State of Utah
SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

16121

Title V Operating Permit

PERMIT NUMBER: 1300141001 -**DRAFT**
DATE OF PERMIT: TBD
Date of Last Revision: TBD

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

Crusoe Energy Systems, Incorporated
255 Fillmore Street
Denver, CO 80206

Permitted Location:

Duchesne Data Center Power Station
1 Mile Northeast of Upalco
Lat: 40.28899 Long: -110.20166
Duchesne County, UT 84007

UTM coordinates: 567,859 m Easting, 4,460,140 m Northing
SIC code: 7374 (Computer Processing & Data Preparation & Processing Services)

By:

_____
Bryce C. Bird, Director

Prepared By:

Brandy Cannon
bcannon@utah.gov

ENFORCEABLE DATES AND TIMELINES

The following dates or timeframes are referenced in Section I: General Provisions of this permit.

Annual Certification Due:	February 15 of every calendar year that this permit is in force.
Renewal application due:	TBD
Permit expiration date:	TBD
Definition of "prompt":	written notification within 14 days.

ABSTRACT

Crusoe Energy Systems, Incorporated operates a power station in Duchesne County, Utah to generate electricity for data centers located onsite. The operation routes stranded gas from nearby facilities through compressor engines, a turbine, and generators to generate electricity for the data centers. Emergency engines provide power during periods when turbine and generator produced power is interrupted. The power station is a major source for emissions of CO and is subject to 40 CFR 60 Subpart A-General Provisions, 40 CFR 60 Subpart IIII-Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60 Subpart JJJJ-Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60 Subpart KKKK-Standards of Performance for Stationary Combustion Turbines, 40 CFR 63 Subpart A-General Provisions, and 40 CFR 63 Subpart ZZZZ-National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

OPERATING PERMIT HISTORY

Permit/Activity	Date Issued	Recorded Changes
Title V initial application (Project #OPP0161210001)	TBD	

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

SECTION I: GENERAL PROVISIONS

I.A **Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B **Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C **Duty to Comply.**

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D **Permit Expiration and Renewal.**

I.D.1 This permit is issued for a fixed term of five years and expires on the date shown under "Enforceable Dates and Timelines" at the front of this permit. (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due on or before the date shown under "Enforceable Dates and Timelines" at the front of this permit. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Director takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Director any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Director consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L **Compliance Certification.**

I.L.1 Permittee shall submit to the Director an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than the date shown under "Enforceable Dates and Timelines" at the front of this permit, and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means

designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

I.L.1.d Such other facts as the Director may require to determine the compliance status.

I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Director: (R307-415-6c(5)(d))

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
1595 Wynkoop Street
Denver, CO 80202-1129

I.M **Permit Shield.**

I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:

I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))

I.M.2 Nothing in this permit shall alter or affect any of the following:

I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))

I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(a)(xiii) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))

I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Director to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N **Reserved.**

I.O **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii))

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Director every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i)

I.S.2.c The Director shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the

probable cause of such deviations, and any corrective actions or preventative measures taken. Prompt, as used in this condition, shall be defined as written notification within the number of days shown under "Enforceable Dates and Timelines" at the front of this permit. Deviations from permit requirements due to breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Director are to be sent to the following address or to such other address as may be required by the Director:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Director:

For annual compliance certifications:

Environmental Protection Agency, Region VIII
Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
1595 Wynkoop Street
Denver, CO 80202-1129

For reports, notifications, or other correspondence related to permit modifications, applications, etc.:

Environmental Protection Agency, Region VIII
Air Permitting and Monitoring Branch
(mail code 8ARD-PM)
1595 Wynkoop Street
Denver, CO 80202-1129
Phone: 303-312-7015

I.T **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Director or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Director determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the Acid Rain Program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into this permit. (R307-415-7g(1)(b))

I.T.3 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U **Inventory Requirements.**

An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.V **Title IV and Other, More Stringent Requirements**

Where an applicable requirement is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, Acid Deposition Control, both provisions shall be incorporated into this permit. (R307-415-6a(1)(b))

SECTION II: SPECIAL PROVISIONS

II.A **Emission Unit(s) Permitted to Discharge Air Contaminants.**
(R307-415-4(3)(a) and R307-415-4(4))

II.A.1 **Permitted Source**
Source-wide

II.A.2 **Compressor Engines**
Unit includes two four-stroke rich burn (4SRB) compressor engines, fired on natural gas only, each rated at 530 HP, and each equipped with non-selective catalytic reduction (NSCR) control. Units are subject to 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ.

