

Date of Posting: October 9, 2025

Name of Permittee: NYDIG

Facility Name: Kraken Central Site

Physical Site Location: Section 8, Township 25 North, Range 59 East, in Richland County

Sent via email: Joshua.burandt@nydig.com

RE: Preliminary Determination on Montana Air Quality Permit Application #5262-05

<u>Proposed Action</u>: The Montana Department of Environmental Quality (DEQ) proposes to issue a permit, with conditions, to the above-named applicant. The application has been assigned Montana Air Quality Permit (MAQP) application #5262-05.

Proposed Conditions: See attached Preliminary Determination on MAQP #5265-05.

<u>Public Comment</u>: Any member of the public desiring to comment must submit comments to <u>DEQAir@mt.gov</u> or to the address below. Comments may address DEQ's analysis and Preliminary Determination (PD), Draft Environmental Assessment (Draft EA), or the information submitted in the application. All comments are due by October 24, 2025. Copies of the application, the PD, including the Draft EA, and DEQ's permit analysis may be requested at https://deq.mt.gov (at the bottom of the home page, select Request Public Records). For more information, contact DEQ at (406) 444-3490, or DEQAir@mt.gov.

<u>Department Action</u>: DEQ intends to issue a Decision on the application following the public comment period. A copy of the Decision will be available on DEQ's website, https://deq.mt.gov/public/publicnotice (select *AIR*). The permit shall become final and effective on the date stated in the Decision, unless the Board of Environmental Review (Board) orders a stay on the permit.

<u>Procedures for Appeal</u>: Any person who is directly and adversely affected by DEQ's Decision may request a hearing before the Board. The appeal must be filed by the date that will be stated in the Decision. The request for a hearing must contain an affidavit setting forth the grounds for the request. The hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620, or the Board Secretary: DEQBERSecretary@mt.gov.

For DEQ,

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MONTANA AIR QUALITY PERMIT

Issued To: NYDIG DFM, LLC. MAQP: #5262-05

One Vanderbilt Avenue Application Complete: 09/04/2025

65thFloor Preliminary Determination Issued: 10/09/2025

Denver, CO 80202 DEQ's Decision Issued:

Permit Final:

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to NYDIG DFM, LLC - Kraken Central Site. (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 August 28, 2025, DEQ received an application from Pinyon Environmental on behalf of NYDIG to modify Montana Air Quality Permit (MAQP) #5262-04. With this action, NYDIG is requesting the BACT-determined emission limits for Volatile Organic Compounds (VOCs) for the seven permitted rich-burn, natural gas-fired engines with a maximum capacity of 2,500 brake horsepower (bhp) be increased from 0.010 grams per bhp-hour (g/bhp-hr) to 0.03 g/bhp-hr.

Section II: Conditions and Limitations

A. Emission Limitations

- 1. NYDIG shall not have onsite more than seven (7) rich-burn, natural gas-fired engines and each engine shall be limited to a maximum capacity of 2,500 brake horsepower (bhp) (ARM 17.8.749).
- 2. Emissions from each of the rich-burn, 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) – 0.03 g/bhp-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 rich-burn, natural gas-fired 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):

$$\begin{split} PM_{TOT}, PM_{10}, PM_{2.5} - 0.02 \text{ g/bhp-hr} \\ SO_{X} - 0.00152 \text{ lb/MMBtu} \\ NO_{X} - 6.09 \text{ g/bhp-hr} \\ CO - 0.18 \text{ g/bhp-hr} \\ VOC - 0.01 \text{ g/bhp-hr} \\ HAPs - 0.00136 \text{ lb/MMBtu} \end{split}$$

- 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 twenty thousand two hundred (20,200)-gallon storage capacity of horizontal diesel storage tanks (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).
- 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 shall be submitted to the DEQ upon request, and shall be submitted along with the annual emissions inventory. 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 #5262-05

Introduction/Process Description

NYDIG DFM, LLC. (NYDIG) owns and operates a natural gas generator station used to power small data centers on site. 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.

Permitted Equipment

NYDIG operates seven (7) rich-burn, natural gas-fired generator engines with a maximum capacity of 2,500 brake horsepower (bhp), 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.

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 power generation.

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.

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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.

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 replaced MAQP #5262-03.

D. Current Permit Action

On August 28, 2025, DEQ received an application from Pinyon Environmental on behalf of NYDIG to modify MAQP #5262-04. In the application, NYDIG requested the BACT-determined emission limits for Volatile Organic Compounds (VOCs) from operation of the 7 permitted 2,500 bhp capacity rich-burn natural gas-fired engines be increased from 0.01 grams per brake horsepower hour (g/bhp-hr) to 0.03 g/bhp-hr. NYDIG also requested a correction be made regarding the number and volume of permitted diesel storage tanks from (twenty) 20, 200-gallon tanks to a total of (twenty thousand two hundred) 20,200-gallons of diesel storage capacity. **MAQP 5262-05** replaces MAQP 5262-04.

E. Response to Public Comment (if received)

Person/ Group Commenting	Permit Reference	Comment	DEQ Response

F. 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. <u>ARM 17.8.101 Definitions</u>. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 - 2. <u>ARM 17.8.105 Testing Requirements</u>. 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. <u>ARM 17.8.106 Source Testing Protocol</u>. 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

- 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 PM₁₀
- 11. ARM 17.8.230 Fluoride in Forage

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

- ARM 17.8, Subchapter 3 Emission Standards, including, but not limited to:
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission <u>Guidelines for Existing Sources</u>. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). NYDIG is considered

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an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

- a. <u>40 CFR 60, Subpart A General Provisions</u> 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. <u>ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source</u>

 <u>Categories</u>. 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. <u>40 CFR 63, Subpart A General Provisions</u> 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. NYDIG submitted the appropriate permit application fee for the current permit action.
 - 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. <u>ARM 17.8.740 Definitions</u>. 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. <u>ARM 17.8.744 Montana Air Quality Permits--General Exclusions</u>. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
 - 4. <u>ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes</u>. 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. NYDIG submitted the required permit application for the current permit action. (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. NYDIG submitted an affidavit of publication of public notice for the August 30, 2025, issue of the Sidney Harold, a newspaper of general circulation in the Town of Sidney in Richland County, as proof of compliance with the public notice requirements.
 - 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. <u>ARM 17.8.752 Emission Control Requirements</u>. 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 #5262-05.

- 8. <u>ARM 17.8.755 Inspection of Permit</u>. This rule requires that air quality permits shall be made available for inspection by DEQ at the location of the source.
- 9. <u>ARM 17.8.756 Compliance with Other Requirements</u>. 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. <u>ARM 17.8.759 Review of Permit Applications</u>. 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. <u>ARM 17.8.760 Additional Review of Permit Applications</u>. 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. <u>ARM 17.8.763 Revocation of Permit.</u> 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. <u>ARM 17.8.765 Transfer of Permit</u>. 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. <u>ARM 17.8.770 Additional Requirements for Incinerators</u>. 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. <u>ARM 17.8.801 Definitions</u>. 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. <u>ARM 17.8.1201 Definitions</u>. (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. $PTE > 70 \text{ tons/year of particulate matter with an aerodynamic diameter of } 10 \text{ microns or less } (PM_{10}) \text{ in a serious } PM_{10} \text{ nonattainment area.}$
 - 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 #5262-05 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 PM₁₀ 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 requested 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 federally enforceable permit limits to keep allowable emissions below Title V major source permitting thresholds. Therefore, the facility is a Title V synthetic minor source, and 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.

With the current permit action, NYDIG is requesting the BACT-determined emission limit for Volatile Organic Compounds (VOCs) from operation of each rich-burn, natural gas-fired generator engine with a maximum capacity of 2,500 brake horsepower (bhp) be increased from 0.010 grams per brake horsepower hour (g/bhp-hr) to 0.030 g/bhp-hr. A BACT analysis was submitted by NYDIG in permit application MAQP # 5262-05 addressing available methods of controlling VOC emission from the Kraken Site and demonstrating the proposed new emission limit constitutes BACT for the proposed action.

Step 1: Identify all available control technologies

The following technologies can reduce VOC emissions from natural gas-fired internal combustion engines:

- No add-on control. Pipeline quality natural gas used as fuel with good combustion practices, including maintaining proper air-to-fuel ratio
- Selective catalytic reduction (SCR)
- Selective non-catalytic reduction (SNCR)
- Non-selective catalytic reduction (NSCR)
- Oxidation catalyst
- EMxTM catalyst system

Step 2: Eliminate technically infeasible options

The following VOC control options are deemed technically infeasible for NYDIG's operations, as described.

