November 27, 2023

Matt Gillet
ONEOK Bakken Pipeline, L.L.C. and ONEOK Elk Creek Pipeline, L.L.C. (ONEOK) – Ekalaka I Pump Station and Ekalaka II Pump Station
100 W. Fifth Street
Tulsa, OK 74103

Sent via email: matthew.gillett@oneok.com

RE: Final Permit Issuance for MAQP #5294-00

Dear Mr. Gillett:

Montana Air Quality Permit (MAQP) #5294-00 is deemed final as of November 25, 2023, by DEQ. This permit is for Ekalaka I and Ekalaka II Pump Stations, two natural gas liquids (NGL) pump stations. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,

Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626

Emily Hultin
Air Quality Engineering Scientist
Air Quality Bureau
(406) 444-2049

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

Montana Air Quality Permit #5294-00

ONEOK Bakken Pipeline, L.L.C. and ONEOK Elk Creek Pipeline, L.L.C. (ONEOK)
Ekalaka I Pump Station and Ekalaka II Pump Station
Section 33, Township 2N, Range 60E
100 W. Fifth Street
Tulsa, OK 74103

November 25, 2023

MONTANA AIR QUALITY PERMIT

Issued To:
ONEOK
100 W Fifth Street
Tulsa, OK 74103

MAQP: #5294-00
Application Complete: 09/12/2023
Preliminary Determination Issued: 10/17/2023
DEQ's Decision Issued: 11/09/2023
Permit Final: 11/25/2023

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to ONEOK Bakken Pipeline, L.L.C., and Elk Creek Pipeline L.L.C., - Ekalaka I and Ekalaka II Pump Station (ONEOK), 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

ONEOK operates two adjacent natural gas liquids (NGL) pump stations, Ekalaka I and Ekalaka II, which will be referred to as the "facility." Ekalaka I was started in 2014 with an annual potential to emit (PTE) less than 25 tons per year of any individual criteria pollutant operating three electric pumps and one flare to control emissions from maintenance events. ONEOK proposes to install a second pump station, Ekalaka II, adjacent to Ekalaka I that will consist of three electric pumps and one flare to control emissions from maintenance events.

Emissions for this facility are comprised of fugitive emissions and emissions from combustion due to the flare.

B. Plant Location

This facility is located in Section 33, Township 2N, Range 60E, approximately 13 miles east of Ekalaka, in Carter County, Montana.

Section II: Conditions and Limitations

A. Emission Limitations

1. Each valve, flange or other connection, pump seal, and other such source of fugitive volatile organic compound (VOC) emissions from leaks shall be inspected quarterly for leaks, and all leaks repaired as soon as reasonably practicable. Inspection methods may include utilizing sight, sound, or smell, soap bubble methods, Method 21 organic vapor analyzers, or optical gas imaging cameras, to actively inspect for and detect leaks. For any two consecutive quarters with no leaks detected, the inspections may thereafter be conducted every 6 months beginning with the next quarter, until a leak is observed. No less than 30 days shall separate each inspection. Inspections shall be recorded in a log including noting the inspection method(s) utilized, results of the inspection, the date the inspection was made, and the individual performing the inspection. The

same log shall be used to record the date of repair and a description of the repair. (ARM 17.8.749 and ARM 17.8.752).

2. The facility shall be designed and operated such that VOCs from the maintenance blowdowns (pumps blowdowns, pump strainer blowdowns and valve blowdowns) and seal flush filter changes are directed to and combusted in a flare with a 98% or greater destruction efficiency. (ARM 17.8.749 and ARM 17.8.752).

3. ONEOK shall use best management practices (BMP) to minimize the VOC and HAPs emissions that result from blowdowns, startup/shutdown, and maintenance activities, and emergency events by implementing operational procedures (ARM 17.8.752).

4. The flare shall be designed and operated for no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours (ARM 17.8.753). Within 180 days of commencement of operation, or at the first use of the Ekalaka II flare, whichever is later, ONEOK shall perform a Method 22 test while the flare is operating. Thereafter, ONEOK shall perform a Method 22 test upon request (ARM 17.8.105, ARM 17.8.749).

5. ONEOK 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).

6. ONEOK 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).

7. ONEOK 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.4 (ARM 17.8.749).

B. Testing Requirements

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

2. The Department of Environmental Quality (DEQ) may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. ONEOK shall supply the DEQ with annual production information for all emission points, as required by the 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 the DEQ by the date required in the emission inventory request. Information shall be in the units required by the 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. ONEOK shall notify the 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 the 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 ONEOK 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 the DEQ, and must be submitted to the DEQ upon request. These records may be stored at a location other than the plant site upon approval by the DEQ (ARM 17.8.749).

D. Notification

1. ONEOK shall notify DEQ in writing of the date of construction commenced on the Ekalaka II Pump Station at the facility within 15 days of commencement.

2. ONEOK shall notify DEQ in writing of the date of operation commenced at Ekalaka II Pump Station within 15 days of commencing operation.

SECTION III: General Conditions

A. Inspection – ONEOK shall allow the 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 ONEOK fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving ONEOK 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 the DEQ's decision may request, within 15 days after the 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 the 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 the 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, the DEQ's decision on the application is final 16 days after the 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 the 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 ONEOK 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
ONEOK Elk Creek Pipeline
Ekalaka I & Ekalaka II Pump Station
MAQP #5294-00

I. Introduction/Process Description

ONEOK Elk Creek Pipeline (ONEOK) owns and operates the Ekalaka I Pump Station since 2014. ONEOK proposes to construct and operate Ekalaka II Pump Station adjacent to Ekalaka I. Ekalaka I and Ekalaka II will be known as the "facility." ONEOK uses this facility to maintain the pressure of natural gas liquids (NGL) in the pipelines. The facility is located at Mill Iron Road, in Ekalaka, MT, 59324, and is known as the Ekalaka I & Ekalaka II Pump Station.

A. Permitted Equipment

Ekalaka I operates three (3) electric pumps, one (1) flare, and associated piping. Ekalaka II is proposed to also operate with three (3) electric pumps, one (1) flare, and associated piping. Emission from this facility is comprised of fugitive emissions and combustion emissions from the flare to control emissions.

B. Source Description

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.

C. Response to Public Comments

Commentor	Comment	Department Response
Western Environmental Law Center on behalf of the Montana Environmental Information Center (MEIC)	DEQ is clearly prohibited from ignoring the First Judicial District Court's permanent injunction against Section 75-1-201(2)(a), MCA, and is required, with respect to its instant preliminary determination and associated EA, to analyze the potential impacts of greenhouse gases and climate change implicated by its issuance of MAQP(5294-00). The district court has enjoined this unconstitutional conduct	DEQ is aware of the recent district court opinion in Held v. State, ruling the statutory prohibition on including greenhouse gas analyses in MEPA reviews unconstituational.[1] That decision is being appealed to the Montana Supreme Court and final resolution is yet unsettled. While litigation is ongoing, and consistent with the court order, DEQ has started a process to assess and improve our environmental review

	on the part of the State. As such, DEQ is required to comply with the order in Held and follow the law. We therefore request that DEQ stop ignoring GHG emissions and climate change in its permitting decisions, take the hard look at climate that MEPA requires, and revise its EA to disclose to the public the climate harms associated with this pump station and the Elk Creek Pipeline as a whole.	processes, including consideration of future climate impact analyses.
Our Children's Trust	The constitutional rights of Montana's youth, including the Held Plaintiffs, are currently being violated, in part, due to DEQ's historic and ongoing permitting of fossil fuel activities. To address these constitutional violations, sixteen brave Montanans' took their state to Court and on August 14, 2023 won an historic victory. Now, instead of working to alleviate the ongoing harms to Montana's children, DEQ is choosing to continue to review permits for fossil fuel activities without consideration of GHG emissions, climate impacts, harms to Montana's youth, the availability of renewable energy alternatives, or protections for the constitutional rights of Montana's children. DEQ must amend its	DEQ is aware of the recent district court opinion in Held v. State, ruling the statutory prohibition on including greenhouse gas analyses in MEPA reviews unconstituational.[1] That decision is being appealed to the Montana Supreme Court and final resolution is yet unsettled. While litigation is ongoing, and consistent with the court order, DEQ has started a process to assess and improve our environmental review processes, including consideration of future climate impact analyses.

	Environmental Assessment and preliminary determination on Permit Application MAQP #5294-00 to comply with the legally binding August 14, 2023, Order in Held v. State of Montana, as outlined herein.	