II.A.3 **Generator Engines**
Unit includes ten 4SRB generator engines, fired on natural gas only, each rated at 2,500 HP, and each equipped with NSCR control. Units are subject to 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ.

II.A.4 **Emergency Engine Generator Sets**
Unit includes two diesel-fired emergency generator engines, each rated at 2,944 HP (2,000 kW). Units are subject to 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ.

II.A.5 **Turbine**
Unit includes one turbine, fired on natural gas only, rated at 13,364 kW (133.1 MMBtu/hr), and equipped with SoLoNO$_x$ (low NO$_x$ burners).

II.B **Requirements and Limitations**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated:

II.B.1 **Conditions on permitted source (Source-wide).**

II.B.1.a **Condition:**

Visible emissions shall not exceed 10 percent opacity from the natural gas-fired engines and the turbine. [Origin: DAQE-AN161210003-24]. [R307-201-3, R307-401-8]

II.B.1.a.1 **Monitoring:**

A visual opacity survey shall be conducted at least once each quarter for each affected emission unit. The visual opacity survey shall be performed while the unit is operating by an individual certified on the observation procedures of 40 CFR 60, Appendix A, Method 9. If any visible emissions are observed from an affected emission unit, an opacity determination of that emission unit shall be performed by a certified observer in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.1.a.2 **Recordkeeping:**

The permittee shall maintain a log of the visual opacity surveys, opacity determinations, and all data required by 40 CFR 60, Appendix A, Method 9 in accordance with Provision I.S.1 of this permit.

II.B.1.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.b **Condition:**

Unless otherwise specified in this permit, at all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any permitted plant equipment, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [Origin: DAQE-AN161210003-24]. [40 CFR 60.11(d), R307-401-4, R307-401-8(2)]

II.B.1.b.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.1.b.2 **Recordkeeping:**

The permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.1.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2 **Conditions on Compressor Engines.**

II.B.2.a **Condition:**

(i) For stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG), the permittee shall comply with the emission standards in Table 1 of 40 CFR 60 Subpart JJJJ. (40 CFR 60.4233(e))
(ii) The permittee shall comply with the provisions of 40 CFR 60.4236 as applicable. (40 CFR 60.4230(a)(6))
(iii) The permittee shall operate and maintain affected emission units that achieve the emission standards as required in this condition over the entire life of the engine. (40 CFR 60.4234)
(iv) Stationary SI natural gas fired engines may be operated using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but shall keep records of such use. (40 CFR 60.4243(e))
(v) The air-to-fuel ratio (AFR) controller, if used, shall be maintained and operated appropriately by the permittee in order to ensure proper operation of affected emission units and control device to minimize emissions at all times. (40 CFR 60.4243(g))

[Origin: 40 CFR 60 Subpart JJJJ]. [40 CFR 60.4230(a)(6), 40 CFR 60.4233(e), 40 CFR 60.4234, 40 CFR 60.4243, 40 CFR 63 Subpart ZZZZ]

II.B.2.a.1 **Monitoring:**

(a) For affected emission units subject to 40 CFR 60.4233(e), the permittee shall demonstrate compliance according to one of the methods specified in paragraphs (a)(1) and (2) of this section.
  (1) Purchasing an engine certified according to procedures specified in 40 CFR 60 Subpart JJJJ, for the same model year, engine class, and maximum engine power. In addition, the permittee shall meet one of the requirements specified in paragraphs (1)a) and b) of this section.
    a) If the permittee operates and maintains the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the permittee shall keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The permittee shall also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If the permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the affected emission unit will not be considered out of compliance.
    b) If the permittee does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the permittee shall demonstrate compliance according to (i) of this section.
      (i) If the affected emission unit is greater than 500 HP, the permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee shall conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.
  (2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) and according to the requirements specified in 40 CFR 60.4244, as applicable, and according to paragraph (2)a) of this section.
    a) If the affected emission unit is greater than 500 HP, the permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee shall conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

  (40 CFR 60.4243(b))

(b) The permittee shall conduct performance tests in accordance with the procedures in 40 CFR 60.4244(a) through (f). (40 CFR 60.4244)

(c) If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the permittee shall conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233. (40 CFR 60.4243(e))

Records required for this permit condition will also serve as monitoring.