- Pipeline quality natural gas fuel and good combustion practices: NYDIG's generators (i.e., engines) consume stranded field gas that is unprocessed and generally goes through a minimum of one stage of separation. NYDIG typically operates on an adjacent surface location to the oil and gas well production facility generating the gas due to lack of infrastructure for the upstream operator to sell the gas via pipeline. The average methane content of stranded field gas is between 55 mole percent and 70 mole percent depending on location. This does not meet the pipeline quality specification for natural gas (i.e. 85 mole percent). Due to the lack of infrastructure in the areas which NYDIG operates these generators, utilizing pipeline quality natural gas is deemed infeasible for the proposed project.
- SCR: SCR requires specific exhaust temperature for optimal VOC destruction efficiency. The exhaust temperatures for SCR's optical effectiveness are between 900 degrees Fahrenheit (deg F) and 700 deg F. NYDIG's generators (Waukesha 9394 GSI) have an exhaust temperature ranging from 750 deg F to 1250 deg F, outside of the optimal temperature range for SCR control of VOC emissions. Therefore, the use of add-on SCR is deemed technically infeasible for the proposed project.
- SNCR: SNCR requires specific exhaust temperatures for optimal destruction efficiency for VOCs. The exhaust temperatures for SNCR's optimal effectiveness are between 1650 deg F and 1830 deg F without the use of urea and between 1740 deg F and 1920 deg F with the use of urea. NYDIG's generators (Waukesha 9394 GSI) have an exhaust temperature ranging from 750 deg F to 1250 deg F, outside the optimal temperature range for SNCR control of VOC emissions. Therefore, SNCR is deemed technically infeasible for the proposed project.
- Oxidation catalyst: Oxidation catalysts are best suited for lean-burn engines where
 there is more air than fuel in the combustion chamber. The oxidation catalyst uses
 the higher concentration of air in the combustion chamber to reduce air pollutants,
 including VOCs. NYDIG's generators (Waukesha 9394 GSI) are rich-burn engines
 where there is more fuel than air in the combustion chamber. Because there isn't
 enough air in the combustion chamber of a rich-burn engine, oxidation catalyst is
 deemed technically infeasible to control VOCs from the proposed project.
- EMxTM catalyst system: The EMxTM catalyst system requires specific exhaust

temperatures for optimal destruction efficiency for VOCs. The exhaust temperatures for optimal effectiveness using the EMxTM catalyst system are between 300 deg F to 700 deg F. NYDIG's generators (Waukesha 9394 GSI) have an exhaust temperature ranging from 750 deg F to 1250 deg F, outside the temperature range for EMxTM catalyst systems to control VOCs. Therefore, the EMxTM catalyst system is deemed technically infeasible for the proposed project.

Step 3: Rank remaining control technologies by control effectiveness

The remaining control technologies, ranked by control effectiveness include the following:

• (1) NSCR. Per the engine manufacturers specifications, the use of add-on NSCR control can reliably and consistently limit VOC emissions at or below 0.0124 g/bhp-hr when combusting pipeline quality natural gas or propane. Because of the variable nature of the field gas being combusted, the engine manufacturer cannot guarantee that an emission rate of 0.0124 g/bhp-hr for the affected engines operating with NSCR is consistently achievable in this case.

With a maximum engine rating of 2,500 hp and an emission rate of 0.0124 g/bhp-hr, controlled VOC emissions would be 0.30 tons per year when combusting pipeline quality natural gas or propane, which was deemed technically infeasible for the proposed project. Compared to the base-case, the combustion of pipeline quality natural gas or propane and the use of a NSCR has a VOC reduction efficiency between 93% and 94%, or a maximum reduction of 4.5 tons VOC per year/engine.

• (2) Good combustion practices including maintaining proper air-to-fuel ratio. Good combustion practices including maintaining proper air-to-fuel ratio constitutes the base case, with no add-on VOC control for the affected engines. Based on engine specifications provided in the application for the proposed permit modification, the Waukesha 9394 GSI base-case engine VOC emission rate is between 0.18 grams per horsepower-hour (g/hp-hr) and 0.20 g/hp-hr. With a maximum horsepower of 2,500 hp, this equates to between 4.3 tons and 4.8 tons VOC per year.

Step 4: Evaluate the most effective controls and document results

• NSCR. The installation and operation of NSCR with an AFR controller on the affected engines constitutes a readily available VOC control option. The cost of NSCR is widely variable depending on the application. The EPA published a cost estimation method for NSCR with a capital cost of \$24.9 x hp + \$13,118 and an annual cost of \$4.77 x hp + 5,679. NYDIG's generators (Waukesha 9394 GSI) have a maximum horsepower of 2,500 resulting in an estimated capital cost of \$75,368 and estimated annual cost of operation at \$17,604 (based on 2009 dollars).

The lifetime for NSCR in the proposed application ranges from 1 to 3 years depending on regular maintenance and cleaning of the elements. Assuming a 3-year lifetime, the average annual cost for NSCR is \$42,727 [\$75,368 + 3 * \$17,604) divided by 3 years]. Therefore, the cost of VOC reduced (4.3) is approximately \$10,411/ton.

Good combustion practices including maintaining proper air-to-fuel ratio. As this is

the base-case, there are no additional environmental, economic, or energy impacts from good combustion practices. There are no perceived challenges from its implementation.

Step 5: Select BACT

Under MAQP #5262-05, BACT for VOC emissions from each of the affected 2,500 hp capacity rich-burn natural gas-fired engines was determined to be add-on NSCR with an AFR controller and an emission limit of 0.03 g/bhp-hr. Because the proposed engines would burn field gas and not pipeline quality natural gas or propane, the previous BACT-determined VOC emission limit of 0.01 g/bhp-hr may not be consistently achievable in practice and cannot be guaranteed by the manufacturer of the engines. Due to the inherent variability of field gas harvested from the existing oil and gas wells and combusted by the affected engines, DEQ determined an emission rate of 0.03 g/bhp reasonably accommodates such variability in fuel and constitutes BACT with consideration for BACT-determined VOC controls.

IV. Emission Inventory

Source	N lb/hr	O _x	lb/hr	CO ton/yr	V(lb/hr	OC ton/yr	lb/hr	SO ₂ ton/yr	PM/P	M ₁₀ /PM _{2.5} ton/yr	H lb/hr	APs ton/yr
EU04 - 7 x Waukesha 9394 GSI	5.79	25.35	11.57	50.70	1.16	5.07	0.56	2.43	0.39	1.69	1.67	7.31
EU05 - 1 x Caterpillar C32	19.79	8.90	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	34.0	15.3	4.45	2.00	0.22	0.10	0.037	0.0165	0.220	0.10	0.0335	0.015
EU07 - 11 x Diesel Storage Tanks	-	-	-	-	0.00051	0.00225	-	-	-	-	-	-
Requested Total Facility PTE	59.58	49.55	16.60	52.96	1.41	5.19	0.61	2.45	0.68	1.82	1.83	7.33
Permitted Facility PTE	59.58	49.55	16.60	52.96	0.64	1.82	0.61	2.45	0.68	1.82	1.83	7.33
Net Change in PTE		0.00		0.00		3.37		0.00		0.00		0.00

Emission Calculations

2,500 hp engines

Note: Emissions are based on the power output of the engine
Operational Capacity of Engine = 7 engines
Hours of Operation = 8,760.00 hours

PM Emissions:

PM Emissions = 11.65 ton/yr (Assume all PM < 1.0 um)

PM-10 Emissions:

