August 18, 2025

Joshua Burandt
NYDIG DFM, LLC
Kraken Central Site
One Vanderbilt Avenue, 65th Floor
New York, NY 10017

RE: Final and Effective Montana Air Quality Permit #5262-04

Sent via email: Joshua.burandt@nydig.com

Dear Mr. Burandt:

Montana Air Quality Permit (MAQP) #5262-04 for the above-named permittee is deemed final and effective as of August 15, 2025, by the Montana Department of Environmental Quality (DEQ). All conditions of the Decision remain the same. A copy of final MAQP #5262-04 is enclosed.

For DEQ,

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Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau

Montana Air Quality Permit #5262-04

NYDIG DFM, LLC
Kraken Central Site
One Vanderbilt Avenue, 65th Floor
New York, NY 10017

Final and Effective Date:
August 15, 2025

MONTANA AIR QUALITY PERMIT

Issued To: NYDIG DFM, LLC.
One Vanderbilt Avenue
65th Floor
Denver, CO 80202

MAQP: #5262-04
Administrative Amendment ((AA)
Received: 07/07/2025
DEQs Decision on AA: 07/30/2025
Permit Final: 08/15/2025

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to NYDIG DFM, LLC. (NYDIG), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

NYDIG owns and operates the Kraken Central Site, located approximately 15.2 miles northeast of Sidney, Montana, in Section 8, Township 25 North, Range 59 East, in Richland County, 47.93400°N, latitude and -104.13700°W, longitude.

B. Current Permit Action

On July 7, 2025, the Montana Department of Environmental Quality (DEQ), pursuant to the applicable requirements of ARM 17.8.764, Administrative Amendment to Permit, received a request to transfer ownership of the Kraken Central Site and this permit from Crusoe Energy Systems, Inc., to NYDIG. All conditions of the permit remain unchanged.

Section II: Conditions and Limitations

A. Emission Limitations

1. NYDIG shall not have onsite more than seven (7) 2,500 brake horsepower (bhp) natural gas fired engines (ARM 17.8.749).

2. Emissions from each of the 2,500 bhp natural gas fired engines shall not exceed the following (ARM 17.8.749 and 17.8.752):

   Total Particulate Matter (PM_{TOT}) – 0.01 grams per brake horsepower-hour (g/bhp-hr)
   PM with an aerodynamic diameter of 10 microns or less (PM_{10}) – 0.01 g/bhp-hr
   PM with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$) – 0.01 g/bhp-hr
   Sulfur Dioxide (SO_2) - 0.08 pounds per hour (lb/hr)
   Oxides of Nitrogen (NO_X) – 0.83 lb/hr
   Carbon Monoxide (CO) – 1.65 lb/hr
   Volatile Organic Compounds (VOC) – 0.06 pound per hour (lb/hr)
   Hazardous Air Pollutants (HAPs) – 0.24 lb/hr

3. NYDIG shall operate and maintain a non-selective catalytic reduction (NSCR) unit and an air/fuel ratio (AFR) controller on all 2,500 bhp engines, within the parameters recommended by the equipment manufacturer (ARM 17.8.752).

4. NYDIG shall not have onsite more than five (5) 500-kilowatt (kW) diesel-fired engines (ARM 17.8.749).

5. Emission from each of the 500-kW diesel fired engines shall not exceed the following (ARM 17.8.752):

   PM_{TOT}, PM_{10}, $PM_{2.5}$ – 0.03 g/bhp-hr
   SO_X – 0.00152 pounds per million British thermal units (lb/MMBtu)
   NO_X – 4.60 g/bhp-hr
   CO – 0.60 g/bhp-hr
   VOC – 0.03 g/bhp-hr
   HAPs – 0.00136 lb/MMBtu

6. Hours of operation for each of the five (5) 500-kW diesel-fired engines shall not exceed 900 hours per calendar year (hr/yr) (ARM 17.8.749 and ARM 17.8.1204).

