**AIR QUALITY BUREAU**

**NEW SOURCE REVIEW PERMIT**

**Issued under 20.2.72 NMAC**

Note to Applicant for Draft Permit Reviews: The AQB permit specialist provides this draft permit to the applicant as a courtesy to assist AQB with developing practically enforceable permit terms & conditions and correcting any technical errors.  Please note that the draft permit may change following completion of the Department’s internal reviews.  If AQB makes additional changes, and as time allows, the applicant may be provided an opportunity for additional review before the permit is issued.

Certified Mail No: n/a draft

Return Receipt Requested

**NSR Permit No:** PSD3449-M5

**Facility Name:** Hobbs Generating Station

**Facility Owner/Operator:** CAMS (New Mexico) LLC

**Permittee Name:** Lea Power Partners, LLC

**Mailing Address:** 98 N. Twombly Lane

Hobbs, NM 88242

**TEMPO/IDEA ID No:** 25726-PRN20180001

**AIRS No:** 35-025-0341

**Permitting Action:** Significant Permit Revision (PSD major mod)

Source Classification: Major – TV, PSD w/BACT

**Facility Location:** 658,413 m E by 3,622,425 m N,

Zone 13, Datum WGS84

**County:** Lea

**Air Quality Bureau Contact** Kirby Olson

**Main AQB Phone No.** (505) 476-4300

**Liz Bisbey-Kuehn Date**

**Bureau Chief**

**Air Quality Bureau**

TABLE OF CONTENTS

[Part A FACILITY SPECIFIC REQUIREMENTS A3](#_Toc431993106)

[A100 Introduction A3](#_Toc431993107)

[A101 Permit Duration (expiration) A3](#_Toc431993108)

[A102 Facility: Description A3](#_Toc431993109)

[A103 Facility: Applicable Regulations A4](#_Toc431993110)

[A104 Facility: Regulated Sources A5](#_Toc431993111)

[A105 Facility: Control Equipment A7](#_Toc431993112)

[A106 Facility: Allowable Emissions A8](#_Toc431993113)

[A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) A13](#_Toc431993114)

[A108 Facility: Allowable Operations A14](#_Toc431993115)

[A109 Facility: Reporting Schedules A15](#_Toc431993116)

[A110 Facility: Fuel and Fuel Sulfur Requirements A15](#_Toc431993117)

[A111 Facility: 20.2.61 NMAC Opacity A16](#_Toc431993118)

[EQUIPMENT SPECIFIC REQUIREMENTS A18](#_Toc431993119)

[A200 Oil and Gas Industry – Not Required A18](#_Toc431993120)

[A300 Construction Industry – Not Required A18](#_Toc431993121)

[Power Generation Industry A18](#_Toc431993122)

[A400 Power Generation Industry A18](#_Toc431993123)

[A401 Turbines, Cooling Towers, and Inlet Chillers A18](#_Toc431993124)

[A402 Engines A26](#_Toc431993125)

[Part B GENERAL CONDITIONS (Attached) A27](#_Toc431993126)

[Part C MISCELLANEOUS: Supporting On-Line Documents; Definitions; Acronyms (Attached) A27](#_Toc431993127)

Part A FACILITY SPECIFIC REQUIREMENTS

* 1. Introduction
1. This permit, PSD 3449-M5,supersedes all portions of Air Quality Permit PSD 3449-M4, issued July 11, 2016, except the portion requiring compliance tests. Compliance test conditions from previous permits, if not completed, are still in effect, in addition to compliance test requirements contained in this permit.
2. Fee Requirement: This permit is not effective until the Department receives the permit fee specified in the attached invoice. Pursuant to 20.2.75.12 NMAC, the permittee shall pay this invoice no later than thirty (30) days after the permit issue date (invoicing), unless the Department has granted an extension. The permit fee must be paid by this date regardless of the permittee’s intended use or non-use of the permit or of the Department’s cancellation of the permit. The permittee’s failure to pay this fee when due will automatically void the permit and the Department may initiate enforcement action to collect the fee and assess a civil penalty for non-payment. The permittee shall not modify units HOBB-1 and HOBB-2 in Table 104.A. or implement the removal of the operating hours restriction before the date that the Department receives the permit fee in full. The Department may initiate enforcement action for injunctive relief and civil penalties for any construction or operation specified in Table A104 and the revision to operating hours if the permit fee is not paid by the due date.
3. This permit contains limits and conditions which are Prevention of Significant Deterioration (PSD) Best Available Control Technology (BACT) requirements that were imposed in accordance with the PSD permit regulation 20.2.74 NMAC. Any revision of any BACT requirement(s) must first be approved by the Department through a new source review permit application that includes a BACT re-evaluation consistent with 20.2.74 NMAC. Removal of any existing BACT requirement(s) also requires Department approval through an appropriate permit application.
	1. Permit Duration (expiration)
4. The term of this permit is permanent unless withdrawn or cancelled by the Department.
	1. Facility: Description
5. This facility is a natural gas fueled, nominal 604 MW net output power plant with two advanced firing temperature, Mitsubishi 501F combustion turbine generators (CTGs), each provided with its own heat recovery steam generator (HRSG) including duct burners, a single condensing, reheat steam turbine generator (STG), and an air cooled condenser serving the STG. The plant generates electricity for sale to Southwestern Public Service Company, its successors or assignees.
6. This facility is located approximately 9 miles westof Hobbs, New Mexico in Lea County.
7. This modification consists of removing the operating hours restriction for the turbines allowing them to run 8760 hours per year. This modification also increases emission limits for the turbines resulting from an upgrade to the turbines. This modification also redesignates the Total Suspended Particulates (TSP) limits as Particulate Matter (PM) limits due to the revision to 20.2.3 NMAC to repeal the TSP NMAAQS effective November 30, 2018. This description of this modification is for informational purposes only and is not enforceable.
8. Table 102.A and Table 102.B show the total potential emissions from this facility for information only, not an enforceable condition, excluding exempt sources or activities.

Table 102.A: Total Potential Emission Rate (PER) from Entire Facility\*

| **Pollutant** | **Emissions (tons per year)** |
| --- | --- |
| Nitrogen Oxides (NOx) | 193.8 |
| Carbon Monoxide (CO) | 286.4 |
| Volatile Organic Compounds (VOC)  | 97.9 |
| Sulfur Dioxide (SO2) | 53.4 |
| Particulate Matter (PM) | 97.9 |
| Particulate Matter less than 10 microns (PM10) | 96.6 |
| Particulate Matter less than 2.5 microns (PM2.5) | 95.4 |
| Greenhouse Gas (as CO2e) | 1,989,930 |

\*Totals include emissions from SSM

Table 102.B: Total Potential Potential Emissions Rate (PER) for \*Hazardous Air Pollutants (HAPs) and Toxic Air Pollutants (TAPs) that exceed 1.0 ton per year

|  |  |
| --- | --- |
| **Pollutant** | **Emissions** **(tons per year)** |
| Formaldehyde | 1.1 |
| Ammonia (TAP) | 281.3 |
| Total HAPs\*\* | 3.5 |

\* HAP emissions are already included in the VOC emission total.

