Air, Energy & Mining Division



June 19, 2024

Michael Duplantis, HSE Director Crusoe Energy Systems, Inc. Kennedy Pad 1641 California St., Suite 400 Denver, CO 80202

Sent via email: mduplantis@crusoeenergy.com

RE: Final Permit Issuance for MAQP #5301-00

Dear Mr. Duplantis:

Montana Air Quality Permit (MAQP) #5301-00 is deemed final as of June 11, 2024, by DEQ. This permit is for Crusoe Energy Systems, Inc. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,

Craig Henrikson

Jon Paul Prank

Craig P. Henrikson, P.E. Permitting Services Section Supervisor Air Quality Bureau (406) 444-6711

John P. Proulx Air Quality Engineer Air Quality Bureau (406) 444-5391

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

Montana Air Quality Permit #5301-00

Crusoe Energy Systems, Inc. Kennedy Pad Section 9, Township 25 North, Range 58 East 1641 California St., Suite 400 Denver, CO 80202

June 11, 2024



MONTANA AIR QUALITY PERMIT

Issued To: Crusoe Energy Systems Inc. Kennedy Pad 1641 California St, Suite 400 Denver, CO 80202 MAQP: #5301-00 Application Complete: 03/28/2024 Preliminary Determination Issued: 04/25/2024 Department's Decision Issued: 05/24/2024 Permit Final: 06/11/2024

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Crusoe Energy Systems, Inc. (Crusoe) for the Dagney 33-21 CTB facility, 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. Permitted Equipment

Crusoe proposes to install and operate multiple Waukesha 9394 GSI engines with a combined brake horsepower (bhp) not to exceed 7,500 at the Kennedy Pad facility. The permit is written in a de minimis friendly format so that the limitation is on the total horsepower permitted for the site and not the exact number of engines on site, as long as the resulting engines meet the appropriate emission factors. The engines would be used to generate electricity through the combustion of gas that would otherwise be flared from an existing oil and gas facility. All engines combust gas from a nearby oil and gas facility, and each engine utilizes an air fuel ratio controller and a three-way catalyst to reduce emissions.

B. Plant Location

This facility is to be located approximately 10.4 miles northwest of Fairview, Montana, in Section 9, Township 25 North, Range 58 East, in Richland County, 47.927019°N, latitude and -104.239333°W, longitude.

Section II: Conditions and Limitations

- A. Emission Limitations
 - 1. The combined maximum rated brake horsepower (bhp) of the Waukesha Engine(s) (EU01) shall not exceed 7,500 bhp (ARM 17.8.749).
 - 2. Crusoe shall not exceed the following hourly limits for EU01 (ARM 17.8.752).

 $\label{eq:massive} \begin{array}{l} \underline{\rm EU01} \\ {\rm PM}_{\rm Tot} - 0.17 \mbox{ pound per hour (lb/hr)} \\ {\rm PM}_{10} - 0.17 \mbox{ lb/hr} \\ {\rm PM}_{2.5} - 0.17 \mbox{ lb/hr} \\ {\rm NO}_{\rm X} - \mbox{ 2.48 lb/hr} \end{array}$

 $\begin{array}{ll} CO = & 4.96 \ lb/hr \\ VOC = & 0.50 \ lb/hr \\ SO_2 = & 0.03 \ lb/hr \\ HAPs = & 0.72 \ lb/hr \end{array}$

- 3. Crusoe shall operate and maintain a non-selective catalytic reduction (NSCR) unit and an air/fuel ratio (AFR) controller on EU01 within the parameters recommended by the equipment manufacturer (ARM 17.8.752).
- 4. Crusoe 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).
- 5. Crusoe 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).
- B. Testing Requirements
 - For engines in EU01, Crusoe shall demonstrate compliance with the permit limits in Section II.A.2 via source testing within 180 days after equipment commencement. Source testing shall be conducted for NO_x, CO, and VOCs simultaneously. Compliance test results are determined by the average of three 1hour or longer runs. Results shall be submitted to the Department of Environmental Quality (DEQ) to demonstrate compliance with the emission limitations in Section II.A.2 (ARM 17.8.105 and ARM 17.8.749).
 - 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. Crusoe 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).

- 2. Crusoe 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).
- 3. All records compiled in accordance with this permit must be maintained by Crusoe 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).

D. Notification

1. Crusoe shall notify DEQ in writing of the date of commencement of operation of the engines within 30 days following the date of commencement and confirm the total horsepower of engines placed into service.

SECTION III: General Conditions

- A. Inspection Crusoe 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 Crusoe fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations Nothing in this permit shall be construed as relieving Crusoe 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 Crusoe 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 (MAQP) Analysis Crusoe Energy Systems, Inc. – Kennedy Pad MAQP #5301-00

I. Introduction/Process Description

Crusoe Energy Systems, Inc. (Crusoe) owns and operates multiple Waukesha engines at the Kennedy Pad facility. This facility is to be located approximately 10.4 miles northwest of Fairview, Montana, in Section 9, Township 25 North, Range 58 East, in Richland County, 47.927019°N, latitude and -104.239333°W, longitude.

A. Permitted Equipment

Crusoe proposes to install and operate multiple Waukesha 9394 GSI engines with a combined brake horsepower (bhp) not to exceed 7,500 (Emission Unit 1 (EU01)). The permit is written in a de minimis friendly format so that the limitation is on the total horsepower permitted for the site and not the exact number of engines on site, as long as the resulting engines meet the appropriate emission factors. The engines would be used to generate electricity through the combustion of gas that would otherwise be flared from an existing oil and gas facility. All engines combust gas from a nearby oil and gas facility, and each engine utilizes an air fuel ratio controller and a three-way catalyst to reduce emissions.

B. Source Description

Crusoe owns and operates multiple natural gas fired engines located on an already existing site. The engines will be used to generate electricity for small data centers.