II.B.2.a.2 **Recordkeeping:**

(a) The permittee shall keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this condition and all documentation supporting any notification.
(2) Maintenance conducted on each affected emission unit.
(3) If the affected emission unit is a certified engine, documentation from the manufacturer that the affected emission unit is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.
(4) If the affected emission unit is not a certified engine or is a certified engine operating in a non-certified manner and subject to section (a)(1)b) of monitoring, documentation that the engine meets the emission standards.

(40 CFR 60.4245(a))

(b) The permittee shall keep records of the install date of each affected emission unit and the applicable requirements under 40 CFR 60 Subpart JJJJ for the respective model year engine.
(c) Records of propane usage shall be kept in accordance with 40 CFR 60.4243(e).

Records and results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.2.a.3 **Reporting:**

For affected emission units that are subject to performance testing, the permittee shall submit a copy of each performance test as conducted in 40 CFR 60.4244 within 60 days after the test has been completed in accordance with 40 CFR 60.4245(d).

There are no additional reporting requirements for this provision except those specified in 40 CFR 60.4245 and Section I of this permit.

II.B.2.b **Condition:**

Emissions from each compressor engine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
NO_x: 0.15 g/bhp-hr and 0.18 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.2.b.1 **Monitoring:**

Stack testing shall be performed as specified below:
(a) Frequency. Each unit shall be tested annually based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4. Upon demonstration through at least three annual tests that the limits are not being exceeded, the permittee may request approval to conduct stack testing less frequently than annually.
(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.
(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, Occupational Safety and Health Administration (OSHA)- or Mine Safety and Health Administration (MSHA)-approved access shall be provided to the test location.
(d) Methods.
(1) 40 CFR 60, Appendix A, Method 7, 7E, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine NO_x emissions;

(2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.2.b.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.2.b.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.c **Condition:**

Emissions from each compressor engine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
CO: 0.3 g/bhp-hr and 0.35 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.2.c.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Each unit shall be tested at least once every three years based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.

(d) Methods.
(1) 40 CFR 60, Appendix A, Method 10, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine CO emissions;
(2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate

and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.2.c.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.2.c.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.d **Condition:**

Emissions from each compressor engine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
VOC: 0.02 g/bhp-hr and 0.02 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.2.d.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Each unit shall be tested at least once every three years based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.

(d) Methods.
  (1) 40 CFR 60, Appendix A, Method 18, Method 25, Method 25A, 40 CFR 63, Appendix A, Method 320, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine VOC emissions;
  (2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.2.d.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.2.d.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.3 **Conditions on Generator Engines.**

II.B.3.a **Condition:**

(i) For stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG), the permittee shall comply with the emission standards in Table 1 of 40 CFR 60 Subpart JJJJ. (40 CFR 60.4233(e))
(ii) The permittee shall comply with the provisions of 40 CFR 60.4236 as applicable. (40 CFR 60.4230(a)(6))
(iii) The permittee shall operate and maintain affected emission units that achieve the emission standards as required in this condition over the entire life of the engine. (40 CFR 60.4234)
(iv) Stationary SI natural gas fired engines may be operated using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but shall keep records of such use. (40 CFR 60.4243(e))
(v) The air-to-fuel ratio (AFR) controller, if used, shall be maintained and operated appropriately by the permittee in order to ensure proper operation of affected emission units and control device to minimize emissions at all times. (40 CFR 60.4243(g))

[Origin: 40 CFR 60 Subpart JJJJ]. [40 CFR 60.4230(a)(6), 40 CFR 60.4233(e), 40 CFR 60.4234, 40 CFR 60.4243, 40 CFR 63 Subpart ZZZZ]

II.B.3.a.1 **Monitoring:**

(a) For affected emission units subject to 40 CFR 60.4233(e), the permittee shall demonstrate compliance according to one of the methods specified in paragraphs (a)(1) and (2) of this section.
(1) Purchasing an engine certified according to procedures specified in 40 CFR 60 Subpart JJJJ, for the same model year, engine class, and maximum engine power. In addition, the permittee shall meet one of the requirements specified in paragraphs (1)a) and b) of this section.
a) If the permittee operates and maintains the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the permittee shall keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The permittee shall also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If the permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the affected emission unit will not be considered out of compliance.
b) If the permittee does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-

related written instructions, the engine will be considered a non-certified engine, and the permittee shall demonstrate compliance according to (i) of this section.