\*\* The total HAP emissions may not agree with the sum of individual HAPs because only individual HAPs greater than 1.0 tons per year are listed here.

* 1. Facility: Applicable Regulations
1. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A.

Table 103.A: Applicable Requirements

| **Applicable Requirements** | **Federally****Enforceable** | **Unit****No.** |
| --- | --- | --- |
| 20.2.1 NMAC General Provisions | X | Entire Facility |
| 20.2.3 NMAC Ambient Air Quality Standards | X | Entire Facility |
| 20.2.7 NMAC Excess Emissions  | X | Entire Facility |
| 20.2.33 NMAC Gas Burning Equipment – Nitrogen Dioxide | X | DB-1, DB-2 |
| 20.2.61 NMAC Smoke and Visible Emissions | X | HOBB-1, HOBB-2, DB-1, DB-2, FH-1, FH-2, FH-3, G-1 and FP-1 |
| 20.2.70 NMAC Operating Permits | X | Entire Facility |
| 20.2.71 NMAC Operating Permit Emission Fees | X | Entire Facility |
| 20.2.72 NMAC Construction Permit | X | Entire Facility |
| 20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements | X | Entire Facility |
| 20.2.74 NMAC Prevention of Significant Deterioration | X | Entire Facility |
| 20.2.75 NMAC Construction Permit Fees | X | Entire Facility |
| 20.2.77 NMAC New Source Performance | X | HOBB-1, HOBB-2, DB-1, DB-2 |
| 20.2.82 NMAC MACT Standards for Source Categories of HAPs. | X | G-1, FP-1 |
| 20.2.84 NMAC Acid Rain Permit | X | HOBB-1, HOBB-2, DB-1, DB-2 |
| 40 CFR 50 National Ambient Air Quality Standards | X | Entire Facility |
| 40 CFR 60, Subpart A, General Provisions | X | HOBB-1, HOBB-2, DB-1, DB-2, G-1 |
| 40 CFR 60, Subpart IIII, Stationary Compression Ignition Internal Combustion Engines | X | G-1 |
| 40 CFR 60, Subpart KKKK, Stationary Combustion Turbines | X | HOBB-1, HOBB-2, DB-1, DB-2 |
| 40 CFR 63, Subpart A, General Provisions | X | G-1, FP-1 |
| 40 CFR 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines (RICE MACT) | X | G-1, FP-1 |
| 40 CFR 72 Title IV Acid Rain | X | HOBB-1, HOBB-2, DB-1, DB-2 |
| 40 CFR 73 Title IV Acid Rain Sulfur Dioxide Allowance Emissions | X | HOBB-1, HOBB-2, DB-1, DB-2 |
| 40 CFR 75 Title IV Acid Rain Continuous Emission Monitoring | X | HOBB-1, HOBB-2, DB-1, DB-2 |

* 1. Facility: Regulated Sources
1. Table 104.A lists the emission units authorized for this facility. Emission units identified as exempt activities (as defined in 20.2.72.202 NMAC) and/or equipment not regulated pursuant to the Act are not included.

Table 104.A: Regulated Sources List

| **Unit No.** | **Source Description** | **Make Model** | **Serial No.** | **Capacity** | **Manufacture Date** |
| --- | --- | --- | --- | --- | --- |
| HOBB-1 | Combustion Turbine (CT) | Mitsubishi Heavy Industries M501F-F4  | T487 | 180 MW (1,697 MMBtu/hr (LHV) nominal) | 2001, Modified December 20182 |
| HOBB-2 | Combustion Turbine (CT) | Mitsubishi Heavy Industries M501F-F4  | T488 | 180 MW (1,697 MMBtu/hr (LHV) nominal) | 2001, Modified December 20182 |
| DB-1 | Forney Duct Burner | Forney | 913864 | 330 MM Btu/hr | 2007 |
| DB-2 | Forney Duct Burner | Forney | 913865 | 330 MM Btu/hr | 2007 |
| AC-1 | Auxiliary Cooling Tower  | Baltimore Air Cooler, FXV3-364-100 | U014653101 | 9,500 gpm | 2002 |
| AC-2 | Auxiliary Cooling Tower  | Baltimore Air Cooler, FXV3-364-100 | U014653102 | 9,500 gpm | 2002 |
| AC-3 | Auxiliary Cooling Tower  | Baltimore Air Cooler, FXV3-364-100 | U014653103 | 9,500 gpm | 2002 |
| IC-1 | Inlet Chiller | Baltimore Aircoil, 331132A | U014283404 | 5,898 gpm | 2002 |
| IC-2 | Inlet Chiller | Baltimore Aircoil, 331132A | U014283405 | 5,898 gpm | 2002 |
| IC-3 | Inlet Chiller | Baltimore Aircoil, 331132A | U014283406 | 5,898 gpm | 2002 |
| FH-1 | Fuel Gas Heater | Rheos, 2400 | A07193433 | 2.4 MMBtu/hr | 2008 |
| FH-2 | Fuel Gas Heater | Rheos, 2400 | A07193435 | 2.4 MMBtu/hr | 2008 |
| FH-3 | Fuel Gas Heater | Rheos, 2400 | A07193434 | 2.4 MMBtu/hr | 2008 |
| G-1 | Standby Generator | Volvo Penta, D1641GEP | D16\*021102\*C3\*A | 565kW  | 2008 |
| FP-1 | Diesel Fire Pump | Detroit Diesel, DDFP-06FA---11 | 6VF-300006 | 443 Hp | 2001 |
| SCR-1 | Selective Catalytic Reduction | Peerless Manufacturing Co. | 70418A | < 2.0 ppmvd NOx @ 15% O2 average over 24 hours | 2008 |
| SCR-2 | Selective Catalytic Reduction | Peerless Manufacturing Co. | 70418B | < 2.0 ppmvd NOx @ 15% O2 average over 24 hours | 2008 |

1. All like-kind engine replacements must be evaluated for applicability to NSPS and MACT requirements.

2. Turbines will be upgraded subsequent to issuance of this permit

1. Stack Height of each CT/DB: To demonstrate compliance with 20.2.72.502 NMAC Table A–Non-carcinogens for ammonia, and in conjunction with Table-C Stack Height Correction Factor, the height of each CT/DB stack shall be no less than 165 feet above ground.
2. All equipment, including emission monitoring equipment and the cooling tower, shall be installed, operated and maintained in a manner consistent with the manufacturer’s intended purpose, specifications and recommended procedures.
	1. Facility: Control Requirements
3. Table 105 lists all the pollution control requirements for this facility except for those listed in Condition A100.B. Each emission point is identified by the same number that was assigned to it in the permit application.