Person/Group	Permit	Comment	DEQ Response
Commenting	Reference		
Dusty Weber	None	I am in full support of DEQ approving Crusoe Energy System's Permit Action. I am also submitting the attached report, Stop Scaring Our Kids_124 Years of Actual Temperatures and Precipitation in Montana _NOAA_(1900-2023)_There is Not a Climate Crisis as my personal public comments. (Report is on file with DEQ)	No response.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	"While reductions of both methane and CO ₂ are critical to addressing the climate crisis, activities that result in methane emissions need to be scrutinized with particular care, and affirmative measures taken to adequately mitigate their effects."	The CO ₂ and methane potentially emitted for this proposed project have been reported as CO ₂ e as specified in Section 23 of the EA. Under MEPA, DEQ has completed the EA analyzing the impacts from the Proposed Action and No Action Alternatives. The measures to mitigate the CO ₂ e impacts

C. Response to Public Comments

			from this Proposed Project would be the following: 1) the No Action Alternative, which could not be selected by DEQ if the applicant were to submit a substantive, administrative, and technically complete application, 2) No action alternative which would deny the installation of the engines and generators, and 3) an alternative fuel source which would impose economic hardship and result in more methane being released because it would not be combusted in the engines. The EA has been updated under the heading of "Alternatives Considered But Dismissed" further explaining the rationale of DEQ to not analyze the reduction in the amount of time this project could operate and an alternative fuel source with no CO ₂ e properties.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	The Draft EA purports to conduct a "Greenhouse Gas Assessment" by disclosing the estimated emissions from the proposed project, total emissions in Montana based on EPA's 2021 State Inventory Tool, and a comparison of the two to determine the proposed project would account for 0.013% of Montana's annual CO2e emissions. Draft EA at 18. The Draft EA acknowledges that the project will add to GHG emissions from other sources in Montana and cursorily acknowledges the harmful impacts of GHG emissions on the climate in Montana:	In Section #23 of the EA explains DEQ's assumptions in calculating the CO ₂ e emitted by the project during construction and operational life of the Proposed Project, the two different models used, and the rationale for the impact analysis. Also, this section discusses the direct, secondary, and cumulative impacts of the Proposed Project as required by MEPA. Both models used in the analysis in Section #23 have undergone scrutiny with and are recommended by the EPA.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	Draft EA at 18. The Draft EA acknowledges that the project will add to GHG emissions from other sources in Montana and cursorily acknowledges the harmful impacts of GHG emissions on the climate in Montana: 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 2021)	Comment noted.

		The impacts of climate change throughout the Northern Great Plains of Montana include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM 2021).	
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	<i>Id.</i> Then, without analysis, the Draft EA concludes that "this action results in negligible impacts to air quality and GHG emissions in Richland County, Montana." <i>Id.</i> at 19.	Thank you for the comment and Section #23 of the EA has been revised based on this comment.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	It is well settled law in federal courts under the framework of the National Environmental Policy Act that federal agencies are required to consider and analyze both direct emissions that will result from the development of a given project and indirect impacts of the emission of GHGs. See, e.g. <i>Center for Biological</i> <i>Diversity v. NHTSA</i> , 538 F.3d 1172, 1198-1201 (9th Cir. 2008) (articulating heightened standard for duty to analyze GHG and climate impacts); accord <i>Sierra</i> <i>Club v. Fed. Energy Regulatory</i> <i>Comm'n</i> , 867 F.3d 1357, 1374 (D.C. Cir. 2017); <i>Sierra Club v.</i> <i>FERC</i> , 867 F.3d 1357, 1374 (D.C. Cir. 2017) (downstream GHG emissions were an indirect effect of pipeline project and required the agency to provide a quantitative estimate of the downstream GHG emissions resulting from the burning of the natural gas to be transported by the pipeline or explain why it could not do so, and to discuss the significance of these emissions).	The commenter references National Environmental Policy Act (NEPA), NEPA case law and definitions. This EA was completed under the requirements of Montana Environmental Policy Act (MEPA). As the commenter pointed out, NEPA has "indirect impacts" which MEPA does not have. In NEPA and in the cases referenced in the comment are dealing with impacts that are "reasonably foreseeable" under the Indirect and Cumulative impact definitions in NEPA. Please see 75-1-220(4), MCA, for the definition of Cumulative impacts and ARM 17.4.603(18) for the definition of Secondary impact under MEPA.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	Courts have upheld and echoed this reasoning in numerous other contexts including pipeline permitting, coal transport,2 mine plan modifications,3 and oil and gas development,4 to name only a few. Most recently, the Federal Energy Regulatory Commission has incorporated these accepted legal premises into its updated guidance to agencies involved in	Please see response to comment #4. The commentor also fails to articulate what downstream GHG impacts are omitted from this EA. This project is a self-contained natural gas burning electricity generating unit, where GHGs are emitted on-site. Thus, this project is dissimilar from the situations cited by the commentor concerning the extraction or transportation of fossil fuels where the combustion

		the permitting of fossil gas infrastructure.5	occurs elsewhere. To the extent this project has any such effect, it avoids the potential release of methane— which is a stronger GHG than CO ₂ — into the atmosphere by converting that gas into useful electricity.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	The Draft EA's Greenhouse Gas Assessment fails the hard look requirement essential to an adequate analysis under the Montana Environmental Policy Act ("MEPA"). First, the Draft EA's comparison of proposed emissions with Montana's total emissions is designed to yield results that appear de minimis.	The word "de minimis" does not appear in the EA. DEQ is presenting the CO ₂ e calculations as calculated in the EPA Simplified GHG Calculator version May 2023 for the Proposed Project.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	The Draft EA's comparative analysis of project emissions to total emissions says nothing about how the additional emissions will affect the environment, "only that there are other, larger sources of GHGs." <i>Dine Citizens Against Ruining Our</i> <i>Env. v. Haaland</i> , 59 F.4th 1016, 1042 (10th Cir. 2023); <i>see also 350 Montana v.</i> <i>Haaland</i> , 50 F.4th 1254, 1269-70 (9th Cir. 2022) (BLM's reliance on "an opaque comparison to total global emissions" among other failures "hid the ball and frustrated NEPA's purpose.").	DEQ believes the commenter is discussing the Cumulative Impacts of Section #23 of the EA. Please see the Secondary Impacts in Section #23 of the EA of the potential impacts of CO ₂ e on the human environment. Also, DEQ compares the Proposed Project's CO ₂ e impacts to the total of Montana's 2021 CO ₂ e footprint. The EA does not take the Proposed Action's CO ₂ e number and compares it to the worldwide total. This public comment also overlooks the secondary impacts discussion in the EA, which explains that GHGs contribute to radiative forcing that causes climate impacts. The EA also cites a Bureau of Land Management (BLM) study that states GHGs contribute to environmental impacts like flooding, drought, rising temperature, and invasive species. Thus, the EA does explain how additional GHG emissions from the project will impact the environment.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	Second, the Draft EA makes no attempt to use available tools to contextualize the predicted emissions and associated climate impacts, such as the Social Cost of Greenhouse Gases ("SC- GHG").	DEQ did use the available tool of CO ₂ e to contextualize the Proposed Project's impacts for readers. The use of CO ₂ e allows different types of greenhouse gases to be easily compared in terms of their total global warming impact. CO ₂ e is a recognized unit to quantify a project's greenhouse gas assessment by the scientific community. DEQ declines to conduct its Greenhouse Gas Assessment through the lens of Social Cost of Greenhouse Gases (SC-GHG), which would have