(i) If the affected emission unit is greater than 500 HP, the permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee shall conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) and according to the requirements specified in 40 CFR 60.4244, as applicable, and according to paragraph (2)a) of this section.

a) If the affected emission unit is greater than 500 HP, the permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee shall conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(40 CFR 60.4243(b))

(b) The permittee shall conduct performance tests in accordance with the procedures in 40 CFR 60.4244(a) through (f). (40 CFR 60.4244)

(c) If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the permittee shall conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233. (40 CFR 60.4243(e))

Records required for this permit condition will also serve as monitoring.

II.B.3.a.2 **Recordkeeping:**

(a) The permittee shall keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this condition and all documentation supporting any notification.

(2) Maintenance conducted on each affected emission unit.

(3) If the affected emission unit is a certified engine, documentation from the manufacturer that the affected emission unit is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.

(4) If the affected emission unit is not a certified engine or is a certified engine operating in a non-certified manner and subject to section (a)(1)b) of monitoring, documentation that the engine meets the emission standards.

(40 CFR 60.4245(a))

(b) The permittee shall keep records of the install date of each affected emission unit and the applicable requirements under 40 CFR 60 Subpart JJJJ for the respective model year engine.

(c) Records of propane usage shall be kept in accordance with 40 CFR 60.4243(e).

Records and results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.3.a.3 **Reporting:**

For affected emission units that are subject to performance testing, the permittee shall submit a copy of each performance test as conducted in 40 CFR 60.4244 within 60 days after the test has been completed in accordance with 40 CFR 60.4245(d).

There are no additional reporting requirements for this provision except those specified in 40 CFR 60.4245 and Section I of this permit.

II.B.3.b **Condition:**

Emissions from each generator engine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
NO_x: 0.15 g/bhp-hr and 0.83 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.3.b.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Each unit shall be tested annually based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4. Upon demonstration through at least three annual tests that the limits are not being exceeded, the permittee may request approval to conduct stack testing less frequently than annually.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.

(d) Methods.
  (1) 40 CFR 60, Appendix A, Method 7, 7E, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine NO_x emissions;
  (2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.3.b.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.3.b.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual

compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.c **Condition:**

Emissions from each generator engine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
CO: 0.3 g/bhp-hr and 1.65 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.3.c.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Each unit shall be tested at least once every three years based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.

(d) Methods.
  (1) 40 CFR 60, Appendix A, Method 10, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine CO emissions;
  (2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.3.c.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.3.c.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.3.d **Condition:**

Emissions from each generator engine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
VOC: 0.03 g/bhp-hr and 0.17 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.3.d.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Each unit shall be tested at least once every three years based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.

(d) Methods.
  (1) 40 CFR 60, Appendix A, Method 18, Method 25, Method 25A, 40 CFR 63, Appendix A, Method 320, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine VOC emissions;
  (2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.3.d.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.3.d.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4 **Conditions on Emergency Engine Generator Sets.**

II.B.4.a **Condition:**

The permittee shall operate and maintain affected emission units that achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine. The permittee shall do all of the following, except as permitted in 40 CFR 60.4211(g):
(1) Operate and maintain the stationary CI ICE and control device according to the manufacturer's emission-related written instructions;
(2) Change only those emission-related settings that are permitted by the manufacturer; and
(3) Meet the requirements of 40 CFR part 1068, as applicable.
[Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4206, 40 CFR 60.4211(a), 40 CFR 63 Subpart ZZZZ]

II.B.4.a.1 **Monitoring:**

(a) The permittee shall document activities performed to assure proper operation and maintenance.
(b) If the permittee does not install, configure, operate, and maintain affected emission units and control devices according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows:
    (1) For affected emission units greater than 500 HP:
        a. Keep a maintenance plan and records of conducted maintenance; and
        b. To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; and
        c. Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after changing emission-related settings in a way that is not permitted by the manufacturer. The permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(Origin: 40 CFR 60.4211(g)).