Table 105: Control Equipment List:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Control Equipment Unit No.** | **Control Description** | **Pollutant being controlled** | **Control for Unit No.1** | **Required for BACT** |
| SCR-1 | Selective Catalytic Reduction | NOx | HOBB-1, HOBB-1/DB-1 | Yes |
| SCR-2 | Selective Catalytic Reduction | NOx | HOBB-2, HOBB-2/DB-2 | Yes |
| CAT-1 | Catalytic Oxidation | CO, VOC, HAP | HOBB-1, HOBB-1/DB-1 | Yes for CO and VOCs |
| CAT-2 | Catalytic Oxidation | CO, VOC, HAP | HOBB-2, HOBB-2/DB-2 | Yes for CO and VOCs |
| Fuel | pipeline quality natural gaswith a total sulfur limit of 1.7 gr/100 dscf | SO2, PM10 | HOBB-1/DB-1 and HOBB-2/DB-2  | Yes |
| N/A | 0.0071 lb/MMBtu (turbine only) and 0.0089 lb/MMBtu | PM10  | HOBB-1/DB-1 and HOBB-2/DB-2 | Yes |
| N/A | Dry Low NOx Burner | NOx | FH-1 |  |
| N/A | Dry Low NOx Burner | NOx | FH-2 |  |
| N/A | Dry Low NOx Burner | NOx | FH-3 |  |
| N/A | Dry Low NOx Burner | NOx | HOBB-1/DB-1 |  |
| N/A | Dry Low NOx Burner | NOx | HOBB-2/DB-2 |  |
| N/A | high efficiency drift eliminator that will limit total drift to 0.001 percent of the circulated water flow | PM10 | AC-1 to AC-3 and IC-1 to IC-3 | Yes |
| N/A | use of pipeline quality natural gas with a total sulfur content of 1.7 gr/100 scf and utilizing good combustion control practices  | CO, VOC, SO2, PM, PM10 | FH-1 to FH-3 | N/A |
| N/A | injection timing retardation, lean burn combustion, and good combustion practices through the use of turbocharging and aftercoolers | PM10 | FP-1 and G-1 | Yes |
| N/A | good combustion practices | CO and VOCs | FP-1 and G-1 | Yes |
| N/A | Turbocharging, aftercoolers, and good combustion practices | NOx | FP-1 and G-1 | Yes |
| Fuel | Ultra low sulfur diesel fuel of 15 ppmv | SO2 | FP-1 and G-1 | Yes |

1. Control for unit number refers to a unit number from the Regulated Equipment List

* 1. Facility: Allowable Emissions
1. The following Section lists the emission units and their allowable emission limits. (40 CFR 50, 40 CFR 60, Subparts A, IIII, and KKKK, 40 CFR 63 Subparts A and ZZZZ, 20.2.72.210.A and B.1 NMAC)

Table 106.A: Allowable Emissions for Turbine Generators (Units HOBB-1/DB-1 & HOBB-2/DB-2) Emission limits apply per unit except for tons/yr limits and ammonia limits.

| **Pollutant** | **CT w/Duct Burner, Normal Operations** | **CT w/o Duct Burner, Normal Operations** | **CT 1 Startup & Shutdown** | **Averaging Period** |
| --- | --- | --- | --- | --- |
| NO22 (lbs/hr), each | 18.1 | 14.5 | 193.2 | Hourly rolling 24-hour average based on CEMS data (SSM limits are based on a 1-hour average) |
| NO22,3 (ppmv) dry @ 15% O2, each | 2.0BACT | 965BACT | Hourly rolling 24-hour average based on CEMS data |
| NO22, (lb/MWh), each | 0.43 | Per NSPS KKKK | Daily rolling 30-day average (NSPS KKKK) |
| NO22 (tons/yr), combined | 190.1 | Daily rolling 365-day total (includes SSM emissions) |
|  |
| CO (lbs/hr), each | 11.0 | 8.8 | 2,0606 | 1-hour block9 average (Normal operation and SSM) |
| CO3 (ppmv) dry @ 15% O2, each | 2.0BACT | 30005BACT | 1-hour block9 average (Normal operation and SSM) |
| CO (tons/yr), combined | 285.0 | Daily rolling 365-day total (includes SSM emissions) |
|  |
| VOC (lbs/hr), each | 2.9 | 25 | 591 | Hourly rolling 24-hour average, calculation based on emission factor determined from compliance test data (SSM limits are based on a 1-hour average) |
| VOC3 (ppmv) dry @ 15% O2, each | 1.0BACT | 9005BACT |  Hourly rolling 24-hour average (SSM limits are based on a 1-hour block9 average) |
| VOC (tons/yr), combined | 97.7 | Daily rolling 365-day total (includes SSM emissions) |
|  |
| SO2 (lbs/hr), each | 10.7 | 8.7 | N/A8 | 1-hour block9 average, calculation based on Sulfur content of fuel  |
| SO2 (lb/MMBtu), each | 0.06 | Per NSPS KKKK | Daily rolling 30-day average (NSPS KKKK)  |
| SO2 (tons/yr), combined | 53.3 | Daily rolling 365-day total (includes SSM emissions) |
|  |
| PM/PM10/PM2.54(lbs/hr), each | 17.8 | 12.0 | N/A | Hourly rolling 24-hour average, calculation based on emission factor determined from compliance test data |
| PM/PM10 (lb/MMBtu), each4, 7 | 0.0089BACT | 0.0071BACT | N/A | Hourly rolling 24-hour average |
| PM/PM10/PM2.5 4(tons/yr), combined | 95.2 | Daily rolling 365-day total (includes SSM emissions) |
|  |
| NH3 (lbs/hr) each | 32.1 | N/A | Calculation based on compliance test data |
| NH3 (tons/yr), combined | 281.3 | N/A | Daily rolling 365-day total |

1 Turbine only; duct burners do not operate during startup and shutdown

2 Nitrogen oxide emissions include all oxides of nitrogen expressed as NO2.

3 The ppmvd limits for NOx, CO, and VOCs are PSD BACT limits

4 The PM/PM10/PM2.5 limits include condensable particulate matter.

5CT Startup not-to-exceed emissions are based on manufacturer’s data for uncontrolled emissions + a 20% safety factor as a 1-hr average.

6. Limit based on operational data from CEMS plus a 20% safety factor.

7 PSD3449R6 reduced lb/MMBtu from 0.015 combined to 0.0089 and 0.0071.

8 “N/A” means separate allowable SSM emission limits are not required for this unit because the SSM emissions are predicted to be less than the limits established in Table 106A. The permittee shall maintain records in accordance with Condition B109.C.