Western	Environmental	The Draft EA also fails to analyze	added an economic or dollar figure on top of CO ₂ e. SC-GHG, additionally, compares the costs and benefits of the project under several assumptions like a discount rate for future damages related to GHG emissions. EPA, Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances, November 2023. DEQ finds that SC-GHG's evaluation of one impact in such economic terms would be inconsistent with the remainder of the EA, which does not evaluate impacts through quantitative economic measures. Instead, the EA generally discusses the project's benefits alongside its environmental impacts. Besides maintaining consistency in methodology within the EA, DEQ declining to adopt SC- GHG is warranted because MEPA does not require the precise quantitative cost-benefit analysis contemplated by SC-GHG. <i>State ex rel.</i> <i>Montana Wilderness Ass'n v. Board of</i> <i>Natural Resources & Conservation</i> , 200 Mont. 11, 33, 648 P.2d 734, 746 (1982); Belk v. Mont. Dep't of Envtl. <i>Quality</i> , 2022 MT 38, ¶ 29, 408 Mont. 1, 504 P.3d 1090 (MEPA "require[s] assessments of impacts on human populations—including health, agriculture, tax bases, and culture—but they <i>do not require quantitative economic forecasts.</i> ") (emphasis added). Please see Response to Comment #1.
Environmental Law Center	Assessment - 23. Greenhouse Gas Assessment	reasonable alternatives or identify available mitigation measures to avoid, minimize, or compensate for climate effects of the proposed action. These shortcomings render the Draft EA's significance finding under ARM 17.4.608 meaningless.	
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	Now that the unconstitutional prohibition on the analysis of GHG and climate effects has been enjoined through the <i>Held v.</i> <i>Montana</i> decision discussed below, DEQ is required to not only disclose but also to analyze such impacts. Thus, an analysis of GHG and climate impacts is required for the proposed data center.	Please see Section #23 of the EA.

Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	The Draft EA's failure to evaluate the significance of the proposed GHG emissions and climate impacts is an unlawful omission that violates MEPA, the Constitution, and the Montana First Judicial District Court's order in Held v. State, that found "each additional ton of GHGs emitted into the atmosphere exacerbates impacts to the climate." Held v. State, No. CDV- 2020-307 (Mont. First Jud. Dist. Ct. Aug. 14, 2023) (Findings of Eact. Conclusions of Law, and	Please see the section titled "Conclusions and Findings" in the EA.
		Order at 24).	
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	The omission of an analysis of context and significance of the disclosed GHGs in the present analysis represents a failure to take the hard look at climate change required by MEPA.	Please see Section #23 and the section titled "Conclusions and Findings" in the EA.
Western Environmental Law Center	Environmental Assessment - 23. Greenhouse Gas Assessment	"We therefore request that DEQ conduct a robust GHG emissions and climate change analysis in its permitting decisions, take the hard look at climate that MEPA requires, and revise its EA to contextualize and disclose to the public the climate harms associated with this proposed data center."	Please see Section #23 and the section titled "Conclusions and Findings" in the EA.

D. 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 the Department of Environmental Quality (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). Crusoe 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. <u>ARM 17.8.110 Malfunctions</u>. (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. <u>ARM 17.8.111 Circumvention</u>. (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. <u>ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide</u>
 - 3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
 - 4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
 - 5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
 - 6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
 - 7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
 - 8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
 - 9. ARM 17.8.222 Ambient Air Quality Standard for Lead
 - 10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀
 - 11. ARM 17.8.230 Fluoride in Forage

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

- C. ARM 17.8, Subchapter 3 Emission Standards, including, but not limited to:
 - 1. <u>ARM 17.8.304 Visible Air Contaminants</u>. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

- 2. <u>ARM 17.8.308 Particulate Matter, Airborne</u>. (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, Crusoe shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
- 3. <u>ARM 17.8.309 Particulate Matter, Fuel Burning Equipment</u>. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
- 4. <u>ARM 17.8.310 Particulate Matter, Industrial Process</u>. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
- 5. <u>ARM 17.8.316 Incinerators</u>. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any incinerator, particulate matter in excess of 0.10 grains per standard cubic foot of dry flue gas, adjusted to 12% carbon dioxide and calculated as if no auxiliary fuel had been used. Further, no person shall cause or authorize to be discharged into the outdoor atmosphere from any incinerator emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes.
- 6. <u>ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel</u>. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
- <u>ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products</u>. (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.
- <u>ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission</u> <u>Guidelines for Existing Sources</u>. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Crusoe is considered 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. <u>40 CFR 60, Subpart JJJJ Standards of Performance for Stationary Spark Ignition</u> <u>Internal Combustion Engines.</u> 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.

- 10. <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. <u>40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air</u> <u>Pollutants for Stationary Reciprocating Internal Combustion Engines.</u> Subpart ZZZZ applies to the new reciprocating engines but compliance with Subpart ZZZZ is demonstrated by compliance with 40 CFR 60 Subpart JJJJ. If 40 CFR 63 Subpart ZZZZ undergoes revision and specifies new or different requirements for the applicable engines, then Crusoe shall comply with those new requirements.
- D. ARM 17.8, Subchapter 5 Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:
 - 1. <u>ARM 17.8.504 Air Quality Permit Application Fees</u>. 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. Crusoe submitted the appropriate permit application fee for the current permit action.
 - 2. <u>ARM 17.8.505 Air Quality Operation Fees</u>. 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. <u>ARM 17.8.743 Montana Air Quality Permits--When Required</u>. 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. The Crusoe Kennedy site has a PTE greater than 25 tons per year of oxides of nitrogen (NO_x) and carbon monoxide (CO); 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. <u>ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements</u>. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Crusoe 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. Crusoe submitted an affidavit of publication of public notice for the *March 13, 2024*, issue of the *Sidney Herald*, a newspaper of general circulation in the Town of Sidney in Richland County, as proof of compliance with the public notice requirements.
- 6. <u>ARM 17.8.749 Conditions for Issuance or Denial of Permit</u>. 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. The required BACT analysis is included in Section III of this permit analysis.
- 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 Crusoe 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. <u>ARM 17.8.762 Duration of Permit</u>. 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. <u>ARM 17.8.764 Administrative Amendment to Permit</u>. 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).
- 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. <u>ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source</u> <u>Applicability and Exemptions</u>. 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 conventional pollutant.