7. NYDIG shall not have onsite more than one (1) 1,099-kW diesel-fired engine (ARM 17.8.749).

8. Emissions from the 1,099-kW diesel-fired engine shall not exceed the following (ARM 17.8.752):

   PM_{TOT}, PM_{10}, $PM_{2.5}$ – 0.02 g/bhp-hr
   SO_X – 0.00152 lb/MMBtu
   NO_X – 6.09 g/bhp-hr
   CO – 0.18 g/bhp-hr
   VOC – 0.01 g/bhp-hr
   HAPs – 0.00136 lb/MMBtu

9. Hours of operation for the 1,099-kW diesel fired engine shall not exceed 900 hr/yr (ARM 17.8.749 and ARM 17.8.1204).

10. NYDIG shall not have onsite more than 20, 200-gallon horizontal storage tanks for diesel storage (ARM 17.8.749).

11. NYDIG shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

12. NYDIG shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

13. NYDIG shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as

necessary to maintain compliance with the reasonable precautions' limitation in Section II.A.12 (ARM 17.8.749).

14. NYDIG shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 60, Subpart(s) A, IIII, and JJJJ (ARM 17.8.340 and 40 CFR 60, Subpart A, IIII, and JJJJ).

15. NYDIG shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 63, Subpart A, Subpart ZZZZ (ARM 17.8.342 and 40 CFR 63, Subpart(s) A and ZZZZ).

B. Testing Requirements

1. Following the calendar date of the initial compliance demonstration, compliance with the applicable emission limits shall be demonstrated via source testing for NO_X, CO and VOCs simultaneously within 8,760 operating hours or 3 years, whichever comes first. Source testing shall follow the applicable methods defined in 40 CFR 60 Subpart JJJJ, or equivalent methods as approved in writing by DEQ. Future compliance demonstrations shall be required at this same frequency for EU04. (ARM 17.8.105, ARM 17.8.749, ARM 17.8.340, 40 CFR 60 Subpart JJJJ).

2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

3. DEQ may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. NYDIG shall notify DEQ of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit,*** change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation.

   The notice must be submitted to DEQ, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

2. All records compiled in accordance with this permit must be maintained by NYDIG as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by DEQ, and must be submitted to DEQ upon request.
   These records may be stored at a location other than the plant site upon approval by DEQ (ARM 17.8.749).

3. NYDIG shall supply DEQ with annual production information for all emission points, as required by DEQ in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to DEQ by the date required in the emission inventory request. Information shall be in the units required by DEQ. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). NYDIG shall submit the following information annually to DEQ by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

4. NYDIG shall document, by month, the total hours operated for the engines listed in Section II.A.4 and Section II.A.7. By the 25th day of each month, NYDIG shall total the hours operated for the previous month. The monthly information will be used to verify compliance with the hourly limitations listed in Section II.A.6 and Section II.A.9. (ARM 17.8.749).

5. NYDIG shall annually certify that the Kraken Central Site actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207.

   The annual certification shall be submitted along with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

   NYDIG shall provide DEQ with written notification of the following information within the specified time periods (ARM 17.8.749):

   Startup date of each of the two new 500 kW diesel/generators within 15 days of actual startup of each engine.

SECTION III: General Conditions

A. Inspection – NYDIG shall allow DEQ's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment such as Continuous Emission Monitoring Systems (CEMS) or Continuous Emission Rate Monitoring Systems (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if NYDIG fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving NYDIG of the responsibility for complying with any applicable federal or

Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*. (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by DEQ's decision may request, within 15 days after DEQ renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay DEQ's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of DEQ's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, DEQ's decision on the application is final 16 days after DEQ's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by DEQ at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by NYDIG may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin, or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit Analysis
NYDIG DFM, LLC. – Kraken Central Site
MAQP #5262-04

I. Introduction/Process Description

NYDIG DFM, LLC. (NYDIG) owns and operates a natural gas compressor station. The facility is located 15 miles northeast of Sidney, Montana, in Section 8, Township 25 North, Range 59 East, in Richland County, 47. 93400°N, latitude and -104. 13700°W, longitude, and is referred to as the Kraken Central Site.