PD: 10/09/2025 Pernit Analysis: 10/09/2025

8760

engines

hours

5262-05

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Sallons per hour for each engine 2M Emissions: 2MTOT 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 2M-10 Emissions: 2M-10 Emissions: 2M-10 Emissions: 2M-10 Emissions: 2M-10 Emissions: 2M-10 Emissions 2M-10 Emissions 2M-10 Emissions 2M-10 Emissions 2M-25 Emissions:	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 671 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp	7.36 5 900	ton/yr engines hours
PMTOT 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 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr NO _x Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr NO _x Emissions: Emission Factor = 4.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 on/yr 15.3 ton/yr PD: 10/09/20	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 671 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours	7.36 5 900 671	engines hours
### 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 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr O.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 on/yr NO ₈ Emissions: Emission Factor = 4.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 on/yr 15.3 ton/yr PD: 10/09/20	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 671 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating	7.36 5 900 671 0.002205	engines hours hp
Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr 2M-10 Emissions: Cancillation: ((5 engines) * (0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr 2M-2.5 Emissions Cancillation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr 2M-2.5 Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 on/yr NOs Emissions: Cancillation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 on/yr 15.3 ton/yr 162-05	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 771 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds	7.36 5 900 671 0.002205 19300	engines hours hp lbs Btu/gal
Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 Onlyr O	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 771 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine PM Emissions:	7.36 5 900 671 0.002205 19300 35.7	engines hours hp lbs Btu/gal gal/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 On/yr O.1 ton/yr O.2 ton/yr O.3 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 O.3 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 O.4 ton/yr O.5 g/bhp-hr Calculation: ((5 engines) * (4.60 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 On/yr O.62-05	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 671 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.00	7.36 5 900 671 0.002205 19300 35.7	engines hours hp lbs Btu/gal gal/hr
0.1 ton/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 On/yr NO ₄ Emissions: Emission Factor = 4.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 on/yr 15.3 ton/yr 162-05 PD: 10/09/2	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 671 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.0 on/yr	7.36 5 900 671 0.002205 19300 35.7	engines hours hp lbs Btu/gal gal/hr
Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 0.1 ton/yr NO _x Emissions: Emission Factor = 4.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 15.3 ton/yr PD: 10/09/2	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 71 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.0 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT)	7.36 5 900 671 0.002205 19300 35.7 0.1	engines hours hp lbs Btu/gal gal/hr ton/yr
Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.09 On/yr NO _x Emissions: Emission Factor = 4.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 On/yr 15.3 ton/yr PD: 10/09/2	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 671 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.0 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0	7.36 5 900 671 0.002205 19300 35.7 0.1	engines hours hp lbs Btu/gal gal/hr ton/yr
0.1 ton/yr NO _x Emissions: Emission Factor = 4.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 15.3 ton/yr 162-05 13 PD: 10/09/2	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 77 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.0 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr	7.36 5 900 671 0.002205 19300 35.7 0.1	engines hours hp lbs Btu/gal gal/hr ton/yr
Emission Factor = 4.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (4.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 13.6 15.3 ton/yr 62-05 13 PD: 10/09/2	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 71 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds AMBtu per Gallon of Diesel fuel Gallons per hour for each engine PMTOT 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) = 0.0 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT)	7.36 5 900 671 0.002205 19300 35.7 0.1 0.03	engines hours hp lbs Btu/gal gal/hr ton/yr
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 PD: 10/09/20	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr 71 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.0 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr	7.36 5 900 671 0.002205 19300 35.7 0.1 9 0.03 9 0.03	engines hours hp lbs Btu/gal gal/hr ton/yr g/bhp-hr
15.3 ton/yr 162-05 13 PD: 10/09/20	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr C71 hp engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds AMBtu per Gallon of Diesel fuel Gallons per hour for each engine CM Emissions: CMTOT 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) = 0.0 con/yr CM-10 Emissions: Cmission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 con/yr CM-2.5 Emissions Cmission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 con/yr CM-2.5 Emissions Cmission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 con/yr	7.36 5 900 671 0.002205 19300 35.7 0.1 9 0.03 9 0.03	engines hours hp lbs Btu/gal gal/hr ton/yr g/bhp-hr
	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr For the engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.0 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr NO. Emissions: Emission Factor = 4.6 g/bhp-hr (BACT)	7.36 5 900 671 0.002205 19300 35.7 0.1 0.03 0.03 0.1 4.6	engines hours hp lbs Btu/gal gal/hr ton/yr g/bhp-ht ton/yr
	Emission Factor = 0.24 lb/hr Calculation: ((7 engines) * (8,760 hours) * (7.36 ton/yr) * (ton/2000 lb) = 2.453 ton/yr For the engine (500-kW) Note: Emissions are based on the power output of the engine Operational Capacity of Engine = 671 hp Hours of Operation = 900.00 hours Engine Horsepower Rating Conversion of grams to pounds MMBtu per Gallon of Diesel fuel Gallons per hour for each engine 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) = 0.0 on/yr PM-10 Emissions: Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr PM-2.5 Emissions Emission Factor = 0.03 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.03 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 0.0 on/yr NO. Emissions: Emission Factor = 4.6 g/bhp-hr (BACT)	7.36 5 900 671 0.002205 19300 35.7 0.1 9 0.03 9 0.1 4.6	engines hours hp lbs Btu/gal gal/hr ton/yr g/bhp-ht ton/yr

CO Emissions:		
Emission Factor = 0.6 g/bhp-hr (BACT) Calculation: ((5 engines) * (0.60 g/bhp-hr) * (671 hp) * (900.00 hours) * (1 lb/453.53 g) * (1 ton/2000 lb) = 1.8	0.6	g/bhp-hr
Calculation: ((3 engines) · (0.00 g/ biip-iii) · (0/1 iip) · (900.00 nours) · (1 ib/ 453.35 g) · (1 toii/ 2000 ib) = 1.8 ton/yr	1.8	ton/yr
VOC Emissions:		
Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	g/bhp-hr
Calculation: $((5 \text{ engines}) * (0.03 \text{ g/bhp-hr}) * (671 \text{ hp}) * (900.00 \text{ hours}) * (1 \text{ lb/453.53 g}) * (1 \text{ ton/2000 lb}) = 0.09 \text{ ton/yr}$	0.1	ton/yr
SO _x Emissions:		
Emission Factor = 0.014 lb/hr (BACT)	0.00152	lb/MMBtu
Calculation: ((5 engines) * (0.00152 lb/hr) * (900 hours) * $(ton/2000 \text{ lb}) = 0.00 \text{ ton/yr}$	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)		
N. F. C. A. L. A.		
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: $((1 \text{ engine}) * (0.03 \text{ g/bhp-hr}) * (1,497 \text{ hp}) * (900.00 \text{ hours}) * (1 \text{ lb}/453.53 \text{ g}) * (1 \text{ ton}/2000 \text{ lb}) = 0.045 \text{ ton/yr}$	0.04	ton/yr
NO _x Emissions:		
Emission Factor = 4.6 g/bhp-hr (BACT)	4.6	g/bhp-hr
Calculation: $((1 \text{ engine}) * (4.60 \text{ g/bhp-hr}) * (1,497 \text{ hp}) * (900.00 \text{ hours}) * (1 \text{ lb}/453.53 \text{ g}) * (1 \text{ ton}/2000 \text{ lb}) = 6.833 \text{ ton/yr}$	6.83	ton/yr
CO Emissions:		
Emission Factor = 0.6 g/bhp-hr (BACT)	0.6	g/bhp-hr
Calculation: $((1 \text{ engine}) * (0.60 \text{ g/bhp-hr}) * (1,497 \text{ hp}) * (900.00 \text{ hours}) * (1 \text{ lb}/453.53 \text{ g}) * (1 \text{ ton}/2000 \text{ lb}) = 0.891 \text{ ton/yr}$	0.89	ton/yr
VOC Emissions:		
Emission Factor = 0.03 g/bhp-hr (BACT)	0.03	g/bhp-hr
Calculation: $((1 \text{ engine}) * (0.03 \text{ g/bhp-hr}) * (1,497 \text{ hp}) * (900.00 \text{ hours}) * (1 \text{ lb}/453.53 \text{ g}) * (1 \text{ ton}/2000 \text{ lb}) = 0.045 \text{ ton/yr}$	0.04	ton/yr

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ton/yr

0.04 **ton/yr**

SO_x Emissions:

Emission Factor = 0.014 lb/hr (BACT)	0.00152	lb/MMBtu
Calculation: $((1 \text{ engine}) * (0.00152 \text{ lb/MMBtu}) * (900 \text{ hours}) * (ton/2000 \text{ lb}) = 0.006 \text{ ton/yr})$	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/vr
0.071 (011))1	0.51	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

The facility is located 15 miles northeast of Sidney, Montana, in Section 8, Township 25 North, Range 59 East, Richland County, 47. 93400°N, latitude and -104. 13700°W, longitude. The air quality of this area is designated unclassifiable/attainment for all criteria pollutants with an established National Ambient Air Quality Standard (NAAQS).

VI. Air Quality Impacts

MAQP #5262-05 incorporates conditions and limitations that would protect air quality within the operational site and surrounding area. Therefore, DEQ believes this action will not cause or contribute to a violation of any ambient air quality standard.