9 “Block Hour Average” is defined as the total mass of emissions emitted in a clock hour (xx:00 to xx:59) divided by 1 hour.

Table 106.B: Allowable Emissions – Auxiliary Equipment

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Unit No.** | **1NOx pph** | **NOx tpy** | **CO pph** | **CO tpy** | **VOC pph** | **VOC tpy** | **SO2 pph** | **SO2 tpy** | **PM pph** | **PM tpy** | **PM10 pph** | **PM10 tpy** | **PM2.5 pph** | **PM2.5 tpy** |
| IC-1, IC-2, IC-34 | -2 | - | - | - | - | - | - | - | 0.7 | 2.1 | 0.4 | 1.1 | 0.001 | 0.004 |
| FH-1, FH-2 FH-34 | 0.4 | 1.7 | 0.2 | 1.0 | 0.04 | 0.2 | 0.04 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | <3 | < |
| FP-1  | 7.4 | 0.4 | 1.4 | 0.1 | 0.3 | 0.01 | 0.01 | 0.0003 | 0.2 | 0.01 | 0. 2 | 0.01 | < | 0.01 |
| G-1  | 6.5 | 1.6 | 0.9 | 0.2 | 0.2 | 0.1 | 0.01 | 0.002 | 0.1 | 0.03 | 0.1 | 0.03 | < | 0.03 |
| AC-1, AC-2, AC-34 | - | - | - | - | - | - | - | - | 0.1 | 0.4 | 0.04 | 0.2 | 0.0002 | 0.001 |

1 Nitrogen Oxide emissions include all oxides of nitrogen expressed as NO2.

 Note: Title V annual fee assessments are based on the sum of allowable tons per year emission limits in Sections A106 and A107.

2 “-“ indicates that the application represented emissions are not expected for this pollutant.

3 “<“indicates the application represented uncontrolled emissions less than 1.0 pph or 1.0 tpy for this pollutant. Allowable limits are not imposed on this level of emissions, except for flares and pollutants with controls or other regulatory restrictions such as a limitation on operating hours.

4 Emission limits are the combined totals for these emission units.

1. Each duct burner shall not exceed the NOx emission limit of 0.2 lb/MMBtu per hour specified in 20.2.33.108.A. NMAC.
2. BACT Operating Limits for Units HOBB-1/DB-1 and HOBB-2/DB-2, SO2 and PM/PM10 shall be limited by limiting fuel usage to only pipeline quality natural gas with a total sulfur content of 1.7 grains/100 dscf or less.

**Table 106.C: BACT Limits – Fuel Gas Heaters**

|  |  |
| --- | --- |
| **Pollutant** | **FH-1, FH-2, and FH-3** |
| NO2 | 0.054 lb/MMBtu |
| CO | 0.03 lb/MMBtu |
| VOC | 0.005 lb/MMBtu |
| SO2 | 0.006 lb/MMBtu |
| PM/PM10 | 0.007 lb/MMBtu |

* 1. Facility: Allowable Startup, Shutdown, & Maintenance (SSM)
1. The authorization of emission limits for routine or predictable startup, shutdown, and maintenance (SSM) in Table 106.A does not supersede the requirements to minimize emissions according to General Conditions B101.F and B107.A.
2. Routine and Predictable SSM lb/hr and BACT Emission Limits – HOBB-1/DB-1 and HOBB-2/DB-2

|  |
| --- |
| **Requirement:** To demonstrate compliance with the NOx, CO, and VOC lb/hr SSM emission limits and the ppmvd BACT SSM limits in Table 106.A, the permittee shall meet the facility’s Operational Plan to Mitigate SSM Emissions (Plan) required by 20.2.7.14.A NMAC. The Plan shall at a minimum:* ensure that, at all times, the plant operators maintain the combustion turbines, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions and;
* contain a detailed operational plan for minimizing emissions during periods of routine and predictable Startups and Shutdowns associated with planned maintenance or normal operations.
 |
| **Monitoring:** The permittee shall monitor operation of Units HOBB-1/DB-1 and HOBB-2/DB-2 in accordance with the facility Operational Plan to Mitigate SSM Emissions. |
| **Recordkeeping:** The permittee shall keep records of the current Operational Plan to Mitigate SSM Emissions (Plan) and its revisions. Records of the actions required to mitigate SSM emissions in accordance with the Plan and records documenting that Plan requirements are met shall be kept. To ensure on-going compliance with the SSM BACT limits, the permittee shall update the Plan based on operational experience with the facility. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. SSM Ton Per Year Operating Requirements for HOBBS-1/DB-1 and HOBBS-2/DB-2

|  |
| --- |
| **Requirement:** The permittee shall limit annual ton per year emissions, including emissions during routine or predictable startup, shutdown, and maintenance (SSM) to the ton per year limits listed in Table A106.A. |
| **Monitoring:** The permittee shall monitor all routine or predictable startups and shutdowns and scheduled maintenance events as required in Condition A401.G. |
| **Recordkeeping:** The permittee shall meet the recordkeeping requirements in Condition A401.C. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

* 1. For this permit, the following definitions expand upon the existing definitions of 20.2.7.7 NMAC:
		1. Startup: a startup is initiated when the Data Acquisition and Handling System (DAHS) detects a flame signal (or equivalent signal) and ends when the permissives for the emission control system are met (i.e., steady state emissions compliance is achieved).
		2. Shutdown: a shutdown begins when the load drops to the point at which steady state emissions compliance can no longer be assured and ends when a flame-off signal is detected.
		3. Normal Operation: Normal operation begins upon completion of startup and lasts until a shutdown begins. Normal operations include operation of the combustion turbines (HOBB-1 and HOBB-2) in simple cycle or combined cycle mode with and without associated duct burner (DB-1 and DB-2) firing.
		4. Downtime or unit off-line is that time between the end of shutdown and the beginning of startup.
	2. Facility: Allowable Operations
1. Except for the unit specific limitations in Condition A108.B below, this facility is authorized for continuous operation. Monitoring, recordkeeping, and reporting are not required to demonstrate compliance with continuous hours of operation.

|  |
| --- |
|  |
|  |
|  |
|  |

1. Hours of Operation For Units G-1 and FP-1

|  |
| --- |
| **Requirement:** (1)To demonstrate compliance with allowable emission limits in Table 106.A and the with the method of operation represented in the permit application, the Standby Generator (G-1) shall only be operated during the unavoidable loss of commercial power or for necessary maintenance activities, and shall be operated less than 500 hours per year, based on a monthly rolling 12-month total basis. Any maintenance activities conducted on the standby generator are included in the 500 hours per year total. (2) The diesel fire water pump (FP-1) shall not operate more than 100 hours per year.  |
| **Monitoring:** The permittee shall monitor operating hours for these units with a non-resettable hour meter. |
| **Recordkeeping:** The permittee shall record the monthly rolling 12-month total hours of operation for each unit and shall meet Section B109 recordkeeping requirements. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