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. $PTE > 70 \text{ tons/year of particulate matter with an aerodynamic diameter of 10} microns or less (PM_{10}) in a serious PM_{10} nonattainment area.$
- 2. <u>ARM 17.8.1204 Air Quality Operating Permit Program</u>. (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 #5301-00 for Crusoe, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
 - c. This source is not located in a serious PM_{10} nonattainment area.
 - d. This facility is subject to current NSPS; 40 CFR 60, Subpart A and JJJJ.
 - e. This facility is subject to current NESHAP; 40 CFR 63, Subpart 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.

Based on these facts, DEQ determined that Crusoe will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Crusoe will be required to obtain a Title V Operating Permit.

III. BACT Determination

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

A BACT analysis was submitted by Crusoe in permit application #5301-00, addressing available methods of controlling the combustion emissions from the engines at the Kennedy site. DEQ reviewed these methods, as well as previous BACT determinations.

The following control options have been reviewed by DEQ in order to make the following BACT determination. As all of the proposed engines are rich burn engines, the different engine models are summarized under one BACT analysis since the resulting control technologies for each were identical.

<u>NO_x</u>

The following options were reviewed for NO_x control.

Water/steam injection Dry low NO_x combustion Selective catalytic reduction (SCR) Selective non-catalytic reduction (SNCR) Non-selective catalytic reduction (NSCR) Oxidation catalyst EMx catalyst system

Both the water/steam injection and the dry low NO_x combustion are technologies that would require modifications to the existing engines and are considered technically infeasible for the proposed engines. SCR and SNCR require specific exhaust temperatures for optimal destruction and the exhaust temperatures for the proposed engines are not within the required range for either SCR or SNCR. They are deemed technically infeasible since the exhaust temperature from the proposed engines would be below the recommended ranges. Oxidation catalyst is best suited for lean burn engines and therefore is also eliminated from consideration.

The two remaining identified technologies include NSCR and EMx catalyst. Each of these are considered feasible. EMx is able to operate at the exhaust temperature from the proposed engines, but the costs associated with EMx are more than the costs associated with a non-selective catalyst. The NSCR is estimated to provide up to 90 percent emission reduction. Therefore, NSCR with air fuel ratio controller (AFR) is selected as BACT for NOx.

VOC and CO Emissions

VOC and CO emissions primarily occur as the result of incomplete combustion. Similar to NO_x control, catalysts that react with CO and VOC's can be used to convert these pollutants to CO_2 . Therefore, employing NSCR which uses a 3-way catalyst to treat CO, VOC's and NO_x is selected as BACT.

Finding the optimum point in a slightly rich environment can produce very high destruction efficiencies for both CO and VOC's and NOx at the same time. Just as for NOx, the use of an AFR is necessary to control the concentration in a slightly rich environment.

Emission levels associated with NSCR and an AFR for the proposed engine models for each pollutant are proposed as follows:

<u>Waukesha 9394GSI Engine or equivalent</u> NO_x – 2.48 lb/hr CO – 4.96 lb/hr VOC – 0.50 lb/hr

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

IV. Emission Inventory

CONTROLLED				tons/year			
Emission Source	РМ	\mathbf{PM}_{10}	PM _{2.5}	NO _x	СО	VOC	SO_2
2,500 bhp Compressor Engine							
(combined)	2.23	2.23	2.23	32.59	65.17	6.57	0.39
Total Emissions	2.23	2.23	2.23	32.59	65.17	6.57	0.39

Calculations:

Waukesha Engine(s)

Operational Capacity of Engine = 3 engines	3	engines
Ton per pound	0.0005	ton/lb
Hours of Operation = 8,760.00 hr/yr	8760	hr/yr
PM Emissions:		
PM Emissions = 2.23 top / re	2 23	ton /vr
r M Emissions – 2.23 ton/ yr	2.23	t011/ yi
PM-10 Emissions:		
Emission Factor = 0.38 lb/hr (BACT)	0.17	lb/hr
Calculation: ((3 engines) * (0.17 lb/hr) * (8,760 hr/yr) *(ton/2000 lb) = 2.234 ton/yr	2.23	ton/yr
PM2.5 Emissions		
Emission Eactor = 0.38 lb/hr (BACT)	0.17	lb/hr
Calculation: ((3 engines) * (0.17 lb/br) * (8.760 br/vr) *(ton/2000 lb) = 2.234 ton/vr	2.23	ton/vr
	2.23	(011 <i>)</i> <u></u>
NOx Emissions:		
Emission Factor = 0.15 gr/bhp-hr (BACT)	2.48	lb/hr
Calculation: ((3 engines) * (2.48 lb/hr) * (8,760 hr/yr) *(ton/2000 lb) = 32.587 ton/yr	32.59	ton/yr
CO Emissions:		
Emission Factor = 0.3 gr/bhp-hr (BACT)	4.96	lb/hr
Calculation: ((3 engines) * (4.96 lb/hr) * (8,760 hr/yr) *(ton/2000 lb) = 65.174 ton/yr	65.17	ton/yr
NOC Braining		
Emission Factor = 0.01 gr/bhp-br (BACT)	0.5	lb/hr
Calculation: ((3 engines) * (0.50 lb/hr) * (8.760 hr/yr) *(ton/2000 lb) = 6.570 ton/yr	6.57	ton/vr
Carculation. (5 engines) (6.50 h) m) (6,700 m) (1) (600 2000 h) = 0.570 ton yr	0.57	ton/ yi
SO _X Emissions:		
Emission Factor = 0.08 lb/hr (BACT)	0.03	lb/hr
Calculation: ((3 engines) * (0.03 lb/hr) * $(8,760 \text{ hr/yr})$ * $(ton/2000 \text{ lb}) = 0.394 \text{ ton/yr}$	0.39	ton/yr
HAPs Emissions		
Emission Factor = 0.24 lb/hr	0.72	lb/hr
Calculation: $((3 \text{ engines}) * (0.72 \text{ lb/hr}) * (8,760 \text{ hr/yr}) * (ton/2000 \text{ lb}) = 9.461 \text{ ton/yr}$	9.46	ton/yr

V. Existing Air Quality

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

VI. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area.