Note:
1. Held v. State, No. CDV-2020-307 (Mont. 1st Jud. Dist. Ct. Aug. 14, 2023)

Response to Facility Comments:

Permit Reference	Comment	Department Response
Section II. Condition A.1	For consistency with other ONEOK Montana Air Quality Permits for natural gas liquids (NGL) pump stations and to remove ambiguity, please revise this condition as follows: Each valve, flange or other connection, pump seal, and other such source of fugitive volatile organic compound (VOC) emissions from leaks shall be inspected ~~periodically~~ quarterly for leaks, and all leaks repaired as soon as reasonably practicable. Inspection methods may include utilizing sight, sound, or smell, soap bubble methods, Method 21 organic vapor analyzers, or optical gas imaging cameras, to actively inspect for and detect leaks. For any two consecutive quarters with no leaks detected, the inspections may thereafter be conducted every 6 months beginning with the next quarter, until a leak is observed. No less than 30 days shall separate each inspection.	DEQ agrees and will make the requested addition.
Permit Analysis: Section II. Condition 5	ONEOK does not believe any sources at the facility are subject to the incinerator requirements under ARM 17.8.316. The facility flare is subject to the visible emissions	DEQ remains with the same findings that the incinerator rules are applicable to the flare and will remain in the permit.

	and opacity requirements as outlined in Condition II.A.4 and will conduct the required Method 22 test. For consistency with other ONEOK NGL facility permits, ONEOK proposes to remove the reference to incinerator requirements under Condition II.C.5	
Permit Analysis: Section II. C. 9	Please clarify the applicability of 40 CFR Part 61, Subpart V. Subpart V applies to sources that are intended to operate in volatile hazardous air pollutant (VHAP) service, as defined by a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a VHAP. Based on past actual operations at similar NGL facilities, ONEOK expects the VHAP content could not be expected to exceed 10 percent by weight. The potential to emit calculations conservatively included a HAP weight percent of 5.79%, which is expected to be a maximum HAP content for the facility. For consistency with other ONEOK NGL Montana Air Quality Permits, ONEOK proposes to revise this condition as follows: This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate. ~~ONEOK may be held accountable for the Subpart V for the volatile hazardous air pollutant (VHAP) as defined in the subpart.~~ DEQ is not aware of any subpart of 40 CFR 61 currently applicable to this facility.	DEQ remains with the finding that 40 CFR 61, Subpart V is applicable, and ONEOK will be required to comply as appropriate. DEQ agrees to remove the statement of potential accountability, but not the additional statement where this subpart does not apply.
Impact Analysis	Please remove the references to "Refinery Reconfiguration Project" and "refinery": -Section 3, Air Quality – Table 2 heading (PD page 35 of 62) -Section 20, Social Structures and Mores (PD page 42 of 62) -Section 21, Cultural Uniqueness and Diversity (PD page 42 of 62) -Table III heading (PD page 51 of 62)	Language removed.

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, the DEQ will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

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

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

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the 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 the DEQ.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the 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).

   ONEOK 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 the DEQ upon request.

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

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

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide

4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

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

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

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

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

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

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

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

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

7. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged

fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.

8. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR Part 60.

   a. 40 CFR Part 60, Subpart A – General Provisions:
      i. None of the operations at Ekalaka I and Ekalaka II Pump Station are subject to other specific NSPS and therefore are not subject to Subpart A.

   b. 40 CFR 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015:
      i. Subpart OOO does not apply to Ekalaka I and Ekalaka II since these stations are in natural gas liquids service and do not include any equipment which is an affected facility under these rules.

   c. Subpart OOOOa- Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015
      i. Subpart OOOOa fugitive emission requirements do not apply to Ekalaka I and Ekalaka II since the stations are in natural gas liquids service, which is not an affected source under these rules.

9. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This source shall comply with the standards and provisions of 40 CFR Part 61, as appropriate.

   a. 40 CFR 61, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAP Subpart as listed below:

   b. 40 CFR 61, Subpart V- National Emission Standard for Equipment Leaks (Fugitive Emission Sources): ONEOK shall comply with the standards and provisions of Subpart V as it releases fugitive HAPs from pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottom receivers, and control devices. This subpart applies for any equipment that either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a volatile hazardous air pollutant (VHAP).

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 the DEQ. ONEOK 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 the DEQ by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the 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. The DEQ may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

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

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

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

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

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

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. ONEOK 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. ONEOK submitted an affidavit of publication of public notice for the August 11, 2023, issue of *The Ekalaka Eagle*, a newspaper of general circulation in the Town of Ekalaka in Carter 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 the DEQ must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of

this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

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

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

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

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

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

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

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

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

16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to the 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. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

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

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

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

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

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

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

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

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #5294-00 for ONEOK, 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 not subject to any current NSPS.

e. This facility may be subject to current NESHAP standards.

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.

The facility is not a major source and, thus a Title V operating permit is not required.

The DEQ determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

Based on these facts, the DEQ determined that ONEOK 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, ONEOK will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or modified source. ONEOK 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 Trinity Consultants in permit application #5294-00, addressing some available methods of controlling VOC emissions from blowdown/venting and fugitive emissions. The DEQ reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the DEQ in order to make the following BACT determination.

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.

Blowdown/Venting BACT

Both VOC and HAPs emissions are anticipated from the scheduled blowdown events and venting. ONEOK proposed to control these emissions by utilizing a flare. The flare design has a 98% control and makes it a superior control method and is utilized throughout the industry.

Best management practices (BMP) requirements seek to minimize the VOC and HAPs emissions that result from blowdowns, startup/shutdown, and maintenance activities, and emergency events by implementing operational procedures. BMP recordkeeping and reporting

requirements that include estimates of air pollutant emissions along with reason and duration of each episode.

ONEOK will ensure that the emissions from the scheduled maintenance activities are routed to the facility flare and BMP practices of recordkeeping and reporting (inclusive of monthly emissions calculations) are implemented to ensure these limits stated here in the permit are not exceeded.

Fugitives BACT

The fugitive equipment at Ekalaka I and Ekalaka II will emit VOCs. As shown in the emissions calculations, Section IV, Emissions Inventory, ONEOK has conservatively applied a 10% safety factor in calculating fugitive emissions. NSPS, Subpart OOOOa does not provide requirements to perform OGI monitoring for fugitives since this facility is not an affected source.

ONEOK will utilize best management practices for control of the fugitive emissions. ONEOK will perform regular screening of equipment components using audio, visual, and olfactory (AVO) inspection and follow proper operational methods to minimize leakage. Additionally, there will be operational alarms installed at the site.

IV. Emission Inventory

Table 1. Ekalaka I Pump Station Emissions Summary (Uncontrolled)

ID	Description	NOx (TPY)	CO (TPY)	VOC (TPY)	HAP (TPY)
Fugitive I	Component Fugitives	--	--	8.06	0.47
Maintenance I	Maintenance Blowdowns	--	--	17.12	0.99
Seal Flush Filter Change I	Seal Flush Filter Change	--	--	0.62	0.04
Flare I	Flare	0.07	0.31	--	--
Pump Seal Loss I	Pump Seal Losses	--	--	0.01	6.89E-04
Total		**0.07**	**0.31**	**25.81**	**1.50**

Table 2. Ekalaka II Pump Station Emissions Summary (Uncontrolled)

ID	Description	NOx (TPY)	CO (TPY)	VOC (TPY)	HAP (TPY)
Fugitive II	Component Fugitives	--	--	12.69	0.73
Maintenance II	Maintenance Blowdowns	--	--	17.12	0.99
Seal Flush Filter Change II	Seal Flush Filter Change	--	--	0.62	0.04
Flare II	Flare	0.07	0.31	--	--
Pump Seal Loss II	Pump Seal Losses	--	--	0.01	6.89E-04
Total		**0.07**	**0.31**	**30.44**	**1.76**

Table 3. Overall Total Emissions (Uncontrolled)

ID	Description	NOx (TPY)	CO (TPY)	VOC (TPY)	HAP (TPY)
Fugitive II	Component Fugitives	--	--	12.69	0.73

Maintenance II	Maintenance Blowdowns	--	--	17.12	0.99
Seal Flush Filter Change II	Seal Flush Filter Change	--	--	0.62	0.04
Flare II	Flare	0.07	0.31	--	--
Pump Seal Loss II	Pump Seal Losses	--	--	0.01	6.89E-04
Total		**0.07**	**0.31**	**30.44**	**1.76**

Table 4. Ekalaka I Pump Station Emissions

ID	Description	NOx (lb/hr)	CO (lb/hr)	VOC (lb/hr)	HAP (lb/hr)
Fugitive I	Component Fugitives	--	--	1.84	0.11
Maintenance I	Maintenance Blowdowns	--	--	Controlled by flare	
Seal Flush Filter Change I	Seal Flush Filter Change	--	--	Controlled by flare	
Flare I	Flare	5.09	23.22	75.98	4.4
Pump Seal Loss I	Pump Seal Losses	--	--	-	--
Total		**5.09**	**23.22**	**77.82**	**4.51**

Table 5. Ekalaka II Pump Station Emissions

ID	Description	NOx (lb/hr)	CO (lb/hr)	VOC (lb/hr)	HAP (lb/hr)
Fugitive II	Component Fugitives	--	--	2.9	0.17
Maintenance II	Maintenance Blowdowns	--	--	Controlled by flare	
Seal Flush Filter Change II	Seal Flush Filter Change	--	--	Controlled by flare	
Flare II	Flare	5.09	23.22	75.98	4.4
Pump Seal Loss II	Pump Seal Losses	--	--	--	--
Total		**5.09**	**23.22**	**78.88**	**4.57**

ONEOK - Ekalaka I Pump Station
Potential to Emit (PTE) Emission Estimates

Maintenance Activities
Pump Station Facility includes three Pumps (Electric), Pump Strainer, Flare

Equipment	Length (feet)	Inner Dia. (inches)	Inner Dia. (feet)	Volume (cf)	Volume (bbl/event)	Liquid Density (lb/bbl) [1]	% VOC [2]	% HAP [3]	VOC (lb/event) [4]	HAP (lb/event) [4]	Release to	Events/yr [5]	Volume (bbl/yr) [6]	Uncontrolled VOC (tons/yr) [7]	Uncontrolled HAP (tons/yr) [8]	Controlled VOC (tons/yr)	Controlled HAP (tons/yr)
Pump Strainer Blowdowns	-	-	-	-	19	200.0	100%	5.79%	3,799	220	flare	1	19.00	1.90	0.11	See Flare	Neg.
Pump Blowdown (each, including piping)	-	-	-	-	5	200.0	100%	5.79%	1,000	58	flare	8	40.00	4.00	0.23	See Flare	Neg.
Valve Blowdowns (inc. piping)	50	15.2	1.27	63.0	11.2	200.0	100%	5.79%	2,244	130	flare	10	112.22	11.22	0.65	See Flare	Neg.
Subtotal Maintenance (Other Blowdown)					**35.2**				**7,043**	**407**		**19**	**171.2**	**17.1**	**0.99**	**See Flare**	Neg.
					Maintenance (Scheduled VOC Blowdowns) =						**(To atmosphere)**		**0.00**	**0.00**	**0.00**		
					Maintenance (Scheduled VOC Blowdowns) =						**(To flare)**		**171.2**	**17.1**	**0.99**		