* 1. Facility: Reporting Schedules
1. The permittee shall report according to the Specific Conditions and General Conditions of this permit.
	1. Facility: Fuel and Fuel Sulfur Requirements
2. Fuel and Fuel Sulfur Requirements For Units HOBB-1/DB-1 HOBB-2/DB-2, FH-1, FH-2, and FH-3

|  |
| --- |
| **Requirement:** To demonstrate compliance with SO2 BACT requirements and allowable emission limits in Table 106.A and with the method of operation represented in the permit application, all listed combustion emission units shall combust only natural gas containing no more than 1.7 grains of total sulfur per 100 dry standard cubic feet.  |
| **Monitoring:** None. In accordance with EPA document EMTIG – GD-009 (March 12, 1990), no daily monitoring of fuel bound nitrogen is required for Units HOBB-1 and HOBB-2 because they combust only pipeline quality natural gas.  |
| **Recordkeeping:** The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel, or fuel gas analysis, specifying the total sulfur content in accordance with 40 CFR 60.4365.  If fuel gas analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier, with each fuel delivery, which shall include the delivery date, the fuel type delivered, the amount of fuel delivered, and the maximum sulfur content of the fuel. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. Fuel and Fuel Sulfur Requirements For Units G-1 and FP-1

|  |
| --- |
| **Requirement:** To demonstrate compliance with SO2 BACT requirements and sulfur emission limits in Table 106.B, the permittee shall limit the total sulfur content of diesel fuel to 500 ppm. 40 CFR 63 Subpart ZZZZ requires use of ultra low sulfur diesel (15 ppm total sulfur) for these units. |
| **Monitoring:** None.  |
| **Recordkeeping:** The permittee shall demonstrate compliance with the fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel, or fuel gas analysis, specifying the allowable limit or less. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier, with each fuel delivery, which shall include the delivery date, the fuel type delivered, the amount of fuel delivered, and the maximum sulfur content of the fuel. If fuel analysis is used, the analysis shall not be older than one year. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

* 1. Facility: 20.2.61 NMAC Opacity
1. For Units HOBB-1/DB-1 HOBB-2/DB-2, FH-1, FH-2, and FH-3

|  |
| --- |
| **Requirement:** Visible emissions from combustion emissions stacks for units HOBB-1/DB-1 HOBB-2/DB-2, FH-1, FH-2, and FH-3, shall not equal or exceed an opacity of 20 percent in accordance with the requirements at 20.2.61.109 NMAC. |
| **Monitoring:** Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 9 (EPA Method 9) as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures:1. Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (EPA Method 22). If no visible emissions are observed, no further action is required.
2. If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC.

For the purposes of this condition, *Startup mode* is defined as the startup period that is described in the facility’s startup plan. |
| **Recordkeeping:** If no visible emissions were observed, none.If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows:1. For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2.

For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. For Units G-1 and FP-1

|  |
| --- |
| **Requirement:** Visible emissions from combustion emission stacks from units G-1 and FP-1 shall not equal or exceed an opacity of 20% in accordance with the requirements at 20.2.61.109 NMAC. |
| **Monitoring:** (1) The permittee shall measure opacity on a Unit’s emissions stack anytime when visible emissions are observed during steady state operation. For emergency, standby, or limited use compression ignition engines that operate on a limited basis, the permittee shall, at least once during any year that the unit is operated and no less frequently than once every 5 years regardless of unit operation, measure opacity during steady state operation on each Unit for a minimum of 10 minutes in accordance with the procedures of 40 CFR 60, Appendix A, Method 9. (2) Alternatively for any compression ignition engine, if visible emissions are observed during steady state operation, within 1 hour of seeing visible emissions, the permittee shall shut down the engine and perform maintenance and/or repair to eliminate the visible emissions. Following completion of equipment maintenance and/or repair, the permittee shall conduct visible emission observations following startup in accordance with the following procedures:1. Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (EPA Method 22). If no visible emissions are observed, no further action is required.
2. If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC.

For the purposes of this condition, *Startup mode* is defined as the startup period that is described in the facility’s startup plan. |
| **Recordkeeping:**  If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows:1. For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2.
2. For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4.

For each emergency and limited use compression ignition engine, the permittee shall also record the number of operating hours per year of each Unit and the reason for operating the unit.  |
| **Reporting:** The permittee shall report in accordance with Section B110. |

EQUIPMENT SPECIFIC REQUIREMENTS

* 1. Oil and Gas Industry – Not Required
	2. Construction Industry – Not Required

Power Generation Industry

* 1. Power Generation Industry

This section has common equipment related to most Electric Service Operations (SIC-4911).

* 1. Turbines, Cooling Towers, and Inlet Chillers
1. Initial Compliance Test for PM/PM10/PM2.5 (Units HOBB-1/DB-1 and HOBB-2/DB-2)

|  |
| --- |
| **Requirement:** The permittee shall comply with the allowable lbs/MMBtu and lbs/hr emissions limit for each operating scenario (CT w/duct burner and CT w/o duct burner) listed in Table 106.A.Compliance with the PM emissions limits shall be deemed to demonstrate compliance with the PM10 and PM2.5 limits.  |
| **Monitoring:** Unless these tests were already completed and approved by the Department, the permittee shall test using EPA Reference Methods 5 for filterable PM and 202 for condensable PM as required in Condition B111. The Method 5 and 202 test results shall be combined to determine compliance with allowable emission limits.These tests shall occur within the time specified in Condition B111.A(2) starting with the issuance date of permit number PSD3449-M2.  |
| **Recordkeeping:** The permittee shall record the following for each test run:* pound per hour emission rate from Method 5, from Method 202, and the sum of the two rates
* the fuel flow rate (scf/hr), fuel heat rate (MMBtu/scf), and the calculated heat capacity of each unit (scf/hr x MMBtu/scf = MMBtu/hr)

The permittee shall also meet the recordkeeping requirements in Section B111. |
| **Reporting:** The permittee shall report in accordance with Section B110 and B111. |

1. 40 CFR 60, Subpart KKKK (Units HOBB-1/DB-1 and HOBB-2/DB-2)

|  |
| --- |
| **Requirements:** HOBB-1 and HOBB-2 shall comply with the standards for nitrogen oxide and sulfur dioxide of 40 CFR Part 60, Subpart KKKK. The permittee shall determine NOx excess emissions pursuant to 40 CFR 60.4350. |
| **Monitoring:** The permittee shall comply with the applicable monitoring and testing requirements of 40 CFR 60.4345. The permittee shall comply with the combustion turbine monitoring requirements of 40 CFR 60 Subparts A and KKKK.  |
| **Recordkeeping:** The permittee shall comply with the applicable recordkeeping requirements of 40 CFR 60.7.  |
| **Reporting:** The permittee shall comply with the applicable reporting requirements of 40 CFR 60.4375, 60.4395, and 60.7.  |