VII. Ambient Air Impact Analysis

Based on the information provided in the application and conditions established in MAQP #5262-05, DEQ determined that any ambient air quality impacts will be minor. Under the current permit action, total facility allowable VOC emissions would increase by approximately 3.4 tons/year. No other increases in allowable emissions would occur because of the proposed action. Therefore, DEQ believes the current permit action will not cause or contribute to a violation of any ambient air quality standard in the affected area.

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
Λ		affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private
	Λ	property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others,
	Λ	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
	Λ	easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and

YES	NO	
		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
	Λ	impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect
	Λ	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,
	Λ	waterlogged or flooded?
		7c. Has government action lowered property values by more than 30% and necessitated the
	X	physical taking of adjacent property or property across a public way from the property in
		question?
		Takings or damaging implications? (Taking or damaging implications exist if YES is
	X	checked in response to question 1 and also to any one or more of the following questions:
	Λ	2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded
		areas)

The proposed project would take place on private land. DEQ has determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the Montana Clean Air Act. Therefore, DEQ's approval of MAQP #5262-05 would not have private property-taking or damaging implications.

IX. Environmental Assessment

An environmental assessment (EA), prepared pursuant to the applicable requirements of the Montana Environmental Policy Act or MEPA, Title 75, Chapter 1, Parts 1-3, was completed for the proposed project. A copy of the EA is attached.



DRAFT ENVIRONMENTAL ASSESSMENT

October 9, 2026

Air Quality Permitting Services Section Air Quality Bureau Air, Energy and Mining Division **Montana Department of Environmental Quality**

A. PROJECT/SITE NAME: Kraken Central Site

B. APPLICANT/COMPANY NAME: NYDIG

C. Montana Air Quality Permit #5262-05

D. LOCATION: Section 8, Township 25 North, Range 59 East, in Richland County, 47. 93400°N, latitude and -104. 13700°W, longitude

E. COUNTY: Richland

F. PROPERTY OWNERSHIP: FEDERAL STATE **PRIVATE X**

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OVERVIEW OF PROPOSED ACTION

Authorizing Action

Pursuant to the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental review for state actions that may have an impact on the Montana environment. The Proposed Action is a state action that may have an impact on the Montana environment; therefore, the Montana Department of Environmental Quality (DEQ) must prepare an environmental review. This EA will examine the proposed action and alternatives to the proposed action and disclose potential and proximate impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608.

Description of DEQ Regulatory Oversight

DEQ implements the Clean Air Act of Montana, overseeing the development of sources of regulated pollutants and associated facilities. DEQ has authority to analyze proposed emitting units subject to rule established in ARM 17.8.743

Proposed Action

NYDIG proposes to increase the BACT-determined emission limit for Volatile Organic Compounds (VOCs) emitted by the seven permitted 2,500 bhp capacity engines from 0.010 grams per brake horsepower hour (g/bhp-hr) per engine to 0.03 g/bhp-hr. Under the current permit action, total facility allowable VOC emissions would increase by approximately 3.4 tons/year. No other increases in allowable emissions would occur because of the proposed action.

A. Table 1. Summary of Proposed Action

General Overview	The proposed action would increase the BACT-determined emission limit for VOCs emitted by the rich-burn engines combusting field gas for fuel.
Duration & Hours of Operation	The affected engines are permitted to operate for 8,760 hours per year (continuous operation).
Estimated Disturbance	There would no disturbances associated with the proposed action.
Construction Equipment	No construction equipment would be necessary or used for the proposed action.
Personnel Onsite	No new permanent employees would be anticipated because of the proposed action, as the facility is normally unstaffed.
Location and Analysis Area	Location: The facility location is Section 8, Township 25 North, Range 59 East, in Richland County, 47.93400°N, latitude and -104.13700°W, longitude Analysis area: The area being analyzed as part of this environmental review includes the immediate project area (figure 1), as well as the neighboring lands surrounding the analysis area, as reasonably appropriate for impacts being considered.

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B. Table 2. The applicant is required to comply with all applicable local, county, state, and federal requirements pertaining to the following resource areas.

Air Quality	MAQP #5262-05 incorporates conditions and limitations that would protect air quality within the operational site and surrounding area.
Water Quality	Water quality would not be impacted as a result of the proposed action.
Erosion Control and Sediment Transport	No new land disturbances would be expected because of the proposed action because no new construction or construction equipment and associated impacts would occur because of the proposed action.
Solid Waste	The proposed action would create spent catalyst (solid waste) created by the operation of BACT-determined non-selective catalytic reduction or NSCR emission controls. Any spent catalyst created would be regenerated and recycled.
Cultural Resources	The property is already in use as an industrial site surrounded by agricultural property and no additional ground disturbance would be expected because of the proposed action. Therefore, no effects on cultural resources would be expected because of the proposed action.
Hazardous Substances	The proposed action does not contribute any hazardous substances to the facility. The applicant must comply with applicable local, county, state and federal requirements pertaining to hazardous substances.
Reclamation	The property is already in use as an industrial property and would require minor reclamation at the end of the project's lifespan.

C. Table 3. Cumulative Impacts

Past Actions	This an existing, permitted industrial site that is being modified by the current permit action.
Present Actions	The proposed action would increase the BACT-determined emission limit for VOCs emitted by the rich-burn engines combusting field gas for fuel.
Related Future Actions	No future actions are foreseen at this site. As applicable, any future actions would require environmental review pursuant to MEPA.

Purpose, Need, and Benefits

DEQ's purpose in conducting this environmental review is to act upon NYDIG's application for a MAQP to conduct electricity generation to power local data farms. DEQ's action on the permit application is governed by § 75-2-201, et seq., Montana Code Annotated (MCA) and the Administrative Rules of Montana (ARM) 17.8.740, et seq.

The applicant's purpose and need, as expressed to DEQ in seeking this action, is to increase the BACTdetermined emission limit for VOC's emitted by the seven rich-burn, 2500 bhp-capacity field gas-fired engines to accommodate the inherent variability in the fuel combusted and associated VOC emissions.

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D. Figure 1. General Location of the Proposed Project



Other Governmental Agencies and Programs with Jurisdiction

The proposed action would be located on private land. All applicable local, state, and federal rules must be adhered to, which may include other local, state, federal, or tribal agency jurisdiction. Other governmental agencies which may have overlapped, or additional jurisdiction include but may not be limited to: Montana Board of Oil and Gas and Montana Public Service Commissions.

EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE

The impact analysis will identify and evaluate the proximate direct and secondary impacts TO THE PHYSICAL ENVIRONMENT AND POPULATION IN THE AREA TO BE AFFECTED BY THE PROPOSED PROJECT. Direct impacts occur at the same time and place as the action that causes the impact. Secondary impacts are a further impact to Montana's environment that may be stimulated, induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts will be described in this analysis. When the analysis discloses environmental impacts, these are proximate impacts pursuant to 75-1-201(1)(b)(iv)(A), MCA.

Cumulative impacts are the collective impacts on Montana's environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies,

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separate impact statement evaluation, or permit processing procedures (ARM 17.4.603(7)). The project identified in Table 1 was analyzed as part of the cumulative impacts assessment for each resource subject to review, pursuant to MEPA (75-1-101, et. seg).

The duration of the proposed action is quantified as follows:

- Construction Impacts (short-term): These are impacts to the environment that would occur during the construction period, including the specific range of time.
- Operation Impacts (long-term): These are impacts to the environment during the operational period of the proposed action, including the anticipated range of operational time.

The intensity of the impacts is measured using the following:

- No impact: There would be no change from current conditions.
- Negligible: An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor**: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- Moderate: The effect would be easily identifiable and would change the function or integrity of the resource.
- Major: The effect would alter the resource.

1. Geology and Soil Quality, Stability and Moisture

This section includes the following resource areas, as required in ARM 17.4.609: Geology; Soil Quality, Stability, and Moisture

Affected Environment

The Kraken Central Site is located 15.2 miles northeast of Signey, MT in Richland County. The elevation is approximately 2,048 ft as referenced by the nearest topographic map on the Montana DEQ GIS website. The affected area consists primarily of agricultural and grazing lands with nearby dispersed oil and gas operations. Soil within the affected area is made up primarily of Vida-Zahill and Williams loams with 2-8 and 0-4 percent slopes respectively.

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No direct impacts to geology, soil quality, or moisture would be expected because of the proposed action, as no additional ground disturbance would occur because of the proposed project.