[1] NGL density (lb/bbl) is based on theoretical conservative composition to account for possible fluctuations in composition.
[2] %VOC assumed to be 100% for conservatism.
[3] %HAP calculated based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[4] VOC or HAP (lb/event) = Volume (bbl/event) x Liquid Density (lb/bbl) x % VOC or % HAP
[5] Total Maintenance Blowdown (Mtn.) events include 1 pump strainer blowdown, 8 pump blowdowns, and 10 valve blowdowns.
[6] Volume (bbl/yr) = Volume (bbl/event) x Events per year (events/yr)
[7] Uncontrolled VOC emissions (tons/yr) = VOC (lb/event) x Events per year (events/yr) / 2000 lb/ton
[8] Uncontrolled HAP emissions (tons/yr) = HAP (lb/event) x Events per year (events/yr) / 2000 lb/ton

Seal Flush Filter Change Emissions (Flared) - Ekalaka I Pump Station

Seal Flush Filter Change Volume (gal/event) [1]	Sampling Frequency (events/year) [2]	Seal Flush Filter Change Volume (gal/year) [3]	Seal Flush Filter Change Volume (bbl/year) [4]	Liquid Density (lb/bbl) [5]	VOC % [6]	Uncontrolled VOC Emissions (ton/yr) [7]	HAP % [8]	Uncontrolled HAP Emissions (ton/year) [9]	Flare DRE (%)	Controlled VOC Emissions (tons/yr)	Controlled HAP Emissions (tons/yr)
5	52	260	6.19	200.0	100%	0.62	5.79%	0.036	98%	See Flare	Neg.

[1,2] Seal Flush Filter Change volume and Sampling Frequency based on operational data.
[3] Annual Seal Flush Filter Change Volume (gal/year) = Seal Flush Filter Change Volume (gal/event) * Sampling Frequency (events/year)
[4] Annual Seal Flush Filter Change Volume (bbl/year) = Annual Seal Flush Filter Change Volume (gal/year) / 42 (gal/bbl)
[5] NGL density (lb/bbl) is based on theoretical conservative composition to account for possible fluctuations in composition.
[6] %VOC assumed to be 100% for conservatism.
[7] Uncontrolled VOC Emissions (tons/year) = Annual Seal Flush Filter Change Volume (bbl/year) * Liquid Density (lb/bbl) * VOC % / 2000 lb/ton
[8] %HAP calculated based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[9] Uncontrolled HAP Emissions (tons/year) = Annual Seal Flush Filter Change Volume (bbl/year) * Liquid Density (lb/bbl) * HAP % / 2000 lb/ton

Pump Seal Loss Emissions (Uncontrolled) - Ekalaka I Pump Station

Pump Seal Loss Volume (gal/event) [1]	Pump Startup Frequency (events/year) [2]	Pump Seal Loss Volume (gal/year) [3]	Pump Seal Loss Volume (bbl/year) [4]	Liquid Density (lb/bbl) [5]	VOC % [6]	Uncontrolled VOC Emissions (ton/yr) [7]	HAP % [8]	Uncontrolled HAP Emissions (ton/year) [9]
0.02	250	5	0.12	200.0	100%	0.01	5.79%	6.89E-04

[1,2] Pump Seal Loss Volume and Pump Startup Frequency based on operational data.
[3] Annual Pump Seal Loss Volume (gal/year) = Pump Seal Loss Volume (gal/event) * Pump Startup Frequency (events/year)
[4] Annual Pump Seal Loss Volume (bbl/year) = Annual Pump Seal Loss Volume (gal/year) / 42 (gal/bbl)
[5] NGL density (lb/bbl) is based on theoretical conservative composition to account for possible fluctuations in composition.
[6] %VOC assumed to be 100% for conservatism.
[7] Uncontrolled VOC Emissions (tons/year) = Annual Pump Seal Loss Volume (bbl/year) * Liquid Density (lb/bbl) * VOC % / 2000 lb/ton
[8] %HAP calculated based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[9] Uncontrolled HAP Emissions (tons/year) = Annual Pump Seal Loss Volume (bbl/year) * Liquid Density (lb/bbl) * HAP % / 2000 lb/ton

Flared Gas Composition

Component	MW (lb/lb-mol)	Composition [2] (Mol%)	Component Mass [3] (lb/lb-mol)	Flared NGL Composition [4] (Wt%)	HHV [5] (Btu/scf)	Heat Content [6] (Btu/scf * wet vol %)
CO_2	44.01	0.02000%	0.00880	0.01579%	0	0.0
Methane	16.04	0.060%	0.0096	0.0173%	919	0.55
Ethane	30.07	5.4%	1.62	2.91%	1619	87
Propane	44.10	43.4%	19.1	34.3%	2315	1004
i-Butane	58.12	6.86%	3.99	7.15%	3000	206
n-Butane	58.12	19.3%	11.2	20.1%	3011	581
i-Pentane	72.15	5.37%	3.87	6.95%	3699	199
n-Pentane	72.15	7.24%	5.22	9.37%	3707	268
Hexanes[1]	86.18	12.39%	10.68	19.15%	4404	546
Total		100%	55.7			2891
NMNEHC (VOC)		94.53%				

[1] Molecular weight of Hexanes+ assumes 100% C6, in order to more conservatively estimate total heat input to the flare.

[2] Composition is based on estimated worst-case composition. It is assumed that gas molar fractions are equivalent to volume fractions (ideal gas law).

[3] Component mass is calculated as Mol% x MW (lb/lb-mole). The overall molecular weight of the flared product is the sum of individual component mass.

[4] Flared gas is assumed to have the same composition as the provided analysis. The Wt% of each component is calculated as lb/lb-mol / total moles.

[5] Component HHVs obtained from GPSA Engineering Handbook.

[6] It is assumed that gas molar fractions are equivalent to volume fractions (ideal gas law). Heat content is calculated as HHV (Btu/scf) x Flared gas composition (Vol%). The overall heat content of the flared product is the sum of individual heat content.

Flare Parameters

Description	Value
Manufacturer	Zeeco, Inc.
Model	(AFDS-3 Dual Flare Tip)
Flare Type	Elevated-open, air assisted
Flare Efficiency	98%
Height (feet)	20
Diameter (inches)	12
Exit gas temperature (°F)	1,873

Fuel Data (Pilot)

Description	Value	Source
Pilot Rating (scf/hr)	65	Design Spec Sheet (using natural gas rating as a conservative measure)
Pilot Rating (MMscf/hr)	6.50E-05	
Heat Rating (Btu/scf)	2,315	Propane, Gross Heating Value [1]
Pilot Rating (MMBtu/hr)	0.150	
Flare Efficiency	98%	
Total Number of Flaring	19	Maintenance events per year (19 events/yr)
events per year (Events/yr)	52	Seal Flush Filter Change events per year (52 events/yr)
Flare Pilot Operational Time [2] (hours/yr)	8,760	

[1] Heating value of propane obtained from Physical Constants of Hydrocarbons. Gross Heating Value is conservatively used to calculate pilot emissions.

[2] Pilot emissions are conservatively based on 8,760 hours of operation per year, however the flare is a maintenance flare and actual operational time is estimated as less than 4 hours per flaring event.

Fuel Data (Flared Gas)

Description	Value
Blowdown Volume from Maintenance Activities (bbl/year)[1]	177
Max Hourly Blowdown Volume (bbl/hr)[2]	19
Molecular Weight [3]	55.7
Density (lb/bbl)	200.0
Heating Value (Btu/scf) [3]	2,891
Max MMscf/hr [4]	0.026
Max MMBtu/hr [5]	75
MMscf/yr [4]	0.24
MMBtu/yr [5]	698

[1] Blowdown Volume includes the volume from Maintenance Activities (171 bbl/yr), and from Seal Flush Filter Change (6.19 bbl/yr).

[2] Maximum hourly blowdown volume is conservatively based on the maintenance event with the largest volume (pump strainer blowdown) being flared in one hour. Actual operational time is estimated as less than 4 hours per flaring event.

[3] Molecular Weight and Heating Value calculated in the table above.

[4] Blowdown volume (MMscf/hr or MMscf/yr) is calculated as flared volume (bbl/hr or bbl/yr) x Liquid Density (lb/bbl) / Molecular weight of flared product (lb/lb-mol) x 379.4 ft^3/lb-mol. The ft^3/ lb-mole conversion is based on any gas at standard temperature (60 F) and standard pressure (14.696 psia), per GPA 2261, Appendix D.

[5] Heat input is calculated as blowdown volume (MMscf/hr or MMscf/yr) x Heating Value of flared product (Btu/scf).

Flare Calculations - Ekalaka I Pump Station

Emission Factors

Pollutant	Emission Factor[1] (lb/MMBtu)
NO_X	0.068
CO	0.31

[1] Emission factors per U.S. EPA AP-42 Tables 13.5-1 and 13.5-2 (02/18)

Emission Rates - Pilot

Pollutant	Emissions (lb/hr) [1]	Emissions (tpy) [2]
NO_X	0.01	4.48E-02
CO	0.05	2.04E-01

[1] Hourly Emissions (lb/hr) calculated as Annual Emissions (tons/yr) / Hours of Flare Operation (hr/yr) x (2,000 lb/ton)

[2] Annual Emissions (tpy) calculated as Emission Factor (lb/MMBtu) x Flare Pilot Rating (MMBtu/yr) / (2,000 lb/ton)

Emission Rates - Flared gas

Pollutant	Emissions (lb/hr) [1]	Emissions (tpy) [2,3]
NO_X	5.08	0.02
CO	23.18	0.108
VOC [4]	75.98	0.35
HAP	4.40	0.02

[1] Hourly Emissions (lb/hr) conservatively based on the maintenance event with the largest volume (pump strainer blowdown) being flared in one hour. Pump strainer blowdowns occur up to once a year. Actual operational time is estimated as less than 4 hours per flaring event.