1. Continuous Emission Monitoring (CEMS) For Units HOBB-1, HOBB-2, HOBB-1/DB-1 and HOBB-2/DB-2

|  |
| --- |
| **Requirement:** To demonstrate compliance with the allowable NOX, CO, VOC, SOX and PM/PM10/PM2.5 emission limits in Table 106.A, with NSPS KKKK limits, and with 20.2.33 NMAC, the permittee shall meet the following Continuous Emissions Monitoring System (CEMS) requirements and the following monitoring, recordkeeping, and reporting requirements.1. The exhaust stacks for these units shall be equipped and maintained with NOx, CO and O2 CEMS. The permittee shall maintain the units according to manufacturer’s requirements.2. The NOX and O2 CEMS shall be designed, installed and certified in accordance with 40 CFR Part 75. Alternatively, the NOX CEMS may be installed and certified in accordance with the provisions of 40 CFR Part 60, Appendix B, Performance Specification 2 (PS2) – Specifications and Test Procedures for SO2 and NOX Continuous Emissions Monitoring Systems in Stationary Sources. 3. The CO CEMS shall be designed, installed and certified in accordance with the provisions of 40 CFR Part 60, Appendix B, Performance Specification 4A – Specification and Test Procedure for Carbon Monoxide Continuous Emissions Monitoring Systems in Stationary Sources. Following certification testing, the CO CEMS shall be operated in accordance with the provisions of 40 CFR Part 60, Appendix F – Quality Assurance Requirements for Continuous Emissions Monitoring Systems.  |
| **Monitoring:** 1. All CEMS shall comply with the requirements of 40 CFR 60.13, Monitoring Requirements. For the purpose of complying with one hour emission rate limits specified in this permit, all data collected will be used [60.13(h)(2)(v)] to determine the mass of pollutant emitted during any given clock hour (i.e., Block Average).2. The NOX CEMS shall also comply with the requirements of 40 CFR 60.4345. 3. The CEMS shall monitor all instances of excess emissions during startups, shutdowns, maintenance and malfunctions, including those associated with control equipment upset. |
| **Recordkeeping:** (1)The permittee shall keep a quality assurance plan for all CEMS in accordance with 40 CFR 60.4345 and 40 CFR 75, Appendix B. (2) The permittee shall monitor and record all instances in which the CEMS are not in operation or accurately recording stack concentrations. (3) The permittee shall ensure that all of the required monitoring systems are installed and meet the following requirements: * + 1. The NOX and CO2 or O2 CEMS shall be audited in accordance with 40 CFR Part 60 Subpart KKKK or 40 CFR Part 75. The CO CEMS shall be audited in accordance with 40 CFR Part 60, Appendix F.

ii) The reported output of the CEMS shall be in:a. ppmv of NOX and CO at dry standard conditions;b. ppmv of NOx and CO corrected to 15% oxygen at dry standard conditions; and lbs/hr of NOx and CO.iii) The QA/QC plan required by 40 CFR Part 60, Appendix F, shall include a data substitution procedure for the CO CEMS that is consistent with requirements of 40 CFR Part 75’s missing data procedure for NOX data. Under conditions for which the 40 CFR Part 75 missing data procedure for NOx specifies an “HB/HA” substitution, the permittee shall instead calculate the arithmetic average of the CO concentration or CO mass emission rate recorded by the monitoring system during the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin (load range and operational bin are defined in 40 CFR Part 75). Whenever no prior quality-assured concentration data exist for the corresponding load range, the maximum potential CO concentration or mass emission rate will be calculated. Alternatively, if it can be demonstrated that the control equipment was operating properly during the hour of missing data, the maximum controlled emission rate or the maximum expected controlled concentration may be substituted. The permittee will use the greater of this average value or the 95th percentile of the previous 2,160 quality-assured monitor operating hours at the corresponding unit load range or operational bin to substitute for the missing data. The QA/QC plan shall be submitted to the Department with the Compliance Test Protocols.(4) For each CEMS, the permittee shall maintain records of performance test measurements, all performance evaluations, calibration checks, and all adjustment and maintenance activities. (5) The permittee shall maintain records of the following requirements using data from the CEMS (DAHS) to demonstrate compliance with established emission limits:* + 1. For NOX:
			1. The hourly rolling 24-hour average lb/hr.
			2. The hourly rolling 24-hour average parts per million by volume (on a dry standard cubic foot basis, corrected to 15% O2).
			3. The lb/MWh calculated in accordance with NSPS KKKK, 40 CFR 60.6350.
			4. the lb/MMBtu per hour (20.2.33 NMAC and P244R1 Section B.112.C.)
			5. The daily-rolling 365-day total tons/year for the combined units (updated monthly by the 15th of the following month) including any emissions during routine or predictable startup, shutdown, and scheduled maintenance (SSM).
		2. For CO:
			1. The one-hour block average lb/hr.
			2. The one-hour block average ppmvd @ 15% O2.
			3. The daily-rolling 365-day total tons/year for the combined units (updated monthly by the 15th of the following month) including any emissions during routine or predictable startup, shutdown, and scheduled maintenance (SSM).
		3. For VOC:
			1. The hourly rolling 24-hour average lb/hr calculated by DAHS using the heat input and the emission factors listed below:
				1. For calculating startup emissions when the catalyst temperature is <300 degrees F at the beginning of startup, the emissions shall be calculated using this equation: VOC (lb/event) = 165 lb/hr \* event duration (hr/event),
				2. For calculating startup emissions when the catalyst temperature is between 300 degrees F and 500 degrees F at the beginning of startup, the emissions shall be calculated using this equation: VOC (lb/event) = 203 lb/hr \* event duration (hr/event),
				3. For calculating startup emissions when the catalyst temperature is >500 degrees F at the beginning of startup, the emissions shall be calculated using this equation: VOC (lb/event) = 207 lb/hr \* event duration (hr/event),
				4. And the shutdown emissions shall be calculated using this equation: VOC (lb/event) = 156 lb/hr \* event duration (hr/event)
			2. The hourly rolling 24-hour average CO concentration in ppmvd @ 15% O2, using the 1 hr block average CO CEMS output (Compliance with the 24-hr average CO concentration limits in ppmvd@15% O2 shall also demonstrate compliance with the 24-hr average VOC concentration in ppmvd@15% O2.).
			3. The daily-rolling 365-day total tons/year for the combined units (updated monthly by the 15th of the following month) including any emissions during routine or predictable startup, shutdown, and scheduled maintenance (SSM).
		4. For SO2:
			1. One-hour block average lb/hr calculated by DAHS using the heat input and the emission factor calculated using (1) Equation D-1h from 40 CFR 75, Appendix D, Section 2.3.2.1.1 and (2) the sulfur content from the current valid tariff or annual sulfur sampling results. Additionally, 40 CFR 75, Appendix D, Section 2.3.1.1 may also be used for the SO2 emission factor as applicable.
			2. The daily rolling 30 day average lb/MMBtu (NSPS KKKK) calculated by the DAHS using (1) Equation D-1h from 40 CFR 75, Appendix D, Section 2.3.2.1.1 and (2) the sulfur content from the current valid tariff or annual sulfur sampling results. Additionally, 40 CFR 75, Appendix D, Section 2.3.1.1 may also be used for the SO2 emission factor as applicable.
			3. The daily-rolling 365-day total tons/year for the combined units (updated monthly by the 15th of the following month) including any emissions during routine or predictable startup, shutdown, and scheduled maintenance (SSM).
		5. For PM/PM10/PM2.5:
			1. The hourly rolling 24-hour average lb/hr calculated by DAHS using the heat input and the emission factor determined by the compliance test required by Condition A401.A.
			2. The hourly rolling 24-hour average lb/MMBtu rates of PM and PM10 calculated by direct conversion of the hourly emissions calculated above in v)(1). This requirement is not applicable for PM2.5.
			3. The daily-rolling 365-day total tons/year emissions calculated by DAHS using the heat input and the emission factor determined by the compliance test required by Condition A401.A. The ton per year emissions shall include any emissions during routine or predictable startup, shutdown, and scheduled maintenance (SSM).$Output Based CO\_{2} Emission Standard \left(\frac{lb\_{CO2}}{MWh}\right)=\frac{CO\_{2} Mass Emissin Rate \left(ton\_{CO2}\right)}{Plant Net Electricity Generation \left(MWh\right)}×2,000 \frac{lb\_{CO2}}{ton\_{CO2}}$
 |
| **Reporting:** All CEMS shall be subject to the notification requirements of 40 CFR 60.7. The QA/QC plan shall be submitted to the Department with the Compliance Test Protocols.  |