Secondary Impacts

Proposed Action: No secondary impacts to geology, soil quality, or moisture would be expected because of the proposed action, as no additional ground disturbance would occur

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because of the proposed project.

Cumulative Impacts

Proposed Action: No cumulative impacts to geology, soil quality, or moisture would be expected because of the proposed action, as no additional ground disturbance would occur because of the proposed project.

2. Water Quality, Quantity, And Distribution

This section includes the following resource areas, as required in ARM 17.4.609: Water Quality, Quantity and Distribution

Affected Environment

No wetlands have been identified on the site or within the project boundaries. North Fork Fourmile Creek, a seasonally flooded stream bed with emergent riparian vegetation throughout the growing season is located approximately 300 feet to the east and spanning the project boundary. An additional intermittent stream, approximately 100 feet to the southwest and spanning the southern boundary, flows into the North Fork Fourmile Creek.

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not disturb any ground or make any physical changes to the site.

Direct Impacts

Proposed Action: A limited amount of water may be required to control fugitive dust emissions from day-to-day activities and the water would likely be sourced on-site. Therefore, any adverse direct impacts to water quantity would be short-term and negligible.

Secondary Impacts

Proposed Action: No secondary impacts would be expected as a result of the proposed action because the action updates the BACT-determined permit requirements and does not change the operational environment.

Cumulative Impacts

Proposed Action: The proposed action modifies the BACT-determined emission limits for VOCs. Therefore, no cumulative impacts are expected because of the proposed project.

3. Air Quality

This section includes the following resource areas, as required in ARM 17.4.609: Air Quality

Affected Environment

Air quality in the area affected by the proposed project is currently unclassifiable or in compliance with applicable NAAQS. No significant sources of air pollution exist in the area affected by the proposed project. Existing sources of air pollution in the area are limited and generally include dispersed oil and gas facilities similar to the proposed project, fugitive dust associated with high wind events and exposed ground, vehicle travel on paved and unpaved roads (fugitive dust), vehicle exhaust emission, and various agricultural practices (vehicle exhaust and fugitive dust).

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

PD: 10/09/2025 Draft EA: 10/09/2025 Applicants are required to comply with all laws relating to air, such as the Federal Clean Air Act, NAAQS set by Environmental Protection Agency (EPA), and the Clean Air Act of Montana.

In addition, MAQP #5262-05 permitted legally enforceable conditions regarding the emitting units themselves, pollution controls, and requires the applicant to take reasonable precautions to limit fugitive dust from operations at this location.

Direct Impacts

Proposed Action: Any adverse air quality impacts would be minor because of the proposed project. See permit analysis for more information regarding air quality impacts. The majority of pollutants from the proposed project would be related to the combustion of field gas which is similar in composition to natural gas. This would result in the release of NOx, CO, SOx, VOCs and particulate matter.

The proposed action increases the BACT-determined emission limit for VOC's emitted by the 2,500 bhp-capacity rich-burn, field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site. Allowable VOC emissions would increase by approximately 3.4 tons annually because of the proposed action. Therefore, any air quality impacts would be long-term, negligible, and consistent with existing impacts.

Secondary Impacts

Proposed Action: Allowable VOC emissions would increase by approximately 3.4 tons annually because of the proposed action. Emissions from the proposed project would be controlled by BACT and would not be expected to cause or contribute to a violation of the health and welfare-based primary and secondary NAAQS. Primary NAAQS protect public health. Secondary NAAQS provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. See permit analysis for more detailed information regarding air quality impacts. Any adverse impacts would be longterm and minor. No beneficial secondary impacts would be expected because of the proposed project.

Cumulative Impacts

Proposed Action: Cumulative impacts from the operation of the Kraken Central Site are restricted by conditions and limits contained in the MAQP; therefore, any expected air quality impacts would be minor. The Richland County area also has other stationary sources, many of which are similar power generators for data centers, and all contribute to the overall air quality impacts in Richland County, Montana. The cumulative impacts of these other emitters and the proposed actions would not have a significant adverse impact to air quality.

Impacts from the Proposed Action are limited by enforceable conditions and limits contained in the MAQP and BACT must be used. There are other oil and gas operations within the same township and range but none within the same section and none within a mile of linear distance. These other sites contribute VOCs from venting directly to atmosphere, combustion in flares and combustion of field gas to power the generator engines. Collectively, VOCs released directly to the atmosphere and through the combustion of field gas to power the generator engines would release other criteria pollutants and greenhouse gases (GHGs). Because emissions from the proposed project, and all other similar or related projects located the affected area are regulated, any adverse cumulative impacts to air quality would be shortand long-term, and minor.

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Further, the proposed project would generate electricity to power a data center through the combustion of field gas gathered from multiple well pads that would otherwise be flared from an existing oil and gas facility, thereby eliminating or limiting emissions associated with flaring activities. Any beneficial cumulative impacts to air quality from eliminating or limiting the flaring of field gas would be long-term and minor.

4. Vegetation Cover, Quantity, and Quality

This section includes the following resource areas, as required in ARM 17.4.609: Vegetation Cover, **Quantity and Quality**

Affected Environment

The affected area consists primarily of agricultural and grazing lands with nearby, dispersed oil and gas operations.

The proposed action would increase the BACT-determined emission limit for VOCs emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No ground disturbance through construction or operational impacts to vegetative cover, quantity, or quality are expected as a result of the proposed action. Therefore, no impacts to vegetation would be expected because of the proposed action.

Secondary Impacts

Proposed Action: No secondary impacts would be expected because the project increases the BACT-determined emission limit for VOCs from operation of the rich-burn, 2,500 hp capacity engines and would not require any additional ground or vegetation disturbance. The proposed project would not be expected to cause or contribute to a violation of any NAAQS. Secondary NAAQS provide public welfare protection, including protection against damage to vegetation. Therefore, any secondary impacts would be long-term and negligible.

Cumulative Impacts

Proposed Action: There would be no cumulative impacts to vegetative cover, quantity, or quality associated with the proposed action because no additional disturbance to vegetation would be expected because of the proposed action.

5. Terrestrial, Avian, and Aquatic Life and Habitats

This section includes the following resource areas, as required in ARM 17.4.609: Terrestrial and Aquatic Life and Habitats; Unique, Endangered, Fragile, or Limited Environmental Resources

Affected Environment

The affected area consists primarily of agricultural and grazing lands with nearby, dispersed oil and gas operations.

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

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Direct Impacts

Proposed Action: No direct impacts from construction or operational impacts to terrestrial, avian, or aquatic life and habitats are expected as a result of the proposed action because the proposed action does not require any physical changes to the existing facility.

Secondary Impacts

Proposed Action: No secondary constructions or operational impacts to terrestrial, avian, or aquatic life and habitats are expected as a result of the proposed action because the proposed action does not require any physical changes to the existing facility.

Cumulative Impacts

Proposed Action: There would be no cumulative impacts to terrestrial, avian or aquatic life and habitats associated with the proposed action because the proposed action does not require any physical changes to the existing facility.

6. Unique, Endangered, Fragile, or Limited Environmental Resources

This section includes the following resource areas, as required in ARM 17.4.609: Unique, Endangered, Fragile, or Limited Environmental Resources.

Affected Environment

DEQ did not conduct a search using the Montana Natural Heritage Program (MTNHP) because the proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

The proposed project is in not in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program at: http://sagegrouse.mt.gov

Direct Impacts

Proposed Action: No direct construction or operational impacts to unique, endangered, fragile or limited environmental resources are expected as a result of the proposed action because the proposed action does not require any physical changes to the existing facility.

Secondary Impacts

Proposed Action: No secondary construction or operational impacts to unique, endangered, fragile or limited environmental resources are expected as a result of the proposed action because the proposed action does not require any physical changes to the existing facility.

Cumulative Impacts

Proposed Action: There would be no cumulative impacts to unique, endangered, fragile, or limited environmental resources associated with the proposed action because the proposed action does not require any physical changes to the existing facility.

7. Historical and Archaeological Sites

This section includes the following resource areas, as required in ARM 17.4.609: Historical and **Archaeological Sites**

Affected Environment

The Montana State Historical Preservation Office (SHPO) was not notified of the application because the proposed action increases the BACT-determined emission limit for VOC's emitted by operation of

10 5262-05 PD: 10/09/2025 the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No ground disturbance would occur because of the proposed action. Therefore, no direct impacts to historical or archaeological sites are expected as a result of the proposed action.

Secondary Impacts

Proposed Action: No ground disturbance would occur because of the proposed action. Therefore, no secondary impacts to historical or archaeological sites are expected as a result of the proposed action.