[2] Annual NO_x and CO emissions (tpy) calculated as Emission Factor (lb/MMBtu) x Flare Gas Heat Rating (MMBtu/yr) / 2000 (lb/ton).

[3] Annual Controlled VOC/HAP Emissions (tpy) = Annual flared volume (bbl/yr) x Liquid Density (lb/bbl) x Total VOC/HAP % x (1- Destruction efficiency of the flare) / 2,000 (lb/ton).

[4] %VOC assumed to be 100% for conservatism.

Fugitive Components (ID: Fugitive Equipment Leaks)

Component Type [1]	Light Liquid	Light Liquid (With 10% Safety Factor) [2]
Connections	845	930
Flanges	108	119
Open-Ends	0	0
Pumps	6	7
Valves	181	200
"Others" [3]	4	5
Totals	1,144	**1,261**

[1] Component counts are based on actual counts.
[2] Components used for permitting are inclusive of a 10% safety factor.
[3] "Others" could include check valves, compressors, pressure relief valves, etc.

Unspeciated Emissions from Fugitive Leaks

Component Type	Emission Factor [1] Light Liquid (kg/hr/source)	Hourly Emission Rate [2] Light Liquid (lb/hr)	Annual Emission Rate [3] Light Liquid (tpy)
Connections	2.10E-04	0.43	1.88
Flanges	1.10E-04	0.03	0.13
Open-Ends	1.40E-03	0.00	0.00
Pumps	1.30E-02	0.20	0.88
Valves	2.50E-03	1.10	4.82
"Others"	7.50E-03	0.08	0.36
	Totals	1.84	8.06

[1] Emission factors for light liquids obtained from U.S. EPA, Protocol for Equipment Leak Emission Estimates, Table 2-4 *Oil and Gas Production Operations Average Emission Factors (November 1995)*.
[2] Emission Rate (lb/hr) = Emission Factor (kg/hr/source) x Number of sources x (2.2 lb/kg).

Example "Connections" Hourly Emission Rate (lb/hr) = $\frac{2.10E\text{-}04 \text{ kg}}{\text{hr-source}} \times 930 \text{ sources} \times \frac{2.2 \text{ lb}}{\text{kg}} = \frac{0.43 \text{ lb}}{\text{hr}}$

[3] Emission Rate (tpy) = Emission rate (lb/hr) x (8,760 hr/yr) / (2,000 lb/ton).

Example "Connections" Annual Emission Rate (tpy) = $\frac{0.43 \text{ lb}}{} \times \frac{8{,}760 \text{ hr}}{} \times \frac{1 \text{ ton}}{} = 1.88 \text{ ton}$

VOC and HAP Emission Speciation

Pollutant	Wt% [1]	Emission Rate	
		lb/hr [2]	tpy [3]
VOC [4]	100	1.84	8.06
n-Hexane	4.69	0.09	0.38
Benzene	0.44	0.008	0.035
2,2,4-TMP	0.36	6.61E-03	0.029
Ethylbenzene	0.016	2.93E-04	1.28E-03
Toluene	0.20	0.004	0.016
Xylenes	0.086	1.58E-03	0.007
Total HAP	5.79	0.11	0.47

[1] Based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[2] VOC (lb/hr) = Unspeciated Hourly Emission Rate (lb/hr) x VOC wt%
[3] VOC (tpy) = Unspeciated Annual Emission Rate (tpy) x VOC wt%
[4] %VOC assumed to be 100% for conservatism.

ONEOK - Ekalaka II Pump Station
Potential to Emit (PTE) Emission Estimates

Maintenance Activities
Pump Station Facility includes three Pumps (Electric), Pump Strainer, Flare

Equipment	Length (feet)	Inner Dia. (inches)	Inner Dia. (feet)	Volume (cf)	Volume (bbl/event)	Liquid Density (lb/bbl) [1]	% VOC [2]	% HAP [3]	VOC (lb/event) [4]	HAP (lb/event) [4]	Release to	Events/yr [5]	Volume (bbl/yr) [6]	Uncontrolled VOC (tons/yr) [7]	Uncontrolled HAP (tons/yr) [8]	Controlled VOC (tons/yr)	Controlled HAP (tons/yr)
Pump Strainer Blowdowns	-	-	-	-	19	200.0	100%	5.79%	3799	220	flare	1	19.00	1.90	0.11	See Flare	Neg.
Pump Blowdown (each, including piping)	-	-	-	-	5	200.0	100%	5.79%	1000	58	flare	8	40.00	4.00	0.23	See Flare	Neg.
Valve Blowdowns (inc. piping)	50	15.2	1.27	63.0	11.2	200.0	100%	5.79%	2244	130	flare	10	112.22	11.22	0.65	See Flare	Neg.
Subtotal Maintenance (Other Blowdown)					**35.2**				**7043**	**407**		**19**	**171.2**	**17.1**	**0.99**	**See Flare**	Neg.
						Maintenance (Scheduled VOC Blowdowns) =					**(To atmosphere)**		0.00	0.00	0.00		
						Maintenance (Scheduled VOC Blowdowns) =					**(To flare)**		**171.2**	**17.1**	**0.99**		

[1] NGL density (lb/bbl) is based on theoretical conservative composition to account for possible fluctuations in composition.
[2] %VOC assumed to be 100% for conservatism.
[3] %HAP calculated based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[4] VOC or HAP (lb/event) = Volume (bbl/event) x Liquid Density (lb/bbl) x % VOC or % HAP
[5] Total Maintenance Blowdown (Mtn.) events include 1 pump strainer blowdown, 8 pump blowdowns, and 10 valve blowdowns.
[6] Volume (bbl/yr) = Volume (bbl/event) x Events per year (events/yr)
[7] Uncontrolled VOC emissions (tons/yr) = VOC (lb/event) x Events per year (events/yr) / 2000 lb/ton
[8] Uncontrolled HAP emissions (tons/yr) = HAP (lb/event) x Events per year (events/yr) / 2000 lb/ton

Seal Flush Filter Change Emissions (Flared) - Ekalaka II Pump Station

Seal Flush Filter Change Volume (gal/event) [1]	Sampling Frequency (events/year) [2]	Seal Flush Filter Change Volume (gal/year) [3]	Seal Flush Filter Change Volume (bbl/year) [4]	Liquid Density (lb/bbl) [5]	VOC % [6]	Uncontrolled VOC Emissions (ton/yr) [7]	HAP % [8]	Uncontrolled HAP Emissions (ton/year) [9]	Flare DRE (%)	Controlled VOC Emissions (tons/yr)	Controlled HAP Emissions (tons/yr)
5	52	260	6.19	200.0	100%	0.62	5.79%	0.036	98%	See Flare	Neg.

[1,2] Seal Flush Filter Change volume and Sampling Frequency based on operational data.
[3] Annual Seal Flush Filter Change Volume (gal/year) = Seal Flush Filter Change Volume (gal/event) * Sampling Frequency (events/year)
[4] Annual Seal Flush Filter Change Volume (bbl/year) = Annual Seal Flush Filter Change Volume (gal/year) / 42 (gal/bbl)
[5] NGL density (lb/bbl) is based on theoretical conservative composition to account for possible fluctuations in composition.
[6] %VOC assumed to be 100% for conservatism.
[7] Uncontrolled VOC Emissions (tons/year) = Annual Seal Flush Filter Change Volume (bbl/year) * Liquid Density (lb/bbl) * VOC % / 2000 lb/ton
[8] %HAP calculated based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[9] Uncontrolled HAP Emissions (tons/year) = Annual Seal Flush Filter Change Volume (bbl/year) * Liquid Density (lb/bbl) * HAP % / 2000 lb/ton

Pump Seal Loss Emissions (Uncontrolled) - Ekalaka II Pump Station

Pump Seal Loss Volume (gal/event) [1]	Pump Startup Frequency (events/year) [2]	Pump Seal Loss Volume (gal/year) [3]	Pump Seal Loss Volume (bbl/year) [4]	Liquid Density (lb/bbl) [5]	VOC % [6]	Uncontrolled VOC Emissions (ton/yr) [7]	HAP % [8]	Uncontrolled HAP Emissions (ton/year) [9]
0.02	250	5	0.12	200.0	100%	0.01	5.79%	6.89E-04

[1,2] Pump Seal Loss Volume and Pump Startup Frequency based on operational data.
[3] Annual Pump Seal Loss Volume (gal/year) = Pump Seal Loss Volume (gal/event) * Pump Startup Frequency (events/year)
[4] Annual Pump Seal Loss Volume (bbl/year) = Annual Pump Seal Loss Volume (gal/year) / 42 (gal/bbl)
[5] NGL density (lb/bbl) is based on theoretical conservative composition to account for possible fluctuations in composition.
[6] %VOC assumed to be 100% for conservatism.
[7] Uncontrolled VOC Emissions (tons/year) = Annual Pump Seal Loss Volume (bbl/year) * Liquid Density (lb/bbl) * VOC % / 2000 lb/ton
[8] %HAP calculated based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[9] Uncontrolled HAP Emissions (tons/year) = Annual Pump Seal Loss Volume (bbl/year) * Liquid Density (lb/bbl) * HAP % / 2000 lb/ton

Flared Gas Composition

Component	MW (lb/lb-mol)	Composition [2] (Mol%)	Component Mass [3] (lb/lb-mol)	Flared NGL Composition [4] (Wt%)	HHV [5] (Btu/scf)	Heat Content [6] (Btu/scf * wet vol %)
CO_2	44.01	0.02000%	0.00880	0.01579%	0	0.0
Methane	16.04	0.060%	0.0096	0.0173%	919	0.55
Ethane	30.07	5.4%	1.62	2.91%	1619	87
Propane	44.10	43.4%	19.1	34.3%	2315	1004
i-Butane	58.12	6.86%	3.99	7.15%	3000	206
n-Butane	58.12	19.3%	11.2	20.1%	3011	581
i-Pentane	72.15	5.37%	3.87	6.95%	3699	199
n-Pentane	72.15	7.24%	5.22	9.37%	3707	268
Hexanes[1]	86.18	12.39%	10.68	19.15%	4404	546
Total		100%	55.7			2891
NMNEHC (VOC)		94.53%				

[1] Molecular weight of Hexanes+ assumes 100% C6, in order to more conservatively estimate total heat input to the flare.