A. Permitted Equipment

NYDIG operates seven (7) 2,500 brake horsepower (bhp) Waukesha 9394 GSI generator engines, five (5) 500-kilowatt (kW) diesel fired engines, one (1) 1,099-kW diesel fired engine, five (5) 2,000-gallon (gal) horizontal diesel storage tanks, five (5) 1,000-gal horizontal diesel storage tank, and one (1) 5,200-gal horizontal diesel storage tank. NYDIG also maintains a number of 200-gallon horizontal storage tanks for diesel storage.

B. Source Description

NYDIG owns and operates a natural gas generator station used to power small data centers on site. The site also contains diesel-fired engines for back-up generation.

C. Permit History

On September 1, 2021, Montana Air Quality Permit (MAQP) #5262-00 was issued to Crusoe Energy Systems, Inc. (Crusoe), for the construction and operation of a Natural Gas Compressor Station, known as Kraken Central Site. In this permit, Crusoe was given the option to operate under two operating scenarios AOS1 or AOS2.

AOS1 would consist of two (2) 2,500 brake horsepower (bhp) Waukesha 9394 GSI generator engines (EU001), one (1) 484 bhp Waukesha VGF H24SE compressor engine (EU002), and one (1) 21,000 bhp Solar Titan 130 natural gas-fired compressor turbine (EU003).

AOS2 would consist of ten (10) 2,500 bhp Waukesha 9394 GSI generator engines (EU004).

On August 18, 2021, Crusoe notified DEQ in writing of their intent to operate under AOS2, rendering AOS1 no longer an option.

On June 6, 2023, DEQ received an application from Crusoe. The application requested the removal of three (3) 2,500 natural gas engines.

In addition to the removal of the engines, Crusoe requested to add one (1) 1,099-kilowatt (kW) US EPA rated Tier II Caterpillar C32 back-up diesel generator. Two (2) 500-kW US EPA Tier II Caterpillar C15 back-up diesel fire generators. One (1) 2,000-gallon (gal) horizontal diesel storage tanks, three (3) 1,000-gal horizontal diesel storage tanks.

DEQ received an additional request on June 14, 2023, to add an additional (1) 500 kW Tier II Caterpillar C15 back-up diesel generator, one (1) 2,000-gal horizontal diesel storage tank, and one (1) 5,200-gal horizontal diesel storage tank. **MAQP #5262-01** replaced MAQP #5262-00.

On August 10, 2023, DEQ received an Administrative Amendment request from Pinyon Environmental, Inc., on behalf of Crusoe Energy Systems, Inc., to correct units of measurement. **MAQP #5262-02** replaced MAQP #5262-01.

On May 28, 2024, DEQ received an application modification request from Crusoe to add an additional seven (7) emitting units to the existing MAQP. The equipment included two additional up to 500 kW Tier II diesel engine/generators, and five (5) new diesel storage tanks. The new diesel storage tanks included two (2), 2,000-gallon horizontal tanks and three (3), 1,000-gallon horizontal tanks. The two C15 diesel units were added to the existing EU06 emitting group, and the five diesel storage tanks were added to the existing EU04 emitting group. **MAQP #5262-03** replaced MAQP #5262-02.

D. Current Permit Action

On July 7, 2025, DEQ received a request for an administrative amendment, Intent to Transfer Ownership, pursuant to the applicable requirements of ARM 17.8.764, to transfer ownership of the Kraken Central Site and this permit from Crusoe to NYDIG. All conditions of the permit remain unchanged. **MAQP #5262-04** replaces MAQP #5262-03.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from DEQ. Upon request, DEQ will provide references for the location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of DEQ, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by DEQ.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by DEQ, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).
   NYDIG shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods, and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from DEQ upon request.