1. 20.2.33 NMAC Requirements ( DB-1 and DB-2)

|  |
| --- |
| **Requirement:** Units DB-1 and DB-2 shall not exceed the lb/MMBtu emission limit in Condition A106.B.  |
| **Monitoring:** NOx lb/MMBtu emissions shall be monitored according to Condition A401.B. The permittee shall demonstrate compliance with this requirement by demonstrating that the NOx emissions from turbine plus duct burner minus the NOx emissions from operation in turbine only mode are less than this lb/MMBtu limit or by demonstrating that the NOx emissions from the turbine plus duct burner are less than this lb/MMBtu limit . |
| **Recordkeeping:** NOx lb/MMBtu emissions shall be recorded according to Condition A401.B.  |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. Temperature and Static Pressure Drop for Catalyst Beds For Units HOBB-1/DB-1 and HOBB-2/DB-2

|  |
| --- |
| **Requirement:** The permittee shall monitor the temperature and static pressure drop.A thermocouple shall be installed at the inlet of the catalyst bed of SCR-1 and SCR-2.  |
| **Monitoring:** The permittee shall continuously monitor the temperature at the inlet of each SCR catalyst bed, and static pressure drop from the inlet of the CatOx to the outlet of the SCR catalyst bed.  |
| **Recordkeeping:** (1)The permittee shall monitor and record all the instances in which the SCR monitors above are not in operation or are out of calibration specifications.(2) The permittee shall develop and maintain on-site a procedure to monitor SCR catalyst activity, to predict its remaining active life and to define parameters for catalyst replacement. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. Ammonia Injection for SCR for Units HOBB-1/DB-1 and HOBB-2/DB-2

|  |
| --- |
| **Requirement:** (1)Ammonia injection to the SCR shall commence when the inlet temperature to the ammonia injection grid has exceeded 582 0F. This condition is included to reduce NOX emissions during startup. (2) The facility shall not store or use aqueous ammonia in concentrations greater than 19% in SCR-1 and SCR-2. However, if aqueous ammonia in concentrations greater than 20% is utilized, storage shall be limited to 20,000 pounds. (3) Annual compliance testing is required on Stacks 1 and 2 for ammonia. When the measured concentration equals or exceeds 75% of the permitted limit, the permittee shall determine the catalyst activity and schedule replacement in accordance with the procedures required in A401.E.  |
| **Monitoring:** The permittee shall monitor the quantity of aqueous ammonia injected into each SCR system on an hourly basis.  |
| **Recordkeeping:** (1)The ammonia injection systems shall be inspected on a daily basis to ensure proper operation. (2) The permittee shall maintain records of the following requirements using data from the annual compliance test to demonstrate compliance with established emission limits:* + 1. The hourly lb/hr emission rate observed during the most recent annual compliance test.
		2. The daily-rolling 365-day total tons/year for the combined units calculated by the daily hours of operation times the hourly emission rate observed during the most recent annual compliance test (updated monthly by the 15th of the following month).
 |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. Mode of Operation For Units HOBB-1/DB-1 and HOBB-2/DB-2

|  |
| --- |
| **Requirement:** To verify compliance with the allowable emission limits during each operating mode in Table 106.A and the ton per year limits in Table 106.A, the permittee shall monitor and record the operating hours a specified in this condition. The modes of operation include startup, shutdown, and normal operations during both non-duct-burning, and duct burning. |
| **Monitoring:** The permittee shall monitor, using the CEMS and DAHS system, the start and stop times and dates of each operating mode and the total unit operating hours, as defined in 40 CFR 60.4420, for each Turbine (Units HOBB-1/DB-1 and HOBB-2/DB-2) on an hourly, daily, monthly and monthly rolling 12-month total basis.  |
| **Recordkeeping:** For each turbine and each mode, the permittee shall record the operating mode (startup, non-duct burning, duct burning, or shutdown), the date, and the mode start time and end time. The permittee shall also record the total operating hours of each turbine on a monthly rolling 12-month basis. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. Gas Flow Rate and Data for Emissions Estimates For Units HOBB-1/DB-1 and HOBB-2/DB-2

|  |
| --- |
| **Requirement:** To measure the heat input (MMBtu/hr) for determining emission estimates for VOC, SOX, PM/PM10/PM2.5 per Condition A401.C and meet acid rain requirements, the permittee shall install a natural gas fuel flow monitor or an equivalent measuring device shall be installed on Units HOBB-1, HOBB-2, DB-1 and DB-2 and meet the initial certification requirements of 40 CFR Part 75, Appendix D.2.1.5, and the quality assurance requirements of 40 CFR Part 75, Appendix D.2.1.6.  |
| **Monitoring:** (1) The permittee shall monitor the total volumetric flow of natural gas consumed by each combustion Turbine and duct burner on a daily, monthly, and monthly rolling 12-month total basis. (2) For time periods outside of compliance testing, exhaust gas flow shall be determined by EPA Method 19 (F factors) or another approved method as determined by the Department.  |
| **Recordkeeping:** The permittee shall keep records in accordance with Section B109. |
| **Reporting:** The permittee shall report in accordance with Section B110. |