[2] Composition is based on estimated worst-case composition. It is assumed that gas molar fractions are equivalent to volume fractions (ideal gas law).

[3] Component mass is calculated as Mol% x MW (lb/lb-mole). The overall molecular weight of the flared product is the sum of individual component mass.

[4] Flared gas is assumed to have the same composition as the provided analysis. The Wt% of each component is calculated as lb/lb-mol / total moles.

[5] Component HHVs obtained from GPSA Engineering Handbook.

[6] It is assumed that gas molar fractions are equivalent to volume fractions (ideal gas law). Heat content is calculated as HHV (Btu/scf) x Flared gas composition (Vol%). The overall heat content of the flared product is the sum of individual heat content.

Flare Parameters

Description	Value
Manufacturer	Zeeco, Inc.
Model	(AFDS-3 Dual Flare Tip)
Flare Type	Elevated-open, air assisted
Flare Efficiency	98%
Height (feet)	20
Diameter (inches)	12
Exit gas temperature (°F)	1,873

Fuel Data (Pilot)

Description	Value	Source
Pilot Rating (scf/hr)	65	Design Spec Sheet (using natural gas rating as a conservative measure)
Pilot Rating (MMscf/hr)	6.50E-05	
Heat Rating (Btu/scf)	2,315	Propane, Gross Heating Value [1]
Pilot Rating (MMBtu/hr)	0.150	
Flare Efficiency	98%	
Total Number of Flaring events per year (Events/yr)	19 52	Maintenance events per year (19 events/yr) Seal Flush Filter Change events per year (52 events/yr)
Flare Pilot Operational Time [2] (hours/yr)	8,760	

[1] Heating value of propane obtained from Physical Constants of Hydrocarbons. Gross Heating Value is conservatively used to calculate pilot emissions.

[2] Pilot emissions are conservatively based on 8,760 hours of operation per year, however the flare is a maintenance flare and actual operational time is estimated as less than 4 hours per flaring event.

Fuel Data (Flared Gas)

Description	Value
Blowdown Volume from Maintenance Activities (bbl/year)[1]	177
Max Hourly Blowdown Volume (bbl/hr)[2]	19
Molecular Weight [3]	55.7
Density (lb/bbl)	200.0
Heating Value (Btu/scf) [3]	2,891
Max MMscf/hr [4]	0.026
Max MMBtu/hr [5]	75
MMscf/yr [4]	0.24
MMBtu/yr [5]	698

[1] Blowdown Volume includes the volume from Maintenance Activities (171 bbl/yr), and from Seal Flush Filter Change (6.19 bbl/yr).

[2] Maximum hourly blowdown volume is conservatively based on the maintenance event with the largest volume (pump strainer blowdown) being flared in one hour. Actual operational time is estimated as less than 4 hours per flaring event.

[3] Molecular Weight and Heating Value calculated in the table above.

[4] Blowdown volume (MMscf/hr or MMscf/yr) is calculated as flared volume (bbl/hr or bbl/yr) x Liquid Density (lb/bbl) / Molecular weight of flared product (lb/lb-mol) x 379.4 ft^3/lb-mol. The ft^3/ lb-mole conversion is based on any gas at standard temperature (60 F) and standard pressure (14.696 psia), per GPA 2261, Appendix D.

[5] Heat input is calculated as blowdown volume (MMscf/hr or MMscf/yr) x Heating Value of flared product (Btu/scf).

Emission Factors

Pollutant	Emission Factor[1] (lb/MMBtu)
NO_X	0.068
CO	0.31

[1] Emission factors per U.S. EPA AP-42 Tables 13.5-1 and 13.5-2 (02/18)

Emission Rates - Pilot

Pollutant	Emissions (lb/hr) [1]	Emissions (tpy) [2]
NO_X	0.01	4.48E-02
CO	0.05	2.04E-01

[1] Hourly Emissions (lb/hr) calculated as Annual Emissions (tons/yr) / Hours of Flare Operation (hr/yr) x (2,000 lb/ton)

[2] Annual Emissions (tpy) calculated as Emission Factor (lb/MMBtu) x Flare Pilot Rating (MMBtu/yr) / (2,000 lb/ton)

Emission Rates - Flared gas

Pollutant	Emissions (lb/hr) [1]	Emissions (tpy) [2,3]
NO_X	5.08	0.02
CO	23.18	0.108
VOC [4]	75.98	0.35
HAP	4.40	0.02

[1] Hourly Emissions (lb/hr) conservatively based on the maintenance event with the largest volume (pump strainer blowdown) being flared in one hour. Pump strainer blowdowns occur up to once a year. Actual operational time is estimated as less than 4 hours per flaring event.

[2] Annual NO_X and CO emissions (tpy) calculated as Emission Factor (lb/MMBtu) x Flare Gas Heat Rating (MMBtu/yr) / 2000 (lb/ton).

[3] Annual Controlled VOC/HAP Emissions (tpy) = Annual flared volume (bbl/yr) x Liquid Density (lb/bbl) x Total VOC/HAP % x (1- Destruction efficiency of the flare) / 2,000 (lb/ton).

[4] %VOC assumed to be 100% for conservatism.

Fugitive Components (ID: Fugitive Equipment Leaks)

Component Type [1]	Light Liquid	Light Liquid (With 10% Safety Factor) [2]
Connections	1,222	1,345
Flanges	169	186
Open-Ends	3	4
Pumps	6	7
Valves	284	313
"Others" [3]	16	18
Totals	1,700	**1,873**

[1] Ekalaka II Pump Station counts assumed to be the most conservative of actual component counts conducted at multiple pump stations.
[2] Components used for permitting are inclusive of a 10% safety factor.
[3] "Others" could include check valves, compressors, pressure relief valves, etc.

Unspeciated Emissions from Fugitive Leaks

Component Type	Emission Factor [1] Light Liquid (kg/hr/source)	Hourly Emission Rate [2] Light Liquid (lb/hr)	Annual Emission Rate [3] Light Liquid (tpy)
Connections	2.10E-04	0.62	2.72
Flanges	1.10E-04	0.05	0.20
Open-Ends	1.40E-03	0.01	0.05
Pumps	1.30E-02	0.20	0.88
Valves	2.50E-03	1.72	7.54
"Others"	7.50E-03	0.30	1.30
	Totals	2.90	12.69

[1] Emission factors for light liquids obtained from U.S. EPA, Protocol for Equipment Leak Emission Estimates, Table 2-4 *Oil and Gas Production Operations Average Emission Factors (November 1995)*.
[2] Emission Rate (lb/hr) = Emission Factor (kg/hr/source) x Number of sources x (2.2 lb/kg).

Example "Connections" Hourly Emission Rate (lb/hr) = $\frac{2.10E\text{-}04 \text{ kg}}{\text{hr-source}} \times 1345 \text{ sources} \times \frac{2.2 \text{ lb}}{\text{kg}} = \frac{0.62 \text{ lb}}{\text{hr}}$

[3] Emission Rate (tpy) = Emission rate (lb/hr) x (8,760 hr/yr) / (2,000 lb/ton).

Example "Connections" Annual Emission Rate (tpy) = $\frac{0.62 \text{ lb}}{\text{hr}} \times \frac{8{,}760 \text{ hr}}{\text{yr}} \times \frac{1 \text{ ton}}{2{,}000 \text{ lb}} = \frac{2.72 \text{ ton}}{\text{yr}}$

VOC and HAP Emission Speciation

Pollutant	Wt% [1]	Emission Rate	
		lb/hr [2]	tpy [3]
VOC [4]	100	2.90	12.69
n-Hexane	4.69	0.14	0.60
Benzene	0.44	0.013	0.055
2,2,4-TMP	0.36	1.04E-02	0.046
Ethylbenzene	0.016	4.61E-04	2.02E-03
Toluene	0.20	0.006	0.025
Xylenes	0.086	2.49E-03	0.011
Total HAP	5.79	0.17	0.73

[1] Based on theoretical maximum based on Chemical Analysis Report data to account for possible fluctuations in composition.
[2] VOC (lb/hr) = Unspeciated Hourly Emission Rate (lb/hr) x VOC wt%
[3] VOC (tpy) = Unspeciated Annual Emission Rate (tpy) x VOC wt%
[4] %VOC assumed to be 100% for conservatism.

