handling BACT Limits for PM, PM-10, and PM-2.5**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 47C & 47D | PM, PM-10, PM-2.5 | 0.005 grains/dscf (3 stack test average) | Fully Enclosed Conveyors and Fabric Filters |

* 1. PM emissions from the urea handling units shall be controlled with fully enclosed conveyors and fabric filters at all times.
  2. Within 180 days from initial startup of EUs 47C or 47D, the Permittee shall conduct a source test in accordance with Section 9 of this permit to demonstrate initial compliance with the particulate matter limits listed in Table 15.
  3. Conduct the test on one of EUs 47C or 47D during normal operating conditions for the units.
  4. Report in the operating report required in Condition 50 the worst case emission rates determined in the source test required by Condition 29.2.
  5. Report as excess emissions and permit deviation as described in Condition 49 if any of the emission rates determined in the source test required by Condition 29.2 exceed the limit in Table 15, or if EUs 47B through 47D operate without the use of fully enclosed conveyors and fabric filters.

1. **Cooling Tower BACT Limits:** The Permittee shall limit the emissions from EU 40 as specified in Table 16:

**Table 16 – Cooling Tower BACT Limits for PM, PM-2.5, and PM-10**

|  |  |  |  |
| --- | --- | --- | --- |
| **EU ID** | **Pollutant** | **BACT Limit** | **Control Method** |
| 40 | PM, PM-10, PM-2.5 | 0.002 % Drift | High Efficiency Drift Eliminators |

* 1. For EU 40, install, operate, and maintain a high efficiency drift eliminator with a maximum drift of 0.002 percent of circulating water.
  2. For EU 40, within 60 days of startup, the Permittee shall supply the Department with vendor data verifying that a high efficiency drift eliminator with a maximum drift of 0.002 percent of circulating water has been installed.

1. Federal Requirements
2. **NSPS Subpart A Notification.** For any affected facility[[6]](#footnote-6) or existing facility[[7]](#footnote-7) regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and EPA written or electronic notification of:
   1. the date construction or reconstruction of an affected facility commences postmarked no later than 30 days after such date;
   2. the actual date of initial startup of an affected facility postmarked within 15 days after such date;
   3. any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies unless that change is specifically exempted under an applicable subpart or in 40 C.F.R.. 60.14(e), postmarked 60 days or as soon as practicable before the change is commenced and shall include:
      1. information describing the precise nature of the change,
      2. present and proposed emission control systems,
      3. productive capacity of the facility before and after the change, and
      4. the expected completion date of the change.
   4. any proposed replacement of an existing facility, for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and including the following information:
      1. the name and address of owner or operator,
      2. the location of the existing facility,
      3. a brief description of the existing facility and the components that are to be replaced,
      4. a description of the existing and proposed air pollution control equipment,
      5. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility,
      6. the estimated life of the existing facility after the replacements, and
      7. discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
3. **NSPS Subpart A Startup, Shutdown, & Malfunction Requirements.** The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EUs 12, 44a, and 48a through 59a, any malfunctions of the air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EUs 12, 44a, and 48a through 59a is inoperative.
4. **NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report.** Except as provided in Condition 18, the Permittee shall submit to the Department and to EPA a written "excess emissions and monitoring systems performance report" (EEMSP)[[8]](#footnote-8) any time a limit in Condition 18 has been exceeded as described in this condition. Submit the EEMSP reports with the summary reports to EPA semi-annually postmarked by the 30th day following the end of each six month period ending June 30th and December 31st. Written reports of excess emissions shall include the following information:
   1. The magnitude of excess emissions computed in accordance with Condition 39.3, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.
   2. Identification of each period of excess emissions that occurred during startup, shutdown, and malfunction of EU 12; the nature and cause of any malfunction, and the corrective action taken or preventative measures adopted.
   3. The date and time identifying each period during which a Continuous Monitoring System (CMS) was inoperative except for zero and span checks and the nature of any repairs or adjustments.
   4. A statement indicating whether or not any excess emissions occurred or the CMS was inoperative, repaired, or adjusted, at any time during the reporting period.
5. **NSPS Subpart A Summary Report Form.** The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 the NOX continuous monitoring systems required by Conditions 18 and 19. The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period ending June 30th and December 31st:
   1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form **instead of** the EEMSP report described in Condition 33 is requested, otherwise
   2. Submit a summary report form **and the EEMSP** described in Condition 33.
6. **NSPS Subpart A Performance (Source) Tests.** The Permittee shall conduct initial source tests according to Section 9 and as indicated in this condition on any affected facility 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, and at such other times as may be required by EPA, and shall provide the Department and EPA with a written report of the results of the source test. The Permittee shall:
   1. Conduct source tests and reduce data as set out in 40 C.F.R. 60.8(b), and provide the Department copies of any EPA waivers or approvals of alternative methods.
   2. Conduct source tests under conditions specified by EPA to be based on representative performance of EUs 44a, 48a, and 49a.
   3. Notify the Department and EPA at least 30 days in advance of the source test.
   4. Provide adequate sampling ports, safe sampling platforms, safe access to sampling platforms, and utilities for sampling and testing equipment.
7. **NSPS Subpart A Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EUs 12, 44a, 48a, and 48a through 59a including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EUs 12, 44a, 48a, and 48a through 59a.
8. **NSPS Subpart A Credible Evidence.** For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in 40 C.F.R. 60 Subparts D, Db, and KKKK nothing in 40 C.F.R. 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EUs 12, 44a, and 48a through 59a would have been in compliance with applicable requirements of 40 C.F.R. 60 if the appropriate performance or compliance test or procedure had been performed.
9. **NSPS Subpart A Concealment of Emissions.** The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in 40 C.F.R. 60. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.
10. **NSPS Subpart A, Monitoring.** For a Continuous Monitoring System (CMS) required under Condition 18 and 19, the Permittee shall:
    1. Install and operate the CMS prior to a performance test conducted under Condition 35, including completion of manufacturer's written requirements or recommendations for installation, operation, and calibration of device.
    2. Check the zero (or low level value between zero and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with 40 C.F.R. 60.13(d).
    3. Reduce data in accordance with Conditions 18 and 19.