VII. Ambient Air Impact Analysis

DEQ determined, based on amount of allowable emission, that the impacts from this permitting action will be minor. DEQ believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, DEQ conducted the following private property taking and damaging assessment and is included in the Environmental Assessment (EA).

IX. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.



FINAL ENVIRONMENTAL ASSESSMENT

Crusoe Energy Systems, Inc – Kennedy Pad

5/24/2024

Air Quality Bureau

Air, Energy, and Mining Division

Montana Department of Environmental Quality

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Project Overview

COMPANY NAME:	Crusoe Energy Systems, Inc.
EA DATE:	April 25, 2024
SITE NAME:	Kennedy Pad
MAQP#:	5301-00
Application Received Date:	March 7, 2024
Additional Information Received Date:	March 28, 2024

Location

Township Section 9, Township 25 North, Range 58 East County: Richland PROPERTY OWNERSHIP: FEDERAL STATE PRIVATE X

Compliance with the Montana Environmental Policy Act

Under 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 human environment. The proposed action is considered to be a state action that may have an impact on the human environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an environmental review. This Environmental Assessment (EA) will examine the proposed action and alternatives to the proposed action and disclose potential 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. DEQ may not withhold, deny, or impose conditions on the Permit based on the information contained in this EA (§ 75-1- 201(4), MCA).

Proposed Action

Crusoe proposes to install and operate up to three (3) Waukesha 9394 GSI engines at the Kennedy Pad facility. The engines would be used to generate electricity through the combustion of gas that would otherwise be flared from an existing oil and gas facility. All engines combust gas from a nearby oil and gas facility, and each engine utilizes an air fuel ratio controller and a three-way catalyst to reduce emissions.

Purpose and Need

Under MEPA, Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The Proposed Action is considered to be a state action that may have an impact on the human environment and, therefore, DEQ must prepare an environmental review. The purpose and need for the applicant is to install and operate up three Waukesha 9394 GSI engines using natural gas produced from an existing oil and gas facility as a fuel source in order to power onsite data centers. This EA will examine the proposed action and alternatives to the proposed action and disclose potential 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 ARM 17.4.608.

TABLE 1: SUMMARY OF ACTIVITIES PROPOSED IN APPLICATION

Table 1. Summary of Proposed Activities in Application		
General Overview	Install and operate up to three (3) natural gas fired generator engines for the purpose of powering data centers.	
Duration and Timing	Construction: Installation and set-up of the new equipment would be completed in 1 to 3 months, as these are units that would arrive on-site fully assembled, ready to deploy and operate. Operation: These units each may operate up to 8,760 hours per calendar year for the life of the facility depending on natural gas flow from the well facility. Demobilization would be limited to removing and sealing fuel lines, removal of the engines, and remediation of the engine pad site.	
Estimated Disturbance	There would be minimal disturbance to existing land as the engines would occupy an above ground staging area and would be limited to 12.34 acres.	
Equipment	Up to three (3) natural gas fired generator engines.	
Location	Location: Section 9, Township 25 North, Range 58 East. See Figure 1.	
Personnel on-site	Construction: Mobilization limited to engine setup and minor electric/gas connections. Operation: Potentially two or three additional personnel.	
Location and Analysis Area	The Kennedy Pad site is currently used for agricultural purposes.	
Air Quality	The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to air quality.	
Water Quality	This project would not affect water quality because water is not part of the daily operation of the engines.	
Erosion Control and Sediment Transport	This project is on property currently in use for agricultural purposes, and it would not contribute to additional erosion or sediment transport. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to erosion control and sediment transport.	
Solid Waste	This project would have no effect on solid waste in the area. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to solid waste.	

Cultural resources	The property is already in use as agricultural property, and there would be no effects on cultural resources. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to cultural resources.
Aesthetics	The property is already in use as agricultural property, and there would be minor effects on aesthetics with the installation of up to three (3) natural gas fired engines. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to aesthetics.
Hazardous Substances	This project does not contribute any hazardous substances to the facility. The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to hazardous substances.
Weed Control	The Applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to weed control.
Reclamation Plans	The property is already in use as agricultural property and would require minor reclamation at the end of the project's lifespan.

Cumulative Impact Considerations		
Past Actions	This is a new site.	
Present Actions	Install and operate up to three (3) natural gas fired generator engines.	
Related Future Actions	No future actions are foreseen at this site.	

See Figure 1 below for the project location on the Kennedy Site.



Figure 1. Approximate Location for the Generators

EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE:

The impact analysis will identify and evaluate whether the impacts are direct or secondary impacts to the physical environment and human 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 the human environment that may be stimulated, or 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.

Cumulative impacts are the collective impacts on the human environment within the borders of Montana that could result from 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 impacts must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The activities identified in Table 1 were analyzed as part of the cumulative impacts assessment for each resource.

The duration is quantified as follows:

- Construction Impacts (short-term): These are impacts to the environment during the construction period. When analyzing duration, please include a specific range of time.
- Operation Impacts (long-term): These are impacts to the environment during the operational period. When analyzing duration, please include a specific range of 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

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The area where the proposed permit action is located in mostly farmland with surrounding prairie. The topography of the area is low, rolling hills with sedimentary soil. The area is located within the Williston Basin which is a large intracratonic sedimentary basin that lies above the Trans-Hudson Orogenic Belt. Deposition of sediments began in the Williston area when thick accumulations of limestone and dolomite, with lesser thicknesses of sandstones, siltstones, shales, and evaporites.

Direct Impacts:

Minor impacts to topography, geology, stability, and moisture would be expected because the Kennedy site is an undeveloped site. Construction activities would include stripping of topsoils and applying base material for new infrastructure. These impacts would be for the life of the project and be kept to 12.35 acres for impacted land.