1. Cooling Tower Operating Requirements (Units AC-1, 2, 3)

|  |
| --- |
| **Requirement:** The permittee shall demonstrate compliance with the BACT requirements and the cooling tower emission limits for Units AC-1, 2, 3 in Table 106.B by meeting the following requirements.(1) Each Cooling Tower shall be equipped with a high efficiency drift eliminator and designed, operated, and maintained according to manufacturer’s specifications, or equivalent. Each drift eliminator shall have a drift rate of no more than 0.001% or less of the water circulation rate.(2) The facility shall not use any cooling water additives containing heavy metals such as chromium in the cooling tower.(3) The water in each Cooling Tower shall not exceed a total dissolved solids (TDS) of 3000 ppmw.(4) The circulation rate of each Cooling Tower’s water pumps shall not exceed 1780 gallons per minute (gpm). |
| **Monitoring:** The permittee shall monitor the following parameters during Cooling Tower operation.(1) Once per calendar year during the facility shutdown, inspect to verify that the drift eliminators are in place and in good repair.(2) At least daily monitor and record the TDS concentration of cooling tower water in ppmw. |
| **Recordkeeping:** Records shall be kept of the following:(1) The inspections of the drift eliminators including any repairs or maintenance;(2) The dates of the facility annual shutdown;(3) The manufacturer’s design specifications of the drift eliminators and water pumps, and of the manufacturer’s recommended, or equivalent, maintenance procedures;(4) The cooling tower chemical additives used in accordance with Section B109.(5) The daily cooling water TDS measurement; and(6) A written copy of the procedure used to measure the TDS concentration. The permittee shall also shall meet the applicable requirements of Conditions B109.A and B. |
| **Reporting:** The permittee shall report according to Section B110. |

1. Inlet Chiller Operating Requirements (Units IC-1, 2, 3)

|  |
| --- |
| **Requirement:** The permittee shall demonstrate compliance with the BACT requirements and the cooling tower emission limits for Units IC-1, 2, and 3 in Table 106.B by meeting the following requirements.(1) Each inlet chiller shall be equipped with a high efficiency drift eliminator and designed, operated, and maintained according to manufacturer’s specifications, or equivalent. Each drift eliminator shall have a drift rate of no more than 0.001% or less of the water circulation rate.(2) The water in each inlet chiller shall not exceed a total dissolved solids (TDS) of 3000 ppmw.(3) The circulation rate of each inlet chiller’s water pumps shall not exceed 15,448 gallons per minute (gpm). |
| **Monitoring:** The permittee shall monitor the following parameters during inlet chiller operation.(1) Once per calendar year during the facility shutdown, inspect to verify that the drift eliminators are in place and in good repair.(2) At least daily monitoring and record the TDS concentration of cooling tower water in ppmw.  |
| **Recordkeeping:** Records shall be kept of the following:(1) the inspections of the drift eliminators including any repairs or maintenance;(2) the dates of the facility annual shutdown;(3) the manufacturer’s design specifications of the drift eliminators and water pumps, and of the manufacturer’s recommended, or equivalent, maintenance procedures; (4) the daily cooling water TDS measurement; and(5) a written copy of the procedure used to measure the TDS concentration.The permittee shall also shall meet the applicable requirements of Conditions B109.A and B. |
| **Reporting:** The permittee shall report according to Section B110. |

* 1. Engines
1. 40 CFR 60, Subpart IIII (Unit G-1)

|  |
| --- |
| **Requirements:** The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart IIII including, but not limited to, fuel requirements under 60.4207 which references the 40 CFR 80.510(b) sulfur limit of 15 ppm or less.  |
| **Monitoring:** The permittee shall comply with the applicable monitoring requirements of 40 CFR 60 Subparts A and IIII. |
| **Recordkeeping:** The permittee shall comply with the applicable recordkeeping requirements of 40 CFR 60 Subparts A and IIII. |
| **Reporting:** The permittee shall comply with the applicable reporting requirements of 40 CFR 60 Subparts A and IIII. |

1. 40 CFR 63, Subpart ZZZZ (Units G-1 and FP-1)

|  |
| --- |
| **Requirement:** The units are subject to 40 CFR 63, Subpart ZZZZ and the permittee shall comply with all applicable requirements of Subpart A and Subpart ZZZZ, including, but not limited to, fuel requirements under 63.6604(b) which references the 40 CFR 80.510(b) sulfur limit of 15 ppm or less. However, Stationary RICE subject to Regulations under 40 CFR Part 60 must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. (40 CFR 63.6590(c)) |
| **Monitoring:** The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ. |
| **Recordkeeping:** The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10. |
| **Reporting:** The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10. |

1. Maintenance, Repair, and Good Combustion Practices (GCP) (Units FH-1 to FH-3, G-1, and FP-1)

|  |
| --- |
| **Requirement:** To demonstrate compliance with theBACT limits in Tables 106.B and 106.C, the permittee shall meet the following Good Combustion Practices (GCPs).**(1)** The permittee shall operate each engine at the combustion temperature recommended by the manufacturer.**(2)** Each engine shall be maintained and tuned as recommended by the manufacturer.**(3)** Unit G-1 will utilize injection timing retardation and lean burn combustion as part of GCP.**(4)** Unit FP-1 will utilize injection timing retardation, lean burn combustion, turbochargers, and aftercoolers as part of GCP.**(5)** The permittee shall maintain on-site the manufacturer’s specifications and recommended maintenance and tune up requirements along with any written site specific inspection and maintenance protocol. **(6)** To ensure on-going good combustion practice of the units, the permittee shall update their inspection and maintenance protocol as needed based on operational experience with the units. |
| **Monitoring:** At a minimum, the permittee shall complete the monitoring specified by the manufacturer’s specifications or approved protocol and updates to that protocol |
| **Recordkeeping:** **(1)** The permittee shall maintain a copy of the manufacturer’s engine specifications and recommended maintenance and tune-up requirements along with any written site specific inspection and maintenance protocol. **(2)** The permittee shall maintain records of the dates and the results of inspections required by the manufacturer’s specifications; and the tune ups and maintenance. **(3)** The permittee shall maintain records in accordance with Section B109.  |
| **Reporting:** The permittee shall report in accordance with Section B110.  |

1. GENERAL CONDITIONS (Attached)
2. MISCELLANEOUS: Supporting On-Line Documents; Definitions; Acronyms (Attached)