Cumulative Impacts

Proposed Action: No ground disturbance would occur because of the proposed action. Therefore, no cumulative impacts to historical or archaeological sites would be expected because of the proposed action.

8. Aesthetics

This section includes the following resource areas, as required in ARM 17.4.609: Aesthetics

Affected Environment

The affected environment consists primarily of agricultural and grazing lands with nearby, dispersed oil and gas operations. The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No physical changes would occur to the existing facility because of the proposed action; therefore, no direct impacts to the aesthetic nature of the affected area would be expected as a result of the proposed action.

Secondary Impacts

Proposed Action: No physical changes would occur to the existing facility because of the proposed action; therefore, no secondary impacts to the aesthetic nature of the affected area would be expected as a result of the proposed action.

Cumulative Impacts

Proposed Action: No physical changes would occur to the existing facility because of the proposed action; therefore, no cumulative impacts to the aesthetic nature of the affected area would be expected because of the proposed action.

9. Demands on Environmental Resources of Land, Water, Air, or Energy

This section includes the following resource areas, as required in ARM 17.4.609: Demands on Environmental Resources of Land, Water, Air, or Energy

Affected Environment

The proposed action would increase the BACT-determined emission limit for allowable VOCs emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr. No physical changes to the site would occur because of the proposed action.

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Direct Impacts

Proposed Action: No physical changes to the existing facility would occur because of the proposed action; therefore, no direct impacts would be expected because of the proposed action.

Secondary Impacts

Proposed Action: The proposed project would increase allowable VOC emissions from the existing facility by approximately 3.4 tons per year; therefore, long-term, negligible secondary impacts to air quality would be expected because of the proposed action. No other secondary impacts to local demands for the environmental resources of land, water, air or energy are expected as a result of the proposed action.

Cumulative Impacts

Proposed Action: The proposed project would increase allowable VOC emissions from the existing facility by approximately 3.4 tons per year; therefore, long-term, negligible cumulative impacts to air quality would be expected because of the proposed action. No other cumulative impacts to local demands for the environmental resources of land, water, air or energy are expected as a result of the proposed action.

10.Impacts on Other Environmental Resources

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Other Environmental Resources

Affected Environment

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No physical changes to the existing facility would occur because of the proposed action; therefore, no direct impacts to other environmental resources would be expected because of the proposed action.

Secondary Impacts

Proposed Action: The proposed project would increase allowable VOC emissions from the existing facility by approximately 3.4 tons per year; therefore, long-term, negligible cumulative impacts to air quality would be expected because of the proposed action. No other secondary impacts to other environmental resources would be expected because of the proposed action.

Cumulative Impacts

Proposed Action: The proposed project would increase allowable VOC emissions from the existing facility by approximately 3.4 tons per year; therefore, long-term, negligible cumulative impacts to air quality would be expected because of the proposed action. No other secondary impacts to other environmental resources would be expected because of the proposed action.

11. Human Health and Safety

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Human

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Health and Safety

Affected Environment

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

The applicant would be required to adhere to all applicable state and federal safety laws. The Occupational Safety and Health Administration (OSHA) has developed rules and guidelines to reduce the risks associated with this type of labor. Few, if any, members of the public would be in immediate proximity to the project during construction or operations.

Direct Impacts

Proposed Action: No physical changes to the existing facility would occur because of the proposed action; therefore, no direct impacts to human health and safety are expected as a result of the proposed action.

Secondary Impacts

Proposed Action: The proposed project would increase allowable VOC emissions from the existing facility by approximately 3.4 tons per year. However, while the proposed project would increase allowable VOC emissions from existing permitted operations, the proposed action would not be expected to cause or contribute to a NAAQS violation. Primary NAAQS are protective of public health. Therefore, any impacts to human health and safety would be long-term and negligible as a result of the proposed action.

Cumulative Impacts

Proposed Action: The proposed project would increase allowable VOC emissions from the existing facility by approximately 3.4 tons per year. However, while the proposed project would increase allowable VOC emissions from existing permitted operations, the proposed action would not be expected to cause or contribute to a NAAQS violation. Primary NAAQS are protective of public health. Therefore, any cumulative impacts to human health and safety would be long-term and negligible.

12.Industrial, Commercial, and Agricultural Activities and Production

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Human **Health and Safety**

Affected Environment

The affected area consists primarily of agricultural and grazing lands with nearby, dispersed oil and gas operations.

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: The proposed action would occur at an existing industrial facility but would not affect existing operations at the facility. Further, because the proposed action would occur on an existing industrial site, no displacement of or other impacts to existing agricultural land or activities would occur because of the proposed action. Also, the proposed action

13 5262-05 PD: 10/09/2025 would not increase the capacity of the existing data center operations so no impacts to commercial operations would occur. Therefore, no direct impacts to industrial, commercial, agricultural activities and production are expected as a result of the proposed action.

Secondary Impacts

Proposed Action: The proposed action would occur at an existing industrial facility but would not affect existing operations at the facility. Further, because the proposed action would occur on an existing industrial site, no displacement of or other impacts to existing agricultural land or activities would occur because of the proposed action. Also, the proposed action would not increase the capacity of the existing data center operations so no impacts to commercial operations would occur. Therefore, no secondary impacts to industrial, commercial, agricultural activities and production are expected as a result of the proposed action.

Cumulative Impacts

Proposed Action: The proposed action would occur at an existing industrial facility but would not affect existing operations at the facility. Further, because the proposed action would occur on an existing industrial site, no displacement of or other impacts to existing agricultural land or activities would occur because of the proposed action. Also, the proposed action would not increase the capacity of the existing data center operations so no impacts to commercial operations would occur. Therefore, no cumulative impacts to industrial, commercial, agricultural activities and production are expected as a result of the proposed action.

13. Quantity and Distribution of Employment

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Quantity and Distribution of Employment

Affected Environment

There are already existing staff and resources employed by NYDIG in the area, and these resources would continue to be used to operate this facility following the proposed action. The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: NYDIG would continue to use existing staff or contracted services for the facility. Therefore, no direct impacts to the quantity and distribution of employment in the affected area would be expected because of the proposed action.

Secondary Impacts

Proposed Action: NYDIG would continue to use existing staff to operate the facility. Therefore, no secondary impacts to the quantity and distribution of employment in the affected area would be expected because of the proposed action.

Cumulative Impacts

Proposed Action: NYDIG would continue to use existing staff to operate the facility. Therefore, no secondary impacts to the quantity and distribution of employment in the affected area would be expected because of the proposed action.

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14.Local and State Tax Base and Tax Revenue

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Local and State Tax Base and Tax Revenue

Affected Environment

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No physical changes to the existing facility would occur because of the proposed action; therefore, no construction jobs and associated impacts to the local and state tax base and tax revenues would be expected as a result of the proposed action. Therefore, no direct impacts to the local and state tax base and tax revenues would be expected because of the proposed project.

Secondary Impacts

Proposed Action: The proposed action would not increase employment, operations, or energy production at the existing facility. Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, from the companies, employees, or landowners benefitting from the proposed operation. Further, NYDIG would continue to be responsible for accommodation of taxes associated with the operation of the proposed facility. Therefore, no secondary impacts to local and state tax base and tax revenues would be expected because of the proposed project.

Cumulative Impacts

Proposed Action: The proposed action would not increase employment, operations, or energy production at the existing facility. Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, from the companies, employees, or landowners benefitting from the proposed operation. Further, NYDIG would continue to be responsible for accommodation of taxes associated with the operation of the proposed facility. Therefore, no cumulative impacts to local and state tax base and tax revenues would be expected because of the proposed project.

15. Demand for Government Services

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Demands for Government Services

Affected Environment

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: The air quality permit has been prepared by a state government employee as part of their day-to-day, regular responsibilities. Therefore, any adverse direct impact to demands for government services is consistent with existing impacts, short-term, and negligible. No beneficial direct impacts would be expected because of the proposed project.

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Secondary Impacts

Proposed Action: Ongoing compliance inspections of facility operations would be accomplished by state government employees as part of their typical, regular duties and would be required to ensure the facility is operating within the limits and conditions listed in the air quality permit. Therefore, any secondary impacts to demands for government services would be consistent with existing impacts, short- and long-term, and negligible. No beneficial secondary impacts would be expected because of the proposed project.

Cumulative Impacts

Proposed Action: No cumulative impacts are anticipated on government services with the proposed action because the proposed action would not increase government demands in any way.