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--------------------------------------------------------------------------------
**********  MAKEMET METEOROLOGY PARAMETERS  **********
--------------------------------------------------------------------------------

MIN/MAX TEMPERATURE:    394.3 / 427.6 (K)
```

Existing Air Quality

V. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. This is currently designated as an attainment/unclassified for all pollutants.

VI. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #5294-00, the DEQ determined that the impact from this permitting action will be minor. The DEQ believes it will not cause or contribute to a violation of any ambient air quality standard. A health risk assessment (HRA) was required for this permitting action and was submitted to DEQ by Trinity Consultants. Based off the HRA, this permitting action passes (17.8.770).

AERSCREEN 21112 / AERMOD 22112 09/07/23
14:14:55

TITLE: ONEOK EKALAKA II FLARE SCENARIO - SHORT-TERM

********** FLARE PARAMETERS **********

SOURCE EMISSION RATE:	0.5539 g/s	4.396 lb/hr	
FLARE HEIGHT:	6.096 meters	20.00 feet	
EFF RELEASE HEIGHT:	13.519 meters	44.35 feet	
HEAT RELEASE RATE:	0.5234E+07 cal/sec		
HEAT LOSS FRACTION:	0.550		
EFF STACK DIAMETER:	1.516 meters	59.69 inches	
EFF EXIT TEMPERATURE:	1273.0 K	1831.7 Deg F	
EFF EXIT VELOCITY:	20.000 m/s	65.62 ft/s	
RURAL OR URBAN:	RURAL		
INITIAL PROBE DISTANCE =	5025. meters	16486. feet	

********** BUILDING DOWNWASH PARAMETERS **********

NO BUILDING DOWNWASH HAS BEEN REQUESTED FOR THIS ANALYSIS

********** PROBE ANALYSIS **********

25 meter receptor spacing: 30. meters - 5025. meters

Zo SECTOR	ROUGHNESS LENGTH	1-HR CONC (ug/m3)	DIST (m)	TEMPORAL PERIOD
1*	0.100	11.25	150.0	SUM

* = worst case flow sector

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 394.3 / 427.6 (K)

```
MINIMUM WIND SPEED:       0.5 m/s

ANEMOMETER HEIGHT:     10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Grassland
DOMINANT CLIMATE TYPE:    Average Moisture
DOMINANT SEASON:          Summer

ALBEDO:                  0.18
BOWEN RATIO:             0.80
ROUGHNESS LENGTH:       0.100 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED


       METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT
       ------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 06 21  21 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-64.00  1.561 -9.000  0.020 -999. 4000.   7809.7 0.100   0.80   0.18   18.00

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   427.6    2.0

WIND SPEED AT STACK HEIGHT (non-downwash):       19.2 m/s
STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT:        12.1 meters
ESTIMATED FINAL PLUME RISE (non-downwash):        4.6 meters
ESTIMATED FINAL PLUME HEIGHT (non-downwash):     16.7 meters


       METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT
       -------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 01 16  21 12

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
726.07  0.115  1.800  0.020 1541.   89.     -1.0 0.100   0.80   0.18    0.50

    HT  REF TA     HT

 - - - - - - - - - - -
   10.0   427.6    2.0

 WIND SPEED AT STACK HEIGHT (non-downwash):        0.7 m/s
 STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT:        13.5 meters
 ESTIMATED FINAL PLUME RISE (non-downwash):      637.6 meters
 ESTIMATED FINAL PLUME HEIGHT (non-downwash):    651.1 meters
```

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--------------------------------------------------------------------------------
**********  AERSCREEN MAXIMUM IMPACT SUMMARY  **********
--------------------------------------------------------------------------------

                    MAXIMUM      SCALED      SCALED      SCALED      SCALED
                     1-HOUR       3-HOUR      8-HOUR      24-HOUR     ANNUAL
  CALCULATION         CONC         CONC        CONC        CONC        CONC
   PROCEDURE        (ug/m3)      (ug/m3)     (ug/m3)     (ug/m3)     (ug/m3)
---------------   ----------   ----------  ----------  ----------  ----------
FLAT TERRAIN        11.27        11.27       10.14       6.763       1.127

DISTANCE FROM SOURCE        155.00 meters


IMPACT AT THE
AMBIENT BOUNDARY    1.266        1.266       1.140       0.7598      0.1266

DISTANCE FROM SOURCE         30.48 meters


  AERSCREEN 21112 / AERMOD 22112                                    09/13/23
                                                                    10:58:25

  TITLE:  ONEOK EKALAKA II FLARE SCENARIO - ANNUAL


  --------------------------------------------------------------------------------
  **********  FLARE PARAMETERS  **********
  --------------------------------------------------------------------------------

  SOURCE EMISSION RATE:         0.630E-03 g/s             0.500E-02 lb/hr
  FLARE HEIGHT:                     6.096 meters              20.00 feet
  EFF RELEASE HEIGHT:              13.519 meters              44.35 feet
  HEAT RELEASE RATE:           0.5234E+07 cal/sec
  HEAT LOSS FRACTION:               0.550
  EFF STACK DIAMETER:               1.516 meters              59.69 inches
  EFF EXIT TEMPERATURE:            1273.0 K                  1831.7 Deg F
  EFF EXIT VELOCITY:               20.000 m/s                 65.62 ft/s
  RURAL OR URBAN:                   RURAL

  INITIAL PROBE DISTANCE =          5025. meters              16486. feet


  --------------------------------------------------------------------------------
  **********  BUILDING DOWNWASH PARAMETERS  **********
  --------------------------------------------------------------------------------

           NO BUILDING DOWNWASH HAS BEEN REQUESTED FOR THIS ANALYSIS


  **********  PROBE ANALYSIS  **********
                  25 meter receptor spacing: 30. meters - 5025. meters

       Zo       ROUGHNESS       1-HR CONC   DIST      TEMPORAL
       SECTOR     LENGTH         (ug/m3)     (m)       PERIOD
       ------------------------------------------------------------------
        1*         0.100        0.1280E-01   150.0      SUM
  * = worst case flow sector


  --------------------------------------------------------------------------------
  **********  MAKEMET METEOROLOGY PARAMETERS  **********
  --------------------------------------------------------------------------------

  MIN/MAX TEMPERATURE:    394.3 / 427.6 (K)
```

```
MINIMUM WIND SPEED:       0.5 m/s

ANEMOMETER HEIGHT:     10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Grassland
DOMINANT CLIMATE TYPE:    Average Moisture
DOMINANT SEASON:          Summer

ALBEDO:                  0.18
BOWEN RATIO:             0.80
ROUGHNESS LENGTH:       0.100 (meters)

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED


       METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT
       ------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 06 21  21 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-64.00  1.561 -9.000  0.020 -999. 4000.   7809.7 0.100   0.80   0.18   18.00

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   427.6    2.0

WIND SPEED AT STACK HEIGHT (non-downwash):       19.2 m/s
STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT:        12.1 meters
ESTIMATED FINAL PLUME RISE (non-downwash):        4.6 meters
ESTIMATED FINAL PLUME HEIGHT (non-downwash):     16.7 meters


       METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT
       -------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 01 16  21 12

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
726.07  0.115  1.800  0.020 1541.   89.     -1.0 0.100   0.80   0.18    0.50

    HT  REF TA     HT



  - - - - - - - - - - -
    10.0   427.6    2.0

  WIND SPEED AT STACK HEIGHT (non-downwash):        0.7 m/s
  STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT:        13.5 meters
  ESTIMATED FINAL PLUME RISE (non-downwash):      637.6 meters
  ESTIMATED FINAL PLUME HEIGHT (non-downwash):    651.1 meters
```

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--------------------------------------------------------------------------------
**********  AERSCREEN MAXIMUM IMPACT SUMMARY  **********
--------------------------------------------------------------------------------

                    MAXIMUM      SCALED       SCALED       SCALED       SCALED
                     1-HOUR       3-HOUR       8-HOUR      24-HOUR       ANNUAL
  CALCULATION          CONC         CONC         CONC         CONC         CONC
   PROCEDURE       (ug/m3)      (ug/m3)      (ug/m3)      (ug/m3)      (ug/m3)
---------------   ----------   ----------   ----------   ----------   ----------
FLAT TERRAIN     0.1282E-01   0.1282E-01   0.1154E-01   0.7692E-02   0.1282E-02