4. ARM 17.8.110 Malfunctions. (2) DEQ must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}
11. ARM 17.8.230 Fluoride in Forage

NYDIG must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, NYDIG shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.316 Incinerators. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any incinerator, particulate matter in excess of 0.10 grains per standard cubic foot of dry flue gas, adjusted to 12% carbon dioxide and calculated as if no auxiliary fuel had been used. Further, no person shall cause or authorize to be discharged into the outdoor atmosphere from any incinerator emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes.

6. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.

7. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.

8. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). NYDIG is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

    a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

    b. 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The proposed engines will be ordered after June 12, 2006, and manufactured after either July 1, 2007, and July 2, 2008, as applicable based on horsepower. Therefore, the engines operated at this facility are subject to this regulation.

    c. 40 CFR 60, Subpart IIII – Standard of Performance for Stationary Compression Ignition Internal Combustion Engines. Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart.

Based on the information submitted by NYDIG, the CI ICE equipment to be used under MAQP #5262-04 may be subject to this subpart if they remain stationary for longer than one calendar year.

9. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAP Subpart as listed below:

   b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Subpart ZZZZ applies to the new reciprocating engines but compliance with Subpart ZZZZ is demonstrated by compliance with 40CFR 60 Subpart JJJJ.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to DEQ. A permit application fee was not required for the current permit action because the because the permit change is considered an administrative change.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to DEQ by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by DEQ. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. DEQ may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. NYDIG has a PTE greater than 25 tons per year of

Oxides of Nitrogen (NO_X), Carbon Monoxide (CO), Volatile Organic Compounds (VOCs); therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by DEQ must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis was submitted by NYDIG in permit application #5262-04.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by DEQ at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving NYDIG of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes DEQ's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes DEQ's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.

12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

15. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to DEQ.

16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to DEQ for incineration facilities subject to 75-2-215, Montana Code Annotated (MCA).

17. ARM 17.8.771 Mercury Emission Standards for Mercury-Emitting Generating Units. This rule identifies mercury emission limitation requirements, mercury control strategy requirements, and application requirements for mercury-emitting generating units.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as DEQ may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #5262-04 for NYDIG, the following conclusions were made:

   a. The facility's PTE is greater than 100 tons/year for any pollutant.

   b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

   d. This facility is subject NSPS (40 CFR 60, Subparts A, IIII, JJJJ).

   e. This facility is subject to NESHAP standards (40 CFR 63, Subparts A and ZZZZ).

   f. This source is not a Title IV affected source, or a solid waste combustion unit.

   g. This source is not an EPA designated Title V source.

      NYDIG requests federally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and, thus a Title V operating permit is not required.

   h. As allowed by ARM 17.8.1204(3), DEQ may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's potential to emit.

      i. In applying for an exemption under this section, the owner or operator of the source shall certify to DEQ that the source's potential to emit does not require the source to obtain an air quality operating permit.
      ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

NYDIG has taken legally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and, thus a Title V operating permit is not required.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness.

NYDIG shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204 (3)(b). The annual certification shall comply with requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

III. BACT Determination

A BACT determination is required for each new or modified source. NYDIG shall install on the new or modified source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis was not required for the current permit action because the current permit action is considered an administrative permit action.

IV. Emission Inventory

Source	NOx		CO		VOC		SO_2		$PM/PM_{10}/PM_{2.5}$		HAPs	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
EU04 - 7 x Waukesha 9394 GSI	5.79	25.35	11.57	50.7	0.39	1.69	0.56	2.43	0.39	1.69	1.67	7.31
EU05 - 1 x Caterpillar C32	19.79	8.9	0.58	0.26	0.032	0.015	0.014	0.0065	0.065	0.029	0.013	0.0058
EU06 - 5 x Caterpillar C15	34	15.3	4.45	2	0.22	0.1	0.037	0.0165	0.22	0.1	0.0335	0.015
EU07 - 11 x Diesel Storage Tanks	-	-	-	-	0.00051	0.00225	-	-	-	-	-	-
Requested Total Facility PTE	**59.58**	**49.55**	**16.6**	**52.96**	**0.64**	**1.82**	**0.61**	**2.45**	**0.68**	**1.82**	**1.83**	**7.33**
Permitted Facility PTE	**45.97**	**43.43**	**14.82**	**52.16**	**0.55**	**1.77**	**0.59**	**2.45**	**0.58**	**1.78**	**1.7**	**7.32**
Net Change in PTE		**6.12**		**0.8**		**0.05**		**0**		**0.04**		**0.01**