Secondary Impacts:

No secondary impacts to topography, geology, stability, and moisture are anticipated with the proposed action.

Cumulative Impacts:

Since there are only minor direct and no secondary impacts, there are also no cumulative impacts anticipated from this project.

2. Water Quality, Quantity, and Distribution

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The proposed action does not use water in any processes.

Direct Impacts:

There are no direct impacts expected to water quality, quantity, and distribution from this project. Any water used for fugitive dust mitigation for construction operations would be negligible and would evaporate prior to affecting any groundwater or runoff.

Secondary Impacts:

There are no secondary impacts expected from this project.

Cumulative Impacts:

There are no cumulative impacts expected from this project.

3. Air Quality

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The area where the proposed project is located is classified as attainment/unclassifiable for all pollutants by DEQ. An Emissions Inventory is located in Section IV of the MAQP Analysis.

Direct Impacts:

DEQ determined, based on the amount of allowable emissions, that the impacts from this permitting action will be minor.

DEQ believes it will not cause or contribute to a violation of any ambient air quality standard based on the amount of potential emissions and air dispersion characteristics of the area.

Secondary Impacts:

Negligible impacts could be expected with the proposed action in the event of equipment malfunction.

Cumulative Impacts:

Cumulative impacts would be negligible based on the hours of operation, Best Available Control Technology for this project, and air dispersion characteristics of the area.

4. Vegetation Cover, Quantity, and Quality

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The area where the proposed project is being constructed is located in rural farmland with approximately 12.35 acres of vegetated land being impacted.

Direct Impacts:

Since the property is currently used for agricultural purposes, there would be minor impacts to vegetation due to stripping and ground preparation for the engines. The direct impacts are minor on an industrial scale and would remain until the engines are decommissioned with the infrastructure remove. After which, the affected area would most likely be used for agricultural purposes.

Secondary Impacts:

No secondary impacts to vegetation are expected as a result of this project.

Cumulative Impacts:

Cumulative impacts are minor due to the size and scope of the project. Upon completion of the project, the effected area would be reclaimed as agricultural land.

5. Terrestrial, Avian, and Aquatic Life and Habitats

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The impacted area is located in rural farmland with the impacted area being approximately 12.35 acres.

Direct Impacts:

Minor impacts to terrestrial and avian habitats are expected with the proposed project. The main source of impact will be associated with site development and installation for the proposed engines and any additional infrastructure.

No impacts to aquatic life are expected with the proposed project because there are no aquatic environments located within the project boundary.

Secondary Impacts:

No secondary impacts to terrestrial, avian and aquatic life and habitats would be expected.

Cumulative Impacts:

There are no cumulative impacts expected from this project.

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

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines.

A survey of endangered or fragile species was conducted for the area where the proposed project would occur. One (1) species of concern was identified;

Bird – Whooping Crane

Additionally, the proposed project is not in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: http://sagegrouse.mt.gov. Impacts to sage grouse would not be expected.

Direct Impacts:

Negligible impacts to unique, endangered, fragile, or limited environmental resources could be caused by the proposed action. Site development would include heavy machines to clear topsoil and construct the base layer for the installation of the proposed engines.

The Sage Grouse Habitat Conservation Program has stated that the proposed project would not occur in core, general or connectivity sage grouse habitat. Therefore, impacts to sage grouse would not occur.

Secondary Impacts:

No secondary impacts to unique, endangered, fragile, or limited environmental resources that could be stimulated or induced by the direct impacts analyzed above would be expected.

Cumulative Impacts:

No cumulative impacts to unique, endangered, fragile, or limited environmental resources, or sage grouse would be expected.

7. Historical and Archaeological Sites

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The State Historic Preservation Office was consulted on the proposed project and identified one (1) site within the Section, Township, and Range of the project. The site is listed as Type 1 Site, #24R0674 which is a historic road. The site is not eligible for National Register Status.

Direct Impacts:

No direct impacts are expected from this project.

Secondary Impacts:

No secondary impacts to historical and archaeological sites are anticipated.

Cumulative Impacts:

No cumulative impacts to historical and archeological sites would be expected.

8. Aesthetics

The proposed project is for the installation of up to three (3) 2,500 horsepower generators.

Direct Impacts:

Minor impacts would occur with the current permit application due to the installation of new engines. The engines are approximately 14 feet by 6.5 feet and approximately 9.5 feet tall. The engines would be visible from the road and due to the topography of the area, could be seen from large distances, depending on terrain and weather conditions. There are multiple oil and gas well facilities in all directions from this site with residential dwellings approximately 1.8 miles away.

Secondary Impacts:

No secondary impacts to aesthetics are anticipated.

Cumulative Impacts:

No cumulative impacts to aesthetics would be expected from this project.

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

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The engines would utilize natural gas that is supplied from oil and gas extraction wells located in the immediate area. The gas that is produced from the well would otherwise be flared to the atmosphere.

Direct Impacts:

Negligible impacts to air and energy resources associated with the operational needs of the proposed equipment are anticipated. No direct impacts to land and water are expected with the proposed permitting action.

Secondary Impacts:

No secondary impacts to demands on environmental resources of land, water, air, or energy would be anticipated.

Cumulative Impacts:

Negligible cumulative impacts to demands on environmental resources of land, water, air, or energy would be expected.

10. Impacts on Other Environmental Resources

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. No impacts on Other Environmental Resources are anticipated with the installation and operation of up to three (3) natural gas fired generator engines.

Direct Impacts:

No direct impacts to other environmental resources are anticipated as a result of the proposed project. Energy will be generated from the combustion of natural gas provided by local oil and gas wells.

Secondary Impacts:

No secondary impacts to other environmental resources are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to other environmental resources would be expected.

11. Human Health and Safety

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The proposed generators being installed must comply with the permit conditions included in MAQP #5301-00, which are protective of human health and safety. The nearest residents to the proposed site are approximately 1.8 miles from the proposed engine site.

Direct Impacts:

Direct impacts to human health and safety are expected to be negligible for this project. The area is open terrain with good air dispersion characteristics. Heavy construction equipment that would be used to prepare the ground and install the engines and infrastructure would present a temporary minor impact to human health and safety.

Secondary Impacts:

No secondary impacts to Human Health and Safety would be expected.