DISTANCE FROM SOURCE        155.00 meters


IMPACT AT THE
AMBIENT BOUNDARY 0.1440E-02   0.1440E-02   0.1296E-02   0.8641E-03   0.1440E-03

DISTANCE FROM SOURCE         30.48 meters
```

Flare Toxic Risk Assessment

Human Health Risk Assessment for the Flare Model

Cancer and Noncancer Chronic Modeled Concentration	1.28E-03 µg/m³
Noncancer Acute Modeled Concentration	1.13E+01 µg/m³

Annual concentrations are compared to chronic standards, while 1-hour concentrations are compared to the acute standards.

Stack Parameters

Stack Height (ft)	Heat Release (cal/s)	Radiative Heat Loss Fraction	Total HAP Hourly Emission Rate (lb/hr)	Total HAP Annual Emission Rate (lb/hr)
20	5,233,578	0.55	4.396	0.005

HAP Category / Pollutant Name	CAS #	Annual Fraction of all HAPS	Calculated Annual HAP Concentration (µg/m³)	ARM 17.8.770 De Minimis Levels		Exceed ARM 17.8.770 Table 1?	Exceed ARM 17.8.770 Table 2 Chronic?
				Table 1 Cancer Annual (µg/m³)	Table 2 Noncancer Chronic Annual (µg/m³)		
n-Hexane	110543	8.11E-01	1.04E-03	N/A	2.0000E+00	No	No
Benzene	71432	7.56E-02	9.69E-05	1.2048E-02	7.1000E-01	No	No
2,2,4-Trimethylpentane	540841	6.20E-02	7.95E-05	N/A	N/A	No	No
Toluene	108883	3.38E-02	4.34E-05	N/A	4.0000E+00	No	No
Ethylbenzene	100414	2.75E-03	3.52E-06	N/A	1.0000E+01	No	No
m-Xylene	1330207	1.21E-02	1.55E-05	N/A	3.0000E+00	No	No
o-Xylene	1330207	2.71E-03	3.48E-06	N/A	3.0000E+00	No	No

HAP Category / Pollutant Name	CAS #	1 hr Fraction of all HAPS	Calculated 1 hr HAP Concentration (µg/m³)	ARM 17.8.770 De Minimis Levels	Exceed ARM 17.8.770 Table 2 Acute?
				Table 2 Noncancer Acute Annual (µg/m³)	
n-Hexane	110543	8.11E-01	9.14E+00	N/A	No
Benzene	71432	7.56E-02	8.51E-01	N/A	No
2,2,4-Trimethylpentane	540841	6.20E-02	6.99E-01	N/A	No
Toluene	108883	3.38E-02	3.81E-01	N/A	No
Ethylbenzene	100414	2.75E-03	3.10E-02	N/A	No
m-Xylene	1330207	1.21E-02	1.37E-01	4.4000E+01	No
o-Xylene	1330207	2.71E-03	3.06E-02	4.4000E+01	No

Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the DEQ conducted a private property taking and damaging assessment which is located in the attached environmental assessment and is located in the attached environmental assessment.

VII. Environmental Assessment

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

Analysis Prepared By: Emily Hultin
Date: September 06, 2023

ONEOK Bakken Pipeline, L.L.C. and ONEOK Elk Creek Pipeline, L.L.C. – Ekalaka I Pump Station and Ekalaka II Pump Station

Draft Environmental Assessment for

Montana Air Quality Permit #5294-00

Air Quality Bureau

APPLICANT: ONEOK Bakken Pipeline, L.L.C. and ONEOK Elk Creek Pipeline, L.L.C.		
SITE NAME: Ekalaka I and Ekalaka II Pump Stations		
PROPOSED PERMIT NUMBER: Montana Air Quality Permit (MAQP) #5294-00		
APPLICATION RECEIVED: 08/16/2023		
APPLICATION DEEMED COMPLETE: 09/14/2023		
LOCATION: Mill Iron Road, Ekalaka, MT 59324		**COUNTY: Carter**
PROPERTY OWNERSHIP:	**FEDERAL ____ STATE ____ PRIVATE _X___**	
EA PREPARER:	**E. Hultin**	
EA Draft Date:	**EA Final Date:**	**Permit Final Date**
10/17/2023	**11/09/2023**	**11/25/2023**

COMPLIANCE WITH THE MONTANA ENVIRONMENTAL POLICY ACT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to determine the need to prepare an Environmental Impact Statement (EIS) through an initial evaluation and determination of the significance of impacts associated with the proposed action. However, an agency is required to prepare an EA whenever, as here, statutory requirements do not allow sufficient time for the agency to prepare an EIS (ARM 17.4.607(3)(c)). This document may disclose impacts over which DEQ has no regulatory authority.

COMPLIANCE WITH THE CLEAN AIR ACT OF MONTANA

The state law that regulates air quality permitting in Montana is the Clean Air Act of Montana (CAA),

§§ 75-2-101, *et seq.*, Montana Code Annotated (MCA). DEQ may not approve a proposed action contained in an application for an air quality permit unless the project complies with the requirements set forth in the CAA and the administrative rules adopted thereunder, ARMs 17.8.101 *et. seq.* The project is subject to approval by the DEQ Air Quality Bureau (AQB) as the potential project emissions exceed the 5 tons per year threshold of regulated pollutants for modifications of permitted facilities (ARM 17.8.743). DEQ's approval of an air quality permit application does not relieve ONEOK from complying with any other applicable federal, state, or county laws, regulations, or ordinances. ONEOK is responsible for obtaining any other permits, licenses, or approvals (from DEQ or otherwise) that are required for any part of the proposed action. Any action DEQ takes at this time is limited to the pending air quality permit application currently before DEQ's AQB and the authority granted to DEQ under the Clean Air Act of Montana. This action is not indicative of any other action DEQ may take on any future (unsubmitted) applications made pursuant to any other authority (*e.g.* Montana's Water Protection Act). DEQ will decide whether to issue the pending air quality permit pursuant to the requirements of the CAA alone. DEQ may not withhold, deny, or impose conditions on the permit based on the information contained in this Environmental Assessment. § 75-1-201(4), MCA.

SUMMARY OF THE PROPOSED ACTION

ONEOK has applied for a new MAQP under the CAA to request an increase in emissions at the Ekalaka I and Ekalaka II Pump Station associated with constructing and operating a second pump station, Ekalaka II. In 2014, Ekalaka I Pump Station was determined to not need a MAQP as the emissions were under the 25 TPY of any pollutant. With the addition of Ekalaka II Pump Station, an MAQP is required. ONEOK requested this permit because with the addition of Ekalaka II Pump Station, the emissions will be over the 25 TPY year limit.

This ONEOK permit has been assigned MAQP #5294-00 and will allow for the continued operation of the Ekalaka I Pump Station and the construction of Ekalaka II Pump Station, and then operation. MAQP #5294-00 also allows for the construction of three (3) electric pumps, one (1) flare to control VOC emissions from maintenance activities, and associated fugitive components, for operation of the new Ekalaka II Pump Station.

ONEOK's estimated emissions increase from the new Ekalaka II Pump Station is greater than 25 tons per year (tpy) for each regulated pollutant, which requires ONEOK to obtain a MAQP. ONEOK has conservatively estimated all project emission increases. Emissions associated with the new Ekalaka II Pump Station will increase above the previously unpermitted level at the Ekalaka I Pump Station.

All information included in the EA is derived from the permit application, discussions with the applicant, analysis of aerial photography, topographic maps, and other research tools.

Table 1: Proposed Action Details

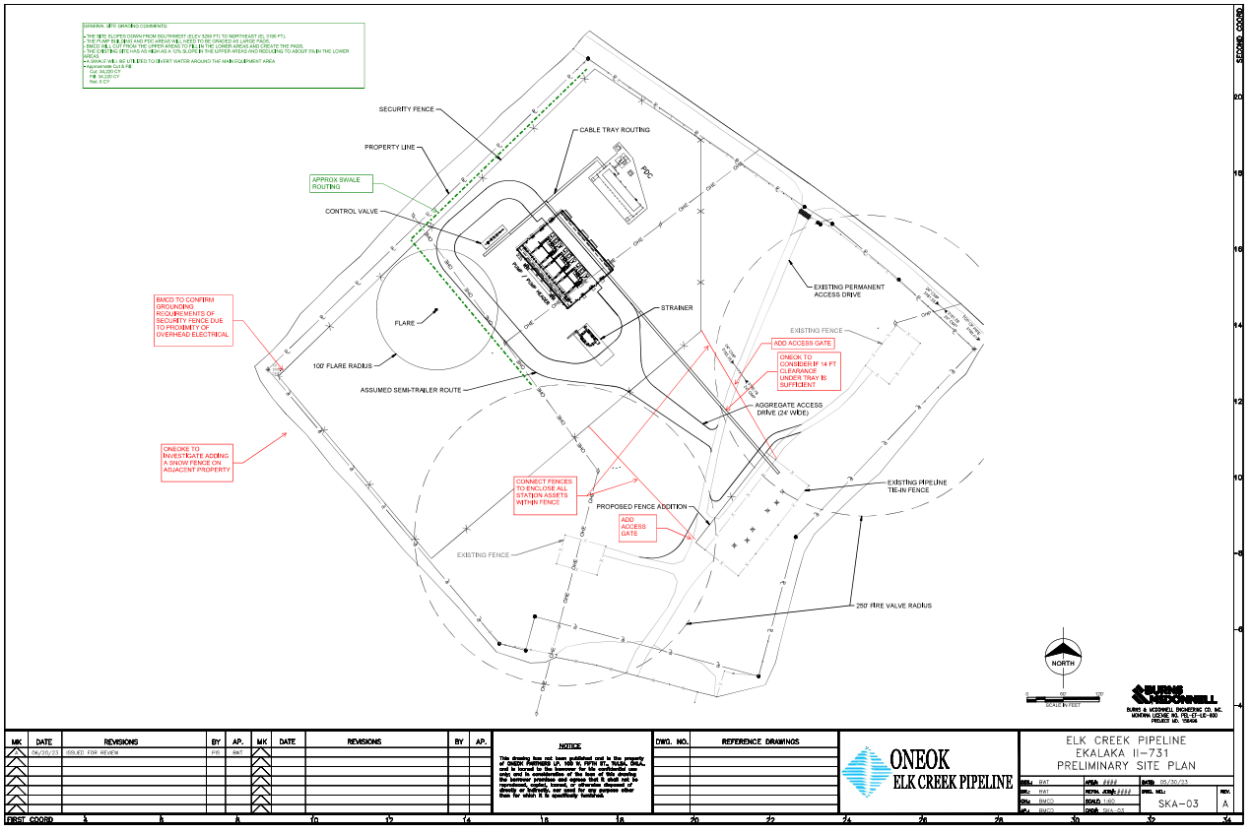
Proposed Action	
General Overview	The following equipment would be constructed adjacent to Ekalaka I Pump Station to create the Ekalaka II Pump Station in this action: o Installing three (3) electric pumps

	○ Installing one (1) flare to control VOC emissions from maintenance events ▪ Maintenance activities referred to as "seal flush filter change" and "pump seal losses" ▪ Seal flush filter changes extend the life of the pump seal and reduce emissions associated with pump blowdowns and potential pump seal replacement ▪ Other maintenance activities include: ten (10) valve blowdowns per year, one (1) pump strainer blowdown per year, and eight (8) pump blowdowns per year ○ Associated fugitive components ▪ The component count used is the estimate of fugitive emissions are assumed to be the most conservative of actual component counts inclusive of a 10% safety factor ○
Proposed Action Estimated Disturbance	
Disturbance	Disturbance for construction would be approximately 10 acres.
Proposed Action	
Duration	**Construction:** Construction or commencement for the new or modified sources must start within three years of issuance of the final air quality permit, otherwise the authority to construct expires. Current plans would be for the Ekalaka II Pump Station project to begin at the end of September 2023, with construction going until the end of September 2024. Followed by the pump building and commissioning activities from September 2024 until the end of January 2025. **Operational Life:** The operational life for the pump stations would be dependent upon the availability of natural gas liquids which are pumped within the pipeline. If the pumps and/or flare fail, they would be replaced with similar equipment.
Construction Equipment	Typical construction equipment, including earth moving equipment (bulldozer, grader, frontend loader, backhoe, etc.), forklifts would be used as for the construction of the construction of the Ekalaka II Pump Station.
Personnel Onsite	**Construction:** Approximately 25 construction personnel for the Ekalaka II Pump Station. **Operations:** No change is staff is necessary to accommodate the addition of the Ekalaka II Pump Station.

Location and Analysis Area	**Location**: The proposed action is located at the Ekalaka I Pump Station property whose street address is Mill Iron Road, Ekalaka, Montana, 59324. This parcel is located within Section 33 of Township 2 North, Range 60 East. The Ekalaka II Pump Station would be adjacent to the Ekalaka I Pump Station. **Analysis Area**: The area being analyzed as part of this environmental review includes the immediate project area, as well as neighboring lands surrounding the analysis area, as reasonably appropriate for the impacts being considered.
Air Quality	The Draft EA will be attached to the Preliminary Determination Air Quality Permit which would include all enforceable conditions for operation of the emitting units. Any revisions to the EA would be addressed and included in the Final EA attached to the DEQ's Decision.
Conditions Incorporated into the Proposed Action	The conditions developed in the Preliminary Determination of the MAQP dated October 17, 2023, set forth in Sections II.A-D.