Emission Calculations

2,500 hp engines

Note: Emissions are based on the power output of the engine		
Operational Capacity of Engine = 7 engines	7	**engines**
Hours of Operation = 8,760.00 hours	8760	**hours**
PM Emissions:		
PM Emissions = 11.65 ton/yr (Assume all PM < 1.0 um)	11.65	**ton/yr**
PM-10 Emissions:		
Emission Factor = 0.38 lb/hr (BACT)	0.38	**lb/hr**
Calculation: ((7 engines) * (8,760 hours) * (0.38 lb/hr) * (8,760 hours) * (ton/2000 lb) = 11.651 ton/yr	11.65	**ton/yr**
PM2.5 Emissions		
Emission Factor = 0.38 lb/hr (BACT)	0.38	**lb/hr**
Calculation: ((7 engines) * (8,760 hours) * (0.38 lb/hr) * (8,760 hours) * (ton/2000 lb) = 11.651 ton/yr	11.65	**ton/yr**
NOx Emissions:		
Emission Factor = 0.825 lb/hr (BACT)	0.825	**lb/hr**
Calculation: ((7 engines) * (8,760 hours) * (0.825 lb/hr) * (8,760 hours) * (ton/2000 lb) = 25.29 ton/yr	25.29	**ton/yr**
CO Emissions:		
Emission Factor = 1.65 lb/hr (BACT)	1.65	**lb/hr**
Calculation: ((7 engines) * (8,760 hours) * (1.65 lb/hr) * (8,760 hours) * (ton/2000 lb) = 50.59 ton/yr	50.59	**ton/yr**
VOC Emissions:		
Emission Factor = 0.055 lb/hr (BACT)	0.06	**lb/hr**
Calculation: ((7 engines) * (8,760 hours) * (0.06 lb/hr) * (8,760 hours) * (ton/2000 lb) = 1.686 ton/yr	1.69	**ton/yr**
SOx Emissions:		
Emission Factor = 0.08 lb/hr (BACT)	0.08	**lb/hr**
Calculation: ((7 engines) * (8,760 hours) * (0.08 lb/hr) * (8,760 hours) * (ton/2000 lb) = 2.453 ton/yr	2.45	**ton/yr**
HAPs Emissions		
Emission Factor = 0.24 lb/hr	0.24	**lb/hr**
Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (8,760 hours) * (ton/2000 lb) = 2.453 ton/yr	7.36	**ton/yr**

671 hp engine (500-kW)

Note: Emissions are based on the power output of the engine		
Operational Capacity of Engine = 671 hp	5	**engines**
Hours of Operation = 900.00 hours	900	**hours**
Engine Horsepower Rating	671	**hp**
Conversion of grams to pounds	0.002205	**lbs**
MMBtu per Gallon of Diesel fuel	19300	**Btu/gal**
Gallons per hour for each engine	35.7	**gal/hr**
PM Emissions:		
PMTOT Emissions = 0.05 ton/yr (Assume all PM < 1.0 um) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 ton/yr	0.1	**ton/yr**
PM-10 Emissions:		

Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	**g/bhp-hr**
Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 ton/yr	0.1	**ton/yr**
PM-2.5 Emissions		
Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	**g/bhp-hr**
Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 ton/yr	0.1	**ton/yr**
NOx Emissions:		
Emission Factor = 4.6 g/bhp-hr (BACT)	4.6	**g/bhp-hr**
Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 ton/yr	15.3	**ton/yr**
CO Emissions:		
Emission Factor = 0.6 g/bhp-hr (BACT)	0.6	**g/bhp-hr**
Calculation: ((5 engines) * (0.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 1.8 ton/yr	1.8	**ton/yr**
VOC Emissions:		
Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	**g/bhp-hr**
Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 ton/yr	0.1	**ton/yr**
SOx Emissions:		
Emission Factor = 0.014 lb/hr (BACT)	0.00152	**lb/MMBtu**
Calculation: ((5 engines) * (0.00152 lb/hr) * (900 hours) * (ton/2000 lb) = 0.00 ton/yr	0.007	**ton/yr**
HAPs Emissions		
Emission Factor = 0.00133 lb/mmbtu	0.00136	**lb/MMBtu**
Calculation: ((5 engines) * (0.00136 lb/MMBtu) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 2.4 ton/yr	2.4	**ton/yr**

1497 hp engine (1,099-kW)

Note: Emissions are based on the power output of the engine (1 hp).		
Operational Capacity of Engine = 1 engine	1	**engine**
Hours of Operation = 900.00 hours	900	**hours**
Engine Horsepower Rating	1497	**hp**
Conversion of grams to pounds	0.002205	**lbs**
MMBtu per Gallon of Diesel fuel	19300	**Btu/gal**
Gallons per hour	69.4	**gal/hr**
PM Emissions:		
PMTOT Emissions = 0.04 ton/yr (Assume all PM < 1.0 um)	0.04	**ton/yr**
PM-10 Emissions:		
Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	**g/bhp-hr**
Calculation: ((1 engine) * (0.03 g/bhp-hr) * (1,497 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.045 ton/yr	0.04	**ton/yr**
PM-2.5 Emissions		
Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	**g/bhp-hr**
Calculation: ((1 engine) * (0.03 g/bhp-hr) * (1,497 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.045 ton/yr	0.04	**ton/yr**
NOx Emissions:		

Emission Factor = 4.6 g/bhp-hr (BACT)	4.6	**g/bhp-hr**
Calculation: ((1 engine) * (4.60 g/bhp-hr) * (1,497 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 6.833 ton/yr	6.83	**ton/yr**

CO Emissions:

Emission Factor = 0.6 g/bhp-hr (BACT)	0.6	**g/bhp-hr**
Calculation: ((1 engine) * (0.60 g/bhp-hr) * (1,497 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.891 ton/yr	0.89	**ton/yr**

VOC Emissions:

Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	**g/bhp-hr**
Calculation: ((1 engine) * (0.03 g/bhp-hr) * (1,497 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.045 ton/yr	0.04	**ton/yr**

SOx Emissions:

Emission Factor = 0.014 lb/hr (BACT)	0.00152	**lb/MMBtu**
Calculation: ((1 engine) * (0.00152 lb/MMBtu) * (900 hours) * (ton/2000 lb) = 0.006 ton/yr	6.84E-4	**ton/yr**

HAPs Emissions

Emission Factor = 0.00133 lb/mmbtu	0.00136	**lb/MMBtu**
Calculation: ((1 engine) * (0.00163 lb/MMBtu) * (1,497 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.891 ton/yr	0.91	**ton/yr**

Storage Tank Calculations

Diesel emissions from storage tanks are insignificant due to the vapor pressure of diesel fuel and are not shown here.

V. Existing Air Quality

Richland County is currently designated as attainment/unclassifiable for all pollutants.

VI. Air Quality Impacts

DEQ determined that there will be no impacts from this permitting action because this permitting action is considered an administrative action. Therefore, DEQ believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Impact Analysis

DEQ determined there will be no impacts from this permitting action because this permitting action is considered an administrative action. DEQ believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, DEQ conducted a private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?

YES	NO	
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, DEQ determined there are no taking or damaging implications associated with this permit action.

IX. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an Environmental Assessment is not required.

Analysis Prepared by: John P. Proulx
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