16.Locally Adopted Environmental Plans and Goals

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Locally Adopted Environmental Plans and Goals

Affected Environment

DEQ has reviewed the Richland County website and found no locally adopted environmental plan and goals for the area.

Direct Impacts

Proposed Action: After conducting research on the subject, DEQ is unaware of any locally adopted environmental plans and goals in the affected area. Therefore, no direct impacts would be expected because of the proposed project.

Secondary Impacts

Proposed Action: After conducting research on the subject, DEQ is unaware of any locally adopted environmental plans and goals in the affected area. Therefore, no secondary impacts would be expected because of the proposed project.

Cumulative Impacts

Proposed Action: After conducting research on the subject, DEQ is unaware of any locally adopted environmental plans and goals in the affected area. Therefore, no cumulative impacts would be expected because of the proposed project.

17. Access to and Quality of Recreational and Wilderness Activities

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Access to and Quality of Recreation and Wilderness Activities

Affected Environment

The affected area consisted primarily of agricultural and grazing lands with nearby, dispersed oil and gas operations.

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No recreational or wilderness areas occur within the vicinity of the proposed

project. Therefore, no direct impacts to access and quality of recreational and wilderness activities would be expected because of the proposed action.

Secondary Impacts

Proposed Action: The area affected consists primarily of agricultural and grazing lands with nearby, dispersed oil and gas operations. No recreational or wilderness areas occur in the immediate area; therefore, no secondary impacts to access and quality of recreational and wilderness activities would be expected because of proposed facility operations

Cumulative Impacts

Proposed Action: No cumulative impacts to access and quality of recreational wilderness activities are anticipated as a result of the proposed permitting action as there are no public recreational or wilderness activity sites located within or near the existing industrial facility.

18. Density and Distribution of Population and Housing

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Density and Distribution of Population and Housing

Affected Environment

The affected area consists primarily of agricultural and grazing lands with nearby, dispersed oil and gas operations.

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

Direct Impacts

Proposed Action: No construction activities would occur because of the proposed action. NYDIG would employ existing staff to operate the facility, and the proposed project would not be expected to otherwise result in an increase or decrease in the local population. Therefore, no direct impacts to density and distribution of population and housing would be expected because of the proposed project

Secondary Impacts

Proposed Action: NYDIG would employ existing staff to operate the facility, and the proposed project would not be expected to otherwise result in an increase or decrease in the local population. Therefore, no secondary impacts to density and distribution of population and housing would be expected because of the proposed project.

Cumulative Impacts

Proposed Action: NYDIG would employ existing staff to operate the facility, and the proposed project would not be expected to otherwise result in an increase or decrease in the local population. Therefore, no cumulative impacts to density and distribution of population and housing would be expected because of the proposed project.

19. Social Structures and Mores

This section includes the following resource areas, as required in ARM 17.4.609: Impacts on Social **Structures and Mores**

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Affected Environment

DEQ is not aware of any Native American cultural concerns that would be affected by the proposed activity. Based on the information provided by the NYDIG, it is not anticipated that this project would disrupt traditional lifestyles or communities.

The existing nature of the area affected by the proposed project is both agricultural and industrial based on the large number of oil and gas wells in Richland County.

Direct Impacts

Proposed Action: The existing nature of the area affected by the proposed project is agricultural and industrial (oil and gas); therefore, operation of the facility would not be expected to affect the existing customs and values of the affected population. Therefore, no direct impacts to the existing social structures and mores of the affected population would be expected because of the proposed project.

Secondary Impacts

Proposed Action: The existing nature of the area affected by the proposed project is agricultural and industrial (oil and gas); therefore, operation of the facility would not be expected to affect the existing customs and values of the affected population. Therefore, no secondary impacts to the existing social structures and mores of the affected population would be expected because of the proposed project.

Cumulative Impacts

Proposed Action: The existing nature of the area affected by the proposed project is agricultural and industrial (oil and gas); therefore, operation of the facility would not be expected to affect the existing customs and values of the affected population. Therefore, no cumulative impacts to the existing social structures and mores of the affected population would be expected because of the proposed project.

20. Cultural Uniqueness and Diversity

This section includes the following resource areas, as required in ARM 17.4.609: Impacts to Cultural **Uniqueness and Diversity**

Affected Environment

The existing nature of the area affected by the proposed project is agricultural and industrial (oil and gas). It is not anticipated that this project would cause a shift in some unique quality of the area.

Direct Impacts

Proposed Action: NYDIG would employ existing staff to operate the facility and no construction activities would occur because of the proposed action. Therefore, no direct impacts to the existing cultural uniqueness and diversity of the affected population would be expected because of the proposed project.

Secondary Impacts

Proposed Action: The existing nature of the area affected by the proposed project is agricultural and industrial (oil and gas). Further, NYDIG would employ existing staff to operate the facility and thus the proposed project would not be expected to result in an increase or decrease in the local population. Therefore, no secondary impacts to the existing cultural uniqueness and diversity of the affected population are anticipated as a result of the proposed action.

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Cumulative Impacts

Proposed Action: The existing nature of the area affected by the proposed project is agricultural and industrial (oil and gas). Further, NYDIG would employ existing staff to operate the facility and thus the proposed project would not be expected to result in an increase or decrease in the local population. Therefore, no cumulative impacts to the existing cultural uniqueness and diversity of the affected population are anticipated as a result of the proposed action.

21. Other Appropriate Social and Economic Circumstances

This section includes the following resource areas, as required in ARM 17.4.609: Impacts to Other **Appropriate Social and Economic Circumstances**

Affected Environment

The existing nature of the area affected by the proposed project is agricultural and industrial (oil and gas) and this would not change because of the proposed action.

Direct Impacts

Proposed Action: DEQ is unaware of any other appropriate short-term social and economic circumstances in the affected area that may be directly impacted by the proposed project. Due to the nature of the proposed action, no direct impacts would be expected because of the proposed project.

Secondary Impacts

Proposed Action: The proposed project would not require any physical changes to the existing industrial facility. The existing facility would continue to generate electricity to power a data center through the combustion of field gas gathered from multiple well pads that would otherwise be flared from an existing oil and gas facility, thereby eliminating or limiting emissions associated with uncontrolled field gas flaring activities. Further, the proposed operation would limit or eliminate economic expenditure necessary to operate the affected engines (i.e., fuel purchases). DEQ is unaware of any other appropriate long-term social and economic circumstances in the affected area that may be impacted by the proposed project. Therefore, no secondary impacts would be expected because of the proposed action.

Cumulative Impacts

Proposed Action: The proposed project would not require any physical changes to the existing industrial facility. The existing facility would continue to generate electricity to power a data center through the combustion of field gas gathered from multiple well pads that would otherwise be flared from an existing oil and gas facility, thereby eliminating or limiting emissions associated with uncontrolled field gas flaring activities. Further, the proposed operation would limit or eliminate economic expenditure necessary to operate the affected engines (i.e., fuel purchases). DEQ is unaware of any other appropriate long-term social and economic circumstances in the affected area that may be impacted by the proposed project. Therefore, no cumulative impacts to any other appropriate social and economic circumstances are anticipated because of the proposed project.

Therefore, DEQ's approval of MAQP #5262-05 would not have private property-taking or damaging implications.

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22. Greenhouse Gas Assessment

The proposed action increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site. Nor would there be a change in the combustion of the field gas in the existing engines, the adjustment in potential emissions from changing the BACT limit requires disclosure of the GHG calculation and impact. Field gas is estimated to be approximately 93 percent methane, and therefore the increase in allowable VOC emissions, would constitute up to 93 percent methane.

The analysis area for this resource is limited to the activities regulated by the issuance of MAQP #5262-05, which is increases the BACT-determined emission limit for VOC's emitted by operation of the seven, 2,500 bhp capacity rich-burn field gas-fired engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site. The amount of natural gas and liquid diesel fuel utilized at this site may be impacted by a number of factors including seasonal weather impediments and equipment malfunctions. DEQ has calculated the range of emissions using the EPA GHG Calculator Tool.

For the purpose of this analysis, DEQ has defined greenhouse gas emissions as the following gas species: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and many species of fluorinated compounds. The range of fluorinated compounds includes numerous chemicals which are used in many household and industrial products. Other pollutants can have some properties that also are similar to those mentioned above, but the EPA has clearly identified the species above as the primary GHGs. Water vapor is also technically a greenhouse gas, but its properties are controlled by the temperature and pressure within the atmosphere, and it is not considered an anthropogenic species.