**Steam Generator Subject to NSPS Subpart D**

1. **NSPS Subpart D Standards for Nitrogen Oxides.** For EU 12, the Permittee shall not allow any gases discharged into the atmosphere which contain nitrogen oxides, expressed as NO2, in excess of 0.20 lb/MMBtu.
   * 1. The Permittee shall perform a NOx source test, in accordance with Section 9, 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 EU to demonstrate compliance with the standard in Condition 40. Compliance shall be determined using the procedures contained in 40 C.F.R. 60.46(b) & (d).
   1. Notify the Department per Condition 49, should any source test reveal an exceedance of the NOx emissions limit in Condition 40.

**Steam Generating Units Subject to NSPS Subpart Db**

1. **NSPS Subpart Db Standards for Nitrogen Oxides.** For EUs 44a, 48a, and 49a, the Permittee shall not allow any gases discharged into the atmosphere which: contain nitrogen oxides, expressed as NO2, in excess of 0.20 lb/MMBtu.
   1. The Permittee shall perform a NOx source test, in accordance with Section 9, within 60 days after achieving the maximum production rate at which the units will be operated, but not later than 180 days after initial startup of the EUs to demonstrate compliance with the standard in Condition 41. Compliance shall be determined using the procedures contained in 40 C.F.R. 60.46b.
   2. Notify the Department per Condition 49, should any source test reveal an exceedance of the NOx emissions limit in Condition 41.