Cumulative Impacts:

Negligible cumulative impacts are expected from this project.

12. Industrial, Commercial, and Agricultural Activities and Production

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. This proposed project area has been in use as agricultural property for growing what is commonly known as hay.

Direct Impacts:

Negligible imparts are anticipated as a result of repurposing the area from agricultural to industrial activities. No impacts to Commercial Activity are anticipated.

Secondary Impacts:

No secondary impacts to industrial, commercial, and agricultural activities and production would be expected.

Cumulative Impacts:

No cumulative impacts are expected as a result of this project.

13. Quantity and Distribution of Employment

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The proposed project would require temporary employment of construction teams for groundwork/preparation for the engines, installation of the engines, and routine maintenance.

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Direct Impacts:

No new permanent employment would be expected with the proposed project. No lasting positive or negative impacts to employment would be expected from this project due to the autonomy the engines. Routine maintenance teams are expected with the engines but are considered temporary.

Secondary Impacts:

No secondary impacts to quantity and distribution of employment are anticipated as a result this project.

Cumulative Impacts:

No cumulative impacts to the quantity and distribution of employment would be expected.

14. Local and State Tax Base and Tax Revenues

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines.

Direct Impacts:

No direct impacts to the tax base or revenues are anticipated as a result of this project.

Secondary Impacts:

No secondary impacts to local and state tax base and tax revenues would be expected.

Cumulative Impacts:

No cumulative impacts to local and state tax base and tax revenues would be expected.

15. Demand for Government Services

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The engines would be required to be inspected by state agencies for compliance with emission limitation as well as required source testing oversight.

Direct Impacts:

Negligible direct impacts to demand for government services would be expected as a result of source testing, and site inspection requirements.

Secondary Impacts:

No secondary impacts to government services are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts are anticipated as a result of this project.

16. Locally Adopted Environmental Plans and Goals

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The proposed operation would occur within Richland County. DEQ is not aware of any additional policies and plans.

Direct Impacts:

DEQ is not aware of any other locally adopted environmental plans or goals that would be impacted by this proposed project or in the project area. Impacts from or to locally adopted environmental plans and goals would not be expected as a result of this project.

Secondary Impacts:

No secondary impacts to locally adopted environmental plans and goals are anticipated as a result of the proposed work.

Cumulative Impacts:

No cumulative impacts to locally adopted environmental plans and goals would be expected.

17. Access to and Quality of Recreational and Wilderness Activities

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The proposed project would not limit access to wilderness or recreational areas nearby. The proposed activities would occur on private agricultural land.

Direct Impacts:

Based on the information provided by the Applicant and DEQ's review of the surrounding area, DEQ does not anticipate that any wilderness or recreational areas would be impacted by the proposed project. Access to wilderness or recreation areas is not an issue at this site.

Secondary Impacts:

No secondary impacts to wilderness or recreational areas are anticipated.

Cumulative Impacts:

No cumulative impacts to access to, and quality of, recreational and wilderness activities would be expected.

18. Density and Distribution of Population and Housing

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The proposed project is not expected to add or remove any housing in the area.

Direct Impacts:

It is unlikely this project would add to the population significantly. No direct impacts are anticipated.

Secondary Impacts:

No secondary impacts to density and distribution of population and housing are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to density and distribution of population and housing are anticipated as a result of this project.

19. Social Structures and Mores

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. DEQ is not aware of any social structures and mores that would be affected by the proposed activity. Based on the information provided by the applicant, it is not anticipated that this project would disrupt traditional lifestyles or communities.

Direct Impacts:

No direct impacts to social structures and mores are anticipated as a result of the proposed project.

Secondary Impacts:

No secondary impacts to social structures and mores are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to social structures and mores would be expected.

20. Cultural Uniqueness and Diversity

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. Based on the information provided by the Applicant, DEQ is not aware of any cultural uniqueness and diversity of the area that would be affected by the proposed activity.

Direct Impacts:

No impacts to cultural uniqueness and diversity are anticipated from this project.

Secondary Impacts:

No secondary impacts to cultural uniqueness and diversity are anticipated as a result of the proposed project.

Cumulative Impacts:

No cumulative impacts to cultural uniqueness and diversity would be expected.

21. Private Property Impacts

The proposed action would take place on privately-owned land. The analysis below in response to the Private Property Assessment Act indicates no impact. DEQ does not plan to deny the application or impose conditions that would restrict the regulated person's use of private property so as to constitute a taking. Further, if the application is complete, DEQ must take action on the permit pursuant to § 75-2-218(2), MCA. Therefore, DEQ does not have discretion to take the action in another way that would have less impact on private property—its action is bound by a statute.

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

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 #5301-00 would not have private property-taking or damaging implications.

22. Other Appropriate Social and Economic Circumstances

Due to the nature and scope of the proposed project activities, no further direct or secondary impacts would be anticipated from this project.

23. Greenhouse Gas Assessment

The proposed project is for the installation of up to three (3) 2,500 hp natural gas fired generator engines. The analysis area for this resource is limited to the activities regulated by the issuance of MAQP #5301-00 which is the operation of up to three (3) natural gas fired generator engines.

The GHG emissions were calculated from the manufacturer's technical data sheet based on the heat value of natural gas in million British thermal units (MMBtu) and 8,760 hours per year (hr/yr) of operation.

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 Greenhouse Gases (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.

Montana recently used the EPA State Inventory Tool (SIT) to develop a greenhouse gas inventory. 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 CO₂, CH₄, and N₂O and reports the total as CO₂e.

The SIT consists of eleven Excel based modules with pre-populated data that can be used as 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 emissions by sector and emissions by type of greenhouse gas. The SIT data is currently updated through the year 2021, as it takes several years to validate and make new data available within revised modules.

The combustion of natural gas at the site would release GHGs primarily being CO_2 , N_2O , and much smaller concentrations of incomplete combustion of fuel components including CH_4 and other volatile organic compounds (VOCs). The duration of construction would be expected to last about one to three months . Construction activities would include the use of heavy equipment such as bulldozers and vibratory earth compactors. Emissions associated with the construction activities were estimated using caterpillar performance data with 15 hours for stripping and leveling land with a medium sized bulldozer and 25 hours for compacting soil and gravel with a medium sized vibratory earth compactor. Temporary emissions are limited to this site and would result in approximately 0.006179 million metric tons of CO_2e emissions.