The combustion of diesel fuel at the site would release GHGs primarily being carbon dioxide (CO₂), nitrous oxide (N₂O) and much smaller concentrations of un-combusted fuel components including methane (CH₄) and other volatile organic compounds (VOCs).

DEQ has calculated GHG emissions using the EPA Simplified GHG Calculator version June 2024, for the purpose of totaling GHG emissions. This tool totals carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄) and reports the total as CO₂ equivalent (CO₂e) in metric tons CO₂e. The calculations in this tool are widely accepted to represent reliable calculation approaches for developing a GHG inventory. DEQ has determined EPA's Scope 1 GHG impacts as defined in the Inventory Guidance for Greenhouse Gas Emissions are appropriate under MEPA for this Proposed Action. Scope 1 emissions are defined as direct GHG emissions that occur from sources that are controlled or owned by the organization (EPA Center for Corporate Climate Leadership). DEQ's review of Scope 1 emissions is consistent with the agency not evaluating downstream effects of other types of impacts.

Secondary Impacts

Proposed Action: GHG emissions contribute to changes in atmospheric radiative forcing, resulting in climate change impacts. GHGs act to contain solar energy loss by trapping longer wave radiation emitted from the Earth's surface and act as a positive radiative forcing component (BLM 2023).

Per EPA's website "Climate Change Indicators," the lifetime of carbon dioxide cannot be represented with a single value because the gas is not destroyed over time. The gas instead moves between air, ocean, and land mediums with atmospheric carbon dioxide remaining in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments. Methane remains in the atmosphere for approximately 12 years. Nitrous oxide has the

20 5262-05 PD: 10/09/2025 potential to remain in the atmosphere for about 109 years (EPA, Climate Change Indictors). The impacts of climate change throughout the Northeastern part of Montana include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM 2021).

Cumulative Impacts

Proposed Action: Montana recently used the EPA State Inventory Tool (SIT) to develop a greenhouse gas inventory in conjunction with preparation of a possible grant application for the Community Planning Reduction Grant (CPRG) program. This tool was developed by EPA to help states develop their own greenhouse gas inventories, and this relies upon data already collected by the federal government through various agencies. The inventory specifically deals with carbon dioxide, methane, and nitrous oxide and reports the total as CO₂e. The SIT consists of eleven Excel based modules with pre-populated data that can be used with default settings or in some cases, allows states to input their own data when the state believes their own data provides a higher level of quality and accuracy. Once each of the eleven modules is filled out, the data from each module is exported into a final "synthesis" module which summarizes all of the data into a single file. Within the synthesis file, several worksheets display the output data in a number of formats such as GHG emissions by sector and GHG emissions by type of greenhouse gas.

DEQ has determined the use of the default data provides a reasonable representation of the greenhouse gas inventory for the various sectors of the state, and the estimated total annual greenhouse gas inventory by year. The SIT data from EPA is currently only updated through the year 2021, as it takes several years to validate and make new data available within revised modules. DEQ maintains a copy of the output results of the SIT.

DEQ has determined that the use of the default data provides a reasonable representation of the GHG inventory for all of the state sectors, and an estimated total annual GHG inventory by year. At present, Montana accounts for 51.04 million metric tons of CO_2e based on the EPA SIT for the year 2022. This project may contribute up to 22,806 metric tons per year of CO_2e . The current estimated emission of 22,806 metric tons of CO_2e from this project would contribute 0.045% of Montana's annual CO_2e emissions. This site was already contributing up to 22,720 metric of CO_2e and this action would not significantly adjust CO_2e . The calculation adjustment is based on field gas being up to 93 percent methane.

GHG emissions that would be emitted as a result of the proposed activities would add to GHG emissions from other sources. The No Action Alternative would contribute same as the Proposed Action Alternative of GHG emissions. The current land use of the area is agricultural.

Description of Alternatives

No Action Alternative: In addition to the proposed action, DEQ must also considered a "no action" alternative. The "no action" alternative would deny the approval of MAQP-5262-05. The applicant would lack the authority to conduct the proposed activity. Any potential impacts that would result from the proposed action would not occur. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

If the applicant demonstrates compliance with all applicable rules and regulations required for approval, the "no action" alternative would not be appropriate.

Other Reasonable Alternative(s): Describe any other alternatives that were considered.

Consultation

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal scoping consisted of internal review of the environmental assessment document by DEQ staff. External scoping efforts also included queries to the following websites/databases/personnel (this section can just name the material used, as it will all be appropriately cited under References):

Public Involvement

DESCRIPTION OF PUBLIC OUTREACH/NOTICE/COMMENT PERIOD/MEETINGS (planned or already conducted). This section should clearly tell the reader your method of public involvement and the time period selected for such public involvement.

Significance of Potential Impacts and Need for Further Analysis

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

- The severity, duration, geographic extent, and frequency of the occurrence of the impact;
- The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
- Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts – identify the parameters of the proposed action;
- The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
- The importance to the state and to society of each environmental resource or value that would be affected:
- Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
- Potential conflict with local, state, or federal laws, requirements, or formal plans.

Conclusions and Findings

DEQ finds that this action results in negligible impacts to air quality and GHG emissions in Richland County, Montana.

No significant adverse impacts would be expected because of the proposed project. As noted throughout the draft EA, the severity, duration, geographic extent and frequency of the occurrences of the impacts associated with the proposed air quality project would be limited. The proposed action changes the emission factor for VOC's of 2,500 bhp engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site. The site is permitted to operate the engines 8,760 hours per calendar year using BACT for the control of emissions from the proposed operations.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed actions for any environmental resources. DEQ does not believe that the activities proposed by the Applicant would have any growth-inducting or growth-inhibiting aspects, or contribution to cumulative impacts. The proposed action changes the emission factor for VOC's of 2,500 bhp engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site.

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There are no unique or known endangered fragile resources in the project area and no underground disturbance would be required for this project. There would be no impacts to view-shed aesthetics as the proposed action changes the emission factor for VOC's of 2,500 bhp engines from 0.01 g/bhp-hr to 0.03 g/bhp-hr and does not make any physical changes to the site. Employees at the operation and nearby oil and gas operations would see and hear the engine operations within the immediate area of the site.

Demands on the environmental resources of land, water, air or energy would not be significant. Impacts to human health and safety would not be significant as access roads would be closed to the public because the site is on private land.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed activities on any environmental resource.

Issuance of a Montana Air Quality permit #5262-05 to the Applicant does not set any precedent that commits DEQ to future action with significant impact or a decision in principle about such future actions. If the Applicant submits another modification or proposed to amend the permit, DEQ is not committed to issuing those revisions.

DEQ would conduct an environmental review of any subsequent permit modifications sought by the Applicant pursuant to MEPA. DEQ would make permitting decisions based on the criteria set four in the Clean Air Act of Montana.

Issuance of the Permit to the Applicant does not set a precedent for DEQ's review of other applications for Permit, including the level of environmental review. The level of environmental review decision is made based on case-specific consideration of the criteria set forth in ARM 17.4.608

Finally, DEQ does not believe that the proposed air quality permitting action by the Applicant would have any growth-inducing or growth-inhibiting impacts that would conflict with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in AMR 17.4.608, no significant adverse impacts to the affected human environment would be expected because of the proposed project. Therefore, preparation of an Environmental Impact Statement or EIS is not required, and the draft EA is deemed the appropriate level of environmental review pursuant to MEPA.

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PREPARATION

Environmental Assessment and Significance Determination Prepared By:

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Environmental Assessment Reviewed By:

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Approved By:

Eric Merchant, Supervisor Air Quality Permitting Services Section Date: September 22, 2025

Date: October 9, 2025

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REFERENCES

- 1. NYDIG Kraken Central Site application for permit modification MAQP#5262-05 received August 29, 2025
- 2. EPA GHG Calculator Tool EPA Center for Corporate Climate Leadership | US EPA
- 3. EPA State Inventory Tool, https://www.epa.gov/statelocalenergy/state-inventory-and-projectiontool
- 4. Climate Change Indicators in the United States | US EPA
- 5. Scopes 1, 2 and 3 Emissions Inventorying and Guidance | US EPA
- 6. 2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends 2023 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends
- 7. Richland County Montana Website, https://www.richland.org/
- 8. MT Sage Grouse Habitat Conservation Program, https://sagegrouse.mt.gov/

COMMENT SUMMARY AND RESPONSES TO SUBSTANTIVE COMMENTS

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