II.B.4.a.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.a.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.b **Condition:**

The permittee of affected emission units with a displacement of less than 30 liters per cylinder that use diesel fuel shall use diesel fuel that meets the following ULSD per-gallon standards of 40 CFR 1090.305 for nonroad diesel fuel.
1. Maximum sulfur content of 15 ppm and
2. A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
The permittee shall only use diesel fuel (e.g., fuel oil #1, #2, or diesel fuel additives) as fuel in each affected emission unit.
[Origin: 40 CFR 60 Subpart IIII, DAQE-AN161210003-24]. [40 CFR 60.4207(b), 40 CFR 63 Subpart ZZZZ, R307-203, R307-401-8]

II.B.4.b.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.b.2 **Recordkeeping:**

The permittee shall maintain documentation that all diesel fuel meets the specifications of 40 CFR 1090.305. Certification of diesel fuel shall be either by permittee's own testing using ASTM Method D2880-71, D4294-89, or other method approved by the Director, or by fuel receipt records from the vendor documenting test results. The diesel fuel purchase invoices and/or certifications shall indicate the diesel fuel meets the requirements in 40 CFR 1090.305. Records demonstrating compliance with this condition shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.b.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.c **Condition:**

The permittee shall operate the emergency affected emission units according to the requirements in paragraphs (i) through (iii). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart IIII, any operation other than as described in 40 CFR 60.4211(f), is prohibited. If the engine is not operated in accordance with the requirements in 40 CFR 60.4211(f), it will not be considered an emergency engine and shall meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary ICE in emergency situations.

(ii) Emergency stationary ICE may be operated for the purpose specified in paragraph (a) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph .

  (a) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. A petition for approval of additional hours to be used for maintenance checks and readiness testing is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(iii) The permittee may operate the emergency stationary ICE for up to 50 hours per calendar year in non-emergency situations as specified in 40 CFR 60.4211(f)(3).

[Origin: 40 CFR 40 CFR 60 Subpart IIII]. [40 CFR 60.4211(f), 40 CFR 63 Subpart ZZZZ]

II.B.4.c.1 **Monitoring:**

The permittee shall install a non-resettable hour meter prior to startup of the engine. [origin: DAQE-AN161210003-24, 40 CFR 60.4209(a)] Records required for this permit condition will also serve as monitoring.

II.B.4.c.2 **Recordkeeping:**

Records of each affected emission unit shall be kept on a monthly basis in an operation and maintenance log. Records shall distinguish between maintenance-related hours and emergency use-related hours. Records shall include the date the engine was used, duration of operation in hours, and the reason for emergency engine usage. If additional hours are to be used for

maintenance checks and readiness testing, the permittee shall maintain records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

Starting with the model years in Table 5 of 40 CFR 60 Subpart IIII, if an affected emission unit does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. (Origin: 40 CFR 60.4214(b))

Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.4.c.3 **Reporting:**

For each affected emergency emission unit with a maximum engine power more than 100 HP that operates for the purpose specified in 40 CFR 60.4211(f)(3)(i), the permittee shall submit an annual report according to the requirements in 40 CFR 60.4214(d).

There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.d **Condition:**

For all affected emission units, except those that are modified, reconstructed, or removed from one existing location and reinstalled at a new location, the permittee shall comply with paragraphs (a) through (b).

(a) After December 31, 2008, the permittee shall not install affected emission units (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
(b) The permittee shall not import affected emission units with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in 40 CFR 60.4208 after the dates specified in 40 CFR 60.4208.

[Origin: 40 CFR 60 Subpart IIII]. [40 CFR 60.4208, 40 CFR 63 Subpart ZZZZ]

II.B.4.d.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.4.d.2 **Recordkeeping:**

The permittee shall keep records of the install date of each affected emission unit and the applicable requirements under 40 CFR 60 Subpart IIII for the respective model year engine. Records shall be maintained as described in Provision I.S.1 of this permit.