**Stationary Combustion Turbines Subject to NSPS Subpart KKKK**

1. **NSPS Subpart KKKK Standards for Nitrogen Oxides.** For EUs 55a through 59a (including corresponding waste heat boilers EUs 50 through 54), the Permittee shall meet the NOx emission limit of 25 ppmv at 15 percent O2 or 150 ng/J of useful output (1.2 lb/MWh).
   1. The Permittee shall perform a NOx source test, in accordance with Section 9 and 40 C.F.R. 60.4400, within 60 days after achieving the maximum production rate at which the units will be operated, but not later than 180 days after initial startup of the EUs to demonstrate compliance with the standard in Condition 42.
   2. Notify the Department per Condition 49, should any source test reveal an exceedance of the NOx emissions limit in Condition 42.
2. **NESHAP Subpart FFFF.** The Permittee shall comply on a timely basis with any applicable requirements of the Miscellaneous Organic Chemical Manufacturing NESHAP, 40 C.F.R. 63 and Subpart FFFF, amended on December 22, 2008.
3. **NESHAP Subpart ZZZZ.** For stationary compression ignition reciprocating internal combustion engines (RICE), comply with the requirements of 40 C.F.R. 63.6590(c).
4. Recordkeeping, Reporting, and Certification Requirements
5. **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.
   1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
      1. A certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and
      2. The person providing the electronic signature has made an agreement with the certifying authority described in Condition 45.1a that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.
6. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall submit reports, compliance certifications, and/or other submittals required by this permit, via the Department’s AOS System at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option.
   1. Upon approval by the Department, the Permittee can submit reports by alternative methods, certified in accordance with Condition 45, and submitted by email under a cover letter using [dec.aq.airreports@alaska.gov](mailto: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.
7. **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.
8. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five-years after the date of collection, including:
   1. copies of all reports and certifications submitted pursuant to this section of the permit; and
   2. records of all monitoring required by this permit, and information about the monitoring including (if applicable):
      1. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
      2. sampling dates and times of sampling or measurements;
      3. the operating conditions that existed at the time of sampling or measurement;
      4. the date analyses were performed;
      5. the location where samples were taken;
      6. the company or entity that performed the sampling and analyses;
      7. the analytical techniques or methods used in the analyses; and
      8. the results of the analyses.
9. **Excess Emissions and Permit Deviation Reports**
   1. Except as provided in Condition 51, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:
      1. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
         1. emissions that present a potential threat to human health or safety; and
         2. excess emissions that the Permittee believes to be unavoidable;
      2. 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 non-routine repair that causes emissions in excess of a technology-based emission standard; and
      3. report all other excess emissions and permit deviations
         1. within 30 days after the end of the month during which the emissions or deviation occured, except as provided in Condition 49.1c(iii); or
         2. 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 49.1c(i); and
         3. for failure to monitor, as required in other applicable conditions of this permit.
   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 <http://dec.alaska.gov/media/6687/sciv-notform-rev-9-27-10.pdf>, 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.
   3. If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.
10. **Operating Reports.** The Permittee shall submit to the Department 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. The report shall be submitted under a cover letter certified in accordance with Condition 45.
    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.
    2. When excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 50.1, the Permittee shall identify
       1. the date of the deviation;
       2. the equipment involved;
       3. the permit condition affected;
       4. a description of the excess emissions or permit deviation; and
       5. any corrective action or preventative measures taken and the date of such actions; or
    3. When excess emissions or permit deviations have already been reported under Condition 49 the Permittee shall cite the date or dates of those reports.
11. **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.
    1. If emissions present a potential threat to health or safety, the Permittee shall report any such emissions according to Condition 49.
    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 51.
    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
       1. 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 51 or
       2. the Department notifies the Permittee that it has found a violation of Condition 51.
    4. The Permittee shall keep records of
       1. the date and time, and nature of all emissions complaints received;
       2. the name of the person or persons that complained, if known;
       3. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 51; and
       4. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.
    5. Report in each operating report required by Condition 50 the applicable operating permit issued to the stationary source under AS 46.14 and 18 AAC 50 a brief summary report for complaints which must include:
       1. the number of complaints received;
       2. the number of times the Permittee or the Department found corrective action necessary;
       3. the number of times action was taken on a complaint within 24 hours; and
       4. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.
    6. The Permittee shall notify the Department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.
12. **Emission Inventory Reporting.** The Permittee shall submit to the Department reports of actual emissions,[[9]](#footnote-9) by emissions unit, of CO, NH3, NOx, PM10, PM2.5, SO2, VOCs and Lead (Pb) (and lead compounds) using the form in Attachment 3 of this permit, as follows:
    1. Each year by April 30, if the stationary source’s potential to emit for the previous calendar year equals or exceeds:
       1. 250 TPY of NH3, PM10, PM2.5, or VOCs; or
       2. 2,500 TPY of CO, NOx, or SO2.
    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:
       1. 0.5 TPY of actual Pb, or
       2. 1,000 TPY of CO; or
       3. 100 TPY of SO2, NH3, PM10, PM2.5, NOx, or VOCs.
    3. For reporting under Condition 52.2, the Permittee shall report in 2021 for calendar year 2020, 2024 for calendar year 2023, etc., in accordance with the Environmental Protection Agency schedule.
    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 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.
       1. 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.
       2. If the AOS system is not available, the report may be submitted by
          1. email using [dec.aq.airreports@alaska.gov](mailto:dec.aq.airreports@alaska.gov); or
          2. hard copy to the following address: ADEC Air Permits Program, ATTN: Emissions Inventory, 555 Cordova Street, Anchorage, Alaska 99501.
13. Standard Permit Conditions
14. 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
    1. an enforcement action; or
    2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
15. 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.
16. 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.
17. 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.
18. The permit does not convey any property rights of any sort, nor any exclusive privilege.
19. 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
    1. enter upon the premises where an emissions unit subject to this permit is located or where records required by the permit are kept;
    2. have access to and copy any records required by this permit;
    3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
    4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.
20. General Source Test Requirements
21. **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.
22. **Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing
    1. at a point or points that characterize the actual discharge into the ambient air; and
    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.
23. **Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:
    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 C.F.R. 60.
    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 C.F.R. 61.
    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 C.F.R. 63.
    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.
    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.
    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.
    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.
24. **Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68°F and an absolute pressure of 760 millimeters of mercury).
25. **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.
26. **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 source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan no later than 60 days after receiving a request under Condition 59 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.
27. **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.
28. **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 45. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.
29. **Test Exemption.** The Permittee is not required to comply with Conditions 64, 65, and 66 when the exhaust is observed for visible emissions by Method 9 Plan or Smoke/No Smoke Plan.
30. Permit Documentation