Additionally, there are no compressed gases, fire suppressants or refrigerants/air conditioning associated with this project which would have been considered Scope 1 emissions.

Direct Impacts

Operation of natural gas fired generator engines for the proposed project would produce exhaust fumes containing GHGs. DEQ has calculated GHG emissions using the EPA Simplified GHG Calculator version May 2023, for the purpose of totaling GHG emissions. This tool totals CO_2 , N_2O , and CH_4 and reports the total as CO_2 equivalent (CO_2e) in metric tons CO_2e . If there are also fluorinated compounds associated with the project those may also be input into the GHG calculator. The calculations in this tool are widely accepted to represent reliable calculation approaches for developing a GHG inventory.

Application information indicates that between approximately 114,081,480 and 342,244,440 standard cubic feet (scf) of natural gas would be utilized per year based on the number of operational generator engines and fuel consumed per hour (scf/hr). To account for variability due to the factors described above, DEQ has calculated the emissions using the maximum value of the Applicant's estimate, three (3) engines using 13,023 scf/hr each and a heat value of 1020 Btu per scf.

Using the EPA's simplified GHG Emissions Calculator for sources, a maximum of 6,147.4 metric tons of CO₂e would be produced per year of operation.

Secondary Impacts

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 2021).

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 potential to remain in the atmosphere for about 109 years.

The impacts of climate change throughout the Northern Great Plains of Montana include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM 2021).

Cumulative Impacts

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 annual GHG inventory by year. At present, Montana accounts for 47.77 million metric tons of CO₂e based on the EPA State Inventory Tool for the year 2021. This project may contribute up to 0.0061474 million metric tons per year of CO₂e. Based on the MAQP analysis and the analysis as mentioned above, the estimated emission of 0.0061474 million metric tons of CO₂e of the proposed permitting action is a negligible impact to air quality in Richland County. The total increase from this project would contribute 0.013% to Montana's annual CO₂e emissions.

GHG emissions that would be emitted as a result of the proposed activities would add to GHG emissions from other sources.

PROPOSED ACTION 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 #5301-00. 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.

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Other Reasonable Alternative(s):

No Action – the no action alternative would have resulted in the methane generated from the existing oil and gas well to be combusted through a "pit flare" required by ARM 17.8.1603 – Emission Control Requirements and Title 40, Code of Federal Regulation, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022. If the methane were to be combusted in the pit flare, the resulting gases would not pass through the Best Available Control Technology (BACT) required for the engines which would result in increased emissions from the site.

Alternatives considered but dismissed from further detailed review:

Alternative Fuel Source– the use of a fuel source that does not have any CO_2e properties does not exist for this type of emitting unit. The use of alternative fuel sources such as Liquid Petroleum Gas (LGP) or more commonly known as propane to power the site would result in increased carbon emissions from the source. Propane (C_3H_8) has a higher carbon content when compared to natural gas (CH_4). Along with the increase in CO_2 from the use of propane, the additional increase of GHGs would occur through the delivery of propane to the site via delivery trucks along with the continued operation of the pit flare.

Reduction in the Project Operation – the alternative of reduction of the amount of time the engines could run was dismissed. This would not meet the purpose and need for the operation of the Proposed Project. When not running the engines the flare pit would then have to emit which was previously discussed above.

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:

MAQP #5301-00 Application, EPA State Inventory Tool, and the EPA GHG Calculator Tool, State Historical Preservation Office, and NRIS

PUBLIC INVOLVEMENT

The public comment period for this permit action was from 4/25/2024 through 5/10/2024. Public comments received have been included and responses provided.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION

The proposed project would be located on private land. All applicable state and federal rules must be adhered to, which, at some level, may also include other state, or federal agency jurisdiction.

This environmental review analyzes the proposed project submitted by the Applicant. The project would be negligible and would be fully reclaimed to the permitted postmining land uses at the conclusion of the project and thus would not contribute to the long-term cumulative effects of mining in the area.

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

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.

The severity, duration, geographic extent and frequency of the occurrence of the impacts associated with the proposed air quality project would be limited. The proposed action would result in the disturbance of about 2 acres on land used for agricultural purposes.

The Applicant is proposing to install up to three (3) generator engines at the Kennedy Pad site as explained in MAQP #5301-00 to generate electricity to power data farms. The site would be permitted to operate the generators year-round. The site selected for the generators is currently open land.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed actions for any environmental resource. DEQ does not believe that the proposed activities by the Applicant would have any growth-inducing or growthinhibiting aspects, or contribution to cumulative impacts. The proposed generator site does not appear to contain known unique or fragile resources.

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There are no unique or known endangered fragile resources in the project area. No underground disturbance would be required for this project.

There would be minor impacts to view-shed aesthetics as the generators would be visible to residents in the immediate area and any road traffic that would be passing through.

Demands on the environmental resources of land, water, air, or energy would not be significant. When the generators were no longer needed, they would be removed from the site and the area would be returned to agricultural purposes.

Impacts to human health and safety would not be significant due to the conditions listed in MAQP# 5301-00.

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 to the Applicant does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions If the Applicant submits another modification or amendment, DEQ is not committed to issuing those revisions. DEQ would conduct an environmental review for any subsequent permit modifications sought by the Applicant that require environmental review. DEQ would make permitting decisions based on the criteria set forth 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 Permits, 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 ARM 17.4.608, the proposed operation is not predicted to significantly impact the quality of the human environment. Therefore, preparation of an EA is the appropriate level of environmental review for MEPA.

References

- 5301-00_2024_03_07_APP Application received from Crusoe Energy Systems, Inc. on March 7, 2024 and additional information provided on March 28, 2024.
- EPA GHG Calculator Tool <u>https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool</u>
- EPA State Inventory Tool, <u>https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool</u>
- EPA Climate Change Indicators, <u>https://www.epa.gov/climate-indicators/greenhouse-gases</u>
- EPA. Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances. November 2023. <u>https://www.epa.gov/system/files/documents/2023-12/epa_scghg_2023_report_final.pdf</u>. Accessed on 5/22/24.
- 2021 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends, <u>https://www.blm.gov/</u>
- 5301-00_2024_03_21_SHPO State Historical Preservation Office Investigation
- 5301-00_NRIS Natural Resource Information System Endangered Species Investigation, https://mtnhp.org