II.B.4.d.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.e **Condition:**

2007 model year and later emergency affected emission units with a displacement of less than 30 liters per cylinder that are not fire pump engines shall comply with the emission standards for new nonroad CI ICE in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their

2007 model year and later emergency stationary CI ICE. Modified or reconstructed affected emission units shall meet the emission standards for new nonroad CI ICE in 40 CFR 60.4202 applicable to the model year, maximum engine power, and displacement of the modified or reconstructed engine. If the permittee conducts performance tests in-use on emergency stationary CI ICE with a displacement of less than 30 liters per cylinder they shall meet the not-to-exceed (NTE) standards as indicated in 40 CFR 60.4212. [Origin: 40 CFR 60 Subpart IIII]. [40 CFR 63 Subpart ZZZZ, 40 CFR 60.4205(b), 40 CFR 60.4205(e), 40 CFR 60.4205(f)]

II.B.4.e.1 **Monitoring:**

The permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b) for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted below. (Origin: 40 CFR 60.4211(c))

If the permittee does not install, configure, operate, and maintain affected emission units and control devices according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows:

(a) For affected emission units greater than 500 HP:
   i. Keep a maintenance plan and records of conducted maintenance; and
   ii. To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; and
   iii. Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after changing emission-related settings in a way that is not permitted by the manufacturer. The permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(Origin: 40 CFR 60.4211(g))

For modified or reconstructed affected emission units that must comply with the emission standards specified in 40 CFR 60.4205(f), the permittee shall demonstrate compliance by purchasing, or otherwise owning or operating, an engine certified to the emission standards in 40 CFR 60.4205(f) or by conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in 40 CFR 60.4212. The test shall be conducted within 60 days after the engine commences operation after the modification or reconstruction. [40 CFR 60.4211(e)]

II.B.4.e.2 **Recordkeeping:**

Results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.e.3 **Reporting:**

For affected emission units that are subject to performance testing, the permittee shall submit the results of the performance test within 60 days after the date of completing each required performance test following the procedures specified in 40 CFR 60.4214(f). There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.f **Condition:**

Visible emissions shall not exceed 20 percent opacity from each affected emission unit. [Origin: DAQE-AN161210003-24]. [R307-201-3, R307-401-8]

II.B.4.f.1 **Monitoring:**

During any period that an emergency generator is operated for longer than 12 hours consecutively, a visual opacity survey shall be performed while the unit is operating by an individual certified on the observation procedures of 40 CFR 60, Appendix A, Method 9. If any visible emissions are observed from an affected emission unit, an opacity determination of that emission unit shall be performed by a certified observer in accordance with 40 CFR 60, Appendix A, Method 9.

II.B.4.f.2 **Recordkeeping:**

The permittee shall maintain a log of the visual opacity surveys, opacity determinations, and all data required by 40 CFR 60, Appendix A, Method 9 in accordance with Provision I.S.1 of this permit.

II.B.4.f.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.g **Condition:**

Each affected emission unit shall be certified to meet a controlled NO_x emission rate of no greater than 0.50 g/hp-hr. [Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.4.g.1 **Monitoring:**

To demonstrate compliance for each affected emission unit, the permittee shall either:
(a) Own/operate a stationary internal combustion engine which has obtained Tier 4 certification as defined in 40 CFR 1039.801; or
(b) Conduct an initial performance test according to 40 CFR part 1039; or
(c) Maintain the manufacturer's emissions guarantee for the installed engine model.

II.B.4.g.2 **Recordkeeping:**

For each affected emission unit, the permittee shall maintain records of engine certification, results of the initial performance test, or the manufacturer’s emissions guarantee for the installed engine model. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.4.g.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Turbine.**

II.B.5.a **Condition:**

The new natural gas fired turbine with a heat input at peak load (HHV) > 50 MMBtu/h and ≤ 850 MMBtu/h shall not exceed the NO_x emission standard of 25 ppm at 15 percent O_2 or 150 ng/J of useful output (1.2 lb/MWh). [Origin: 40 CFR 60 Subpart KKKK]. [40 CFR 60.4320(a)]

II.B.5.a.1 **Monitoring:**

The permittee shall conduct an initial performance test, as required in 40 CFR 60.8. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). (40 CFR 60.4400(a))

To demonstrate continuous compliance, the permittee shall perform annual performance tests in accordance with the test methods and procedures specified in 40 CFR 60.4400. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, the frequency of subsequent performance tests may be reduced to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, the permittee shall resume annual performance tests. (40 CFR 60.4340(a))

II.B.5.a.2 **Recordkeeping:**

Records documenting the results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.a.3 **Reporting:**

The permittee shall submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. (40 CFR 60.4375(b)) There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.b **Condition:**

The permittee shall comply with either paragraph (i) or (ii).