*Date Documentation Details*

October 24, 2013 Department receives original application for AQ0083CPT06

October 29, 2013 Department receives addenda to the application for AQ0083CPT06

January 29, 2014 Department receives addenda to the application for AQ0083CPT06

May 21, 2019 Department receives original application for AQ0083CPT07

August 8, 2019 Department receives addenda to the application for AQ0083CPT07

January 8, 2020 Department receives information request response for AQ0083CPT07

May 19, 2020 Department receives technical review response for AQ0083CPT07

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 form 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.”

|  |  |
| --- | --- |
| * Stationary 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. * Stationary 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 clinometer. * 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. |



Attachment 2 - ADEC Notification Form

Excess Emissions and Permit Deviation Reporting

State of Alaska Department of Environmental Conservation

Division of Air Quality

|  |  |  |
| --- | --- | --- |
| Kenai Nitrogen Operations |  | AQ0083CPT07 |
| **Stationary Source Name** |  | **Air Quality Permit** |
| Agrium, U.S. Inc. |  |  |
| **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

1. Fax to: 907-451-2187

Or

1. Email to: [DEC.AQ.Airreports@alaska.gov](mailto:DEC.AQ.Airreports@alaska.gov)

Or

1. Mail to: ADEC

Air Permits Program

610 University Avenue

Fairbanks, AK 99709-3643

Or

1. 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** |  |  | |  |  |  |
| **PM10 Primary (PM10-PRI)** |  |  | |  |  |  |
| **PM2.5 Primary (PM25-PRI)** |  |  | |  |  |  |
| **Sulfur Dioxide (SO2)** |  |  | |  |  |  |
| **Ammonia (NH3)** |  |  | |  |  |  |
| **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** |  |  | |  | |  |  |
| **PM10 Primary (PM10-PRI)** |  |  | |  | |  |  |
| **PM2.5 Primary (PM25-PRI)** |  |  | |  | |  |  |
| **Sulfur Dioxide (SO2)** |  |  | |  | |  |  |
| **Ammonia (NH3)** |  |  | |  | |  |  |
| **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 (acfm)** |  |
| **> 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

1. Fax to: 907-269-7508

Or

1. Email to: [DEC.AQ.Airreports@alaska.gov](mailto:aDEC.AK.Airreports@ak.)

Or

1. Mail to: ADEC Division of Air Quality

ATTN: Emissions Inventory

555 Cordova Street

Anchorage, AK 99501

1. Commence has the meaning given in 40 C.F.R. 52.21(b)(9). [↑](#footnote-ref-1)
2. See: 40 C.F.R. 52.21(r) [↑](#footnote-ref-2)
3. 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 6.1, 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. [↑](#footnote-ref-3)
4. Startup is defined as the period that begins when fuel is supplied to the unit and ends when the unit reaches stable operations. [↑](#footnote-ref-4)
5. 40 C.F.R. 60 Subpart KKKK requires initial and annual NOx performance testing on each turbine subject to the new source performance standards of Subpart KKKK unless a waiver is granted by EPA. [↑](#footnote-ref-5)
6. *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2, effective 7/1/07 [↑](#footnote-ref-6)
7. *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 C.F.R. 60.2, effective 7/1/07. [↑](#footnote-ref-7)
8. The federal EEMSP report is not the same as the State excess emission report required by Condition 49. [↑](#footnote-ref-8)
9. 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. [↑](#footnote-ref-9)