(i) The permittee shall not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2 in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output; or

(ii) The permittee shall not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input.

[Origin: 40 CFR 60 Subpart KKKK]. [40 CFR 60.4330(a)]

II.B.5.b.1 **Monitoring:**

The permittee shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in 40 CFR 60.4365. The sulfur content of the fuel shall be determined using total sulfur methods described in 40 CFR 60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 which measure the major sulfur compounds, may be used. (40 CFR 60.4360)

The permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO_2/J (0.060

lb SO_2/MMBtu) heat input. One of the sources of information in 40 CFR 60.4365(a) or (b) shall be used to make the required demonstration. (40 CFR 60.4365)

If the permittee elects not to demonstrate sulfur content using options in 40 CFR 60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day. (40 CFR 60.4370(b)) The permittee may develop custom schedules for determination of the total sulfur content of gaseous fuels in accordance with 40 CFR 60.4370(c). If the permittee chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are as defined in 40 CFR 60.4385.

The permittee shall conduct an initial performance test, as required in 40 CFR 60.8. Subsequent SO_2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). The permittee shall use one of the four methodologies specified in 40 CFR 60.4415 to conduct the performance tests.

II.B.5.b.2 **Recordkeeping:**

Records documenting the results of monitoring shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.b.3 **Reporting:**

For each affected unit required to periodically determine the fuel sulfur content, the permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c). Excess emissions shall be reported for all periods of unit operation, including start-up, shutdown, and malfunction. (40 CFR 60.4375(a)) All reports required under 40 CFR 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period. (40 CFR 60.4395)

There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.c **Condition:**

The permittee shall operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
[Origin: 40 CFR 60 Subpart KKKK]. [40 CFR 60.4333(a)]

II.B.5.c.1 **Monitoring:**

Records required for this permit condition will serve as monitoring.

II.B.5.c.2 **Recordkeeping:**

The permittee shall document activities performed to assure proper operation and maintenance. Records shall be maintained in accordance with Provision I.S.1 of this permit.

II.B.5.c.3 **Reporting:**

There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.d **Condition:**

Emissions from the turbine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
NO_x: 0.33 g/bhp-hr and 13.33 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.5.d.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested annually based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4. Upon demonstration through at least three annual tests that the limits are not being exceeded, the permittee may request approval to conduct stack testing less frequently than annually.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.

(d) Methods.
  (1) 40 CFR 60, Appendix A, Method 7, 7E, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine NO_x emissions;
  (2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.5.d.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.5.d.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.e **Condition:**

Emissions from the turbine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):

CO: 0.20 g/bhp-hr and 8.11 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.5.e.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested at least once every three years based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4.

(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.

(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.

(d) Methods.
  (1) 40 CFR 60, Appendix A, Method 10, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine CO emissions;
  (2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.5.e.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.5.e.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.f **Condition:**

Emissions from the turbine shall not exceed the following rates and concentrations (standardized at 68 degrees F, 29.92 in Hg):
VOC: 0.12 g/bhp-hr and 4.65 lbs/hour
[Origin: DAQE-AN161210003-24]. [R307-401-8]

II.B.5.f.1 **Monitoring:**

Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested at least once every three years based on the date of the most recent stack test. The Director may require the permittee to perform a stack test at any time. The permittee shall conduct testing according to the approved source test protocol and according to the test conditions contained in R307-165-4.
(b) Notification. At least 30 days before the test, the source shall notify the Director of the date, time, and place of testing and provide a copy of the test protocol. The source test protocol shall include the items contained in R307-165-3. The source shall attend a pretest conference if determined necessary by the Director.
(c) Sample Point. The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved testing method, as acceptable to the Director. In addition, OSHA- or MSHA-approved access shall be provided to the test location.
(d) Methods.
(1) 40 CFR 60, Appendix A, Method 18, Method 25, Method 25A, 40 CFR 63, Appendix A, Method 320, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine VOC emissions;
(2) 40 CFR 60, Appendix A, Method 2, or other EPA-approved testing method, as acceptable to the Director, shall be used to determine stack gas velocity and volumetric flow rate.
(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

II.B.5.f.2 **Recordkeeping:**

Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision I.S.1 of this permit.

II.B.5.f.3 **Reporting:**

A written report of the results of required stack testing shall be submitted to the Director within 60 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status and shall include validated results and supporting information. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation. There are no additional reporting requirements for this provision except those specified in Section I of this permit.

II.C Emissions Trading

(R307-415-6a(10))

Not applicable to this source.

II.D Alternate Operating Scenarios.

(R307-415-6a(9))

SECTION III: PERMIT SHIELD

A permit shield was not granted for any specific requirements.

SECTION IV: ACID RAIN PROVISIONS

This source is not subject to Title IV. This section is not applicable.

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

Incorporates DAQE-AN161210003-24 dated September 18, 2024

1. Comment on an item originating in the Notice of Intent dated 9/9/2022 regarding Permitted Source Major source clarification: The power station uses stranded gas, that would otherwise be flared, to power the onsite data centers. The gas is received from the XCL Facility, adjacent to the Crusoe site, and other nearby locations. Because the Crusoe facility and the XCL facility, and other nearby sources of gas, are owned and operated by different companies with no environmental control over the other's operations, they would not be considered under common control within the definition of major source in R307-415-3. [4/4/2024] [Last updated September 18, 2024]

2. Comment on an item originating in 40 CFR 63 Subpart ZZZZ regarding Permitted Source 40 CFR 63 Subpart ZZZZ applicability:
   The two, 530 HP each, natural gas-fired compressor engines were installed after June 12, 2006, and are new stationary reciprocating internal combustion engines (RICE) as defined in 40 CFR 63.6590(a)(2)(iii). Per 40 CFR 63.6590(c)(1), the two spark ignition (SI) engines must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ and no further requirements from 40 CFR 63 Subpart ZZZZ apply.

   The ten, 2,500 HP each, natural gas-fired generator engines were installed after June 12, 2006, and are new stationary RICE as defined in 40 CFR 63.6590(a)(2)(iii). Per 40 CFR 63.6590(c)(1), the ten SI engines must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ and no further requirements from 40 CFR 63 Subpart ZZZZ apply.

   The two, 2,944 HP each, emergency diesel-fired generator engines were installed after June 12, 2006, and are new stationary RICE as defined in 40 CFR 63.6590(a)(2)(iii). Per 40 CFR 63.6590(c)(1), the two compression ignition (CI) engines must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII and no further requirements from 40 CFR 63 Subpart ZZZZ apply.
   [4/4/2024] [Last updated September 18, 2024]

3. Comment on an item originating in 40 CFR 60 Subpart JJJJ regarding Compressor Engines and Generator Engines
   40 CFR 60 Subpart JJJJ applicability:
   The two 4SRB, 530 HP each, natural gas-fired compressor engines were ordered after June 12, 2006, manufactured after July 1, 2007 and are stationary SI ICE subject to the requirements of 40 CFR 60 Subpart JJJJ, per 40 CFR 60.4230(a)(4)(i).

   The ten 4SRB, 2,500 HP each, natural gas-fired generator engines were ordered after June 12, 2006, manufactured after July 1, 2007 and are stationary SI ICE subject to the requirements of 40 CFR 60 Subpart JJJJ, per 40 CFR 60.4230(a)(4)(i).
   [4/4/2024] [Last updated September 18, 2024]

4. Comment on an item originating in 40 CFR 60 Subpart IIII regarding Emergency Engine Generator Sets

40 CFR 60 Subpart IIII applicability:
The two, 2,944 HP each, emergency diesel-fired generator engines were ordered after July 11, 2005, manufactured after April 1, 2006, are not fire pump engines, and are stationary CI ICE subject to the requirements of 40 CFR 60 Subpart IIII, per 40 CFR 60.4200(a)(2)(i). [4/4/2024] [Last updated September 18, 2024]

5. Comment on an item originating in DAQE-AN161210003-24 regarding Permitted Source
Initial stack testing: In the initial Title V application, the permittee confirmed the initial stack testing required by the referenced approval order was completed in the fourth quarter of 2023 for the NO_x, CO, and VOC limits on the compressor engines, generator engines and turbine. For that reason, language regarding initial stack testing has not been included in the operating permit. [6/19/2024] [Last updated September 18, 2024]