Figure 1: Map of the Ekalaka I and Ekalaka II Site Plan

Figure 2: Map of the plot plan for Ekalaka I and Ekalaka II Pump Station



PURPOSE AND BENEFIT FOR PROPOSED ACTION

DEQ's purpose in conducting this environmental review is to act upon ONEOK's air quality permit application No. 5294-00 to: construct and operate Ekalaka II Pump Station, adjacent to the Ekalaka I Pump Station, that in 2014 was determined by DEQ to not require an MAQP. With the addition of Ekalaka II, the facility will require an MAQP. Ekalaka II will consist of three (3) electric pumps and one (1) flare to control VOC emissions from maintenance events.

The benefits of the proposed action, if approved, include authorizing ONEOK to continue current operations unchanged at Ekalaka I Pump Station; authorizing ONEOK to construct and operate the Ekalaka II Pump Station.

Authority to ONEOK for operation of the Ekalaka I and Ekalaka II Pump Station would continue until the permit is revoked, either at the request of ONEOK or by DEQ because of non-compliance with the conditions within the air quality permit.

REGULATORY RESPONSIBILITIES

In accordance with ARM 17.4.609(3)(c), DEQ must list any federal, state, or local, authorities that have concurrent or additional jurisdiction or environmental review responsibility for the proposed action and the permits, licenses, and other authorizations required. MRI must conduct its operations according to the terms of its permit, the CAA, §§ 75-2-101, *et seq*., MCA, and ARMs 17.8.101, *et seq*.

ONEOK must cooperate fully with, and follow the directives of, any federal, state, or local entity that may have authority over Ekalaka I and Ekalaka II Pump Station. These permits, licenses, and other authorizations may include: City of Ekalaka, Carter County Weed Control Board, Occupational safety and Health Administration (worker safety), DEQ AQB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), and Montana Department of Transportation and Carter County (road access).

ONEOK's new Ekalaka Pump II Station would be located within the perimeter of the current Ekalaka I Pump Station property boundary. The pump station is currently located on approximately 15.377 acres. During the construction of Ekalaka II Pump Station, approximately 10 acres of land would be disturbed at the Ekalaka Pump Station. MAQP #5294-00 allows for approximately 10 acres of land to be disturbed for the construction of Ekalaka II.

EVALUATION AND SUMMARY OF POTENTIAL IMPACTS TO THE PHYSICAL AND HUMAN ENVIRONMENT IN THE AREA AFFECTED BY THE PROPOSED ACTION:

The impact analysis will identify and evaluate direct and secondary impacts. Direct impacts are those that occur at the same time and place as the action that triggers the effect. Secondary impacts mean "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 are expected to occur, the impacts analysis estimates the duration and intensity of the impact.
The duration of an impact is quantified as follows:

- **Short-term**: Short-term impacts are defined as those impacts that would not last longer than the proposed operation of the site.
- **Long-term**: Long-term impacts are defined as impacts that would remain or occur following shutdown of the proposed facility.

The severity of an impact is measured using the following:

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

1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

The ONEOK site is located on approximately 15.4 acres of land. About 10 of those acres will be utilized for the Ekalaka II Pump Station. This land is currently pasture and will be graded and then covered with a surface aggregate. The closest water source is approximately 0.5 miles north of the site. The elevation is approximately 3,168 feet as referenced by the nearest topographic map on the Montana DEQ GIS website.

With the construction of Ekalaka II Pump Station, this will be considered a disturbance to the topography. Ekalaka II will be adjacent to Ekalaka I, which was constructed in 2014.

Direct Impacts: The information provided above is based on the information provided to DEQ for the Ekalaka I and Ekalaka II Pump Station project detailing the geology of the local area. Available information includes the permit application, analysis of aerial photography, topographic maps, and information provided from ONEOK. None of the planned disturbance at the site is considered first time disturbance, as Ekalaka I was constructed in 2014. Soils would be disturbed during construction and operation of the proposed action, approximately 10 acres of disturbance would occur for the life of the project. There is no impact expected to topography and geology.

Secondary Impacts: No secondary impacts to topography, geology, stability, and moisture would be expected because Ekalaka II is located within the existing ONEOK property.

2. WATER QUALITY, QUANTITY, AND DISTRIBUTION:

No wetlands have been identified on the site. The closest body of water is Coal Creek, approximately 0.5 miles North of the facility.

Direct Impacts: The information provided above is based on the information provided by the applicant for the purpose of obtaining the pending air quality permit. DEQ is not aware of any other permits required by ONEOK.

Three new pumps and one flare are proposed for the site. These sources would alter the site by covering some of the land surface. Total disturbance for the project was estimated by ONEOK at approximately 10 acres.

Precipitation and surface water would generally be expected to infiltrate into the subsurface, however, any surface water that may leave the site could carry sediment from the disturbed site. ONEOK would manage erosion control as necessary using a variety of Best Management Practices (BMP) that can include, but are not limited to, non-draining excavations, containment, diversion and control of surface run off, flow attenuation, revegetation, earthen berms, silt fences, and gravel packs. These practices would minimize any stormwater impacts to surface water in the vicinity of the project.

No fragile or unique water resources or values are present. No impacts to water quality and quantity, which are resources of significant statewide and societal importance are expected.

Secondary Impacts: No secondary impacts to water quality, quantity and distribution would be expected, nor any impacts from stormwater runoff.

3. AIR QUALITY:

As of April 9, 2018, Carter County is designated as an Unclassifiable/Attainment area for all criteria pollutants according to 40 CFR 81.327.

Any stationary source falling under one of the 28 source categories listed in the "major stationary source" definition in ARM 17.8.801(22) would be a major stationary source if it emits, or has the potential to emit, 100 tpy or more of any regulated Prevention of Significant Deterioration (PSD) pollutant, except for GHGs. The Ekalaka I and Ekalaka II Pump Station is a "natural gas liquids pump station", which is not one of the 28 listed source categories and does not have the potential to emit 100 tpy or more of a regulated PSD pollutant. A proposed action is considered a significant modification under the PSD rules if the proposed action's emission increase exceeds the PSD significant thresholds under ARM 17.8.818. The project emissions from ONEOK's proposed action, which includes emissions from new sources and emissions from existing sources, does not qualify as a major PSD modification as demonstrated in Table 2 below.

Table 2: Project-Only Potential to Emit Emission Increase Summary

Pollutant	Potential to Emit (tpy)	PSD Significant Modification Threshold (tpy)	Project-only Emissions Increase PSD Significant? (Yes/No)
CO	0.63	100	No
NO_X	0.14	40	No
PM (filterable only)	N/A	25	No
PM_{10}	N/A	15	No
$PM_{2.5}$	N/A	10	No
SO_2	N/A	40	No
VOC	56.25	40	No
GHGs, as CO_2e	N/A	75,000	N/A

Direct Impacts: Expected emissions from the proposed action, as submitted in the air quality permit application, are in Table 2. Each pollutant is less than the PSD significant modification threshold; therefore, the proposed action would not require PSD review. No analysis of greenhouse gases is required for a non-major PSD facility.

Air quality standards, set by the federal government and DEQ are enforced by the AQB and allow for pollutants at the levels permitted within the MAQP. Once the Ekalaka II Pump Station is complete, project emissions would include oxides of NO_X, CO, and volatile organic compounds (VOCs). These emissions come from fuel combustion, flaring, maintenance blowdowns, seal flush filter changes, pump seal losses, and fugitives from piping components (valves, pumps, flanges).

Air pollution control equipment must be operated at the maximum design for which it is intended ARM 17.8.752(2). Limitations would be placed on the allowable emissions for the new emission sources. As part of the air quality permit application, ONEOK submitted a Best Available Control Technology (BACT) analysis for each emitting unit. These proposed limits were reviewed by DEQ and incorporated into MAQP #5294-00 as federally enforceable conditions. These permit limits cover NO_X, CO, and VOCs, with associated ongoing compliance demonstrations, as determined by DEQ.

During construction and installation of new equipment, fugitive dust may be generated from earth work and from construction vehicle activity. Pursuant to ARM 17.8.304(2), fugitive dust emissions would need to meet an operational visible opacity standard of 20 percent or less averaged over 6 consecutive minutes. Pursuant to ARM 17.8.308(1), ONEOK is required to take reasonable precautions to control emissions of airborne particulate matter from all phases of operation including material transport. Reasonable precautions would include items such the use of water during construction periods to minimize dust emissions. Air quality standards are regulated by the federal Clean Air Act, 42 U.S.C. 7401 *et seq.* and CAA, § 50-40-101 *et seq.* MCA, and are implemented and enforced by DEQ's AQB. As stated above, ONEOK is required to comply with all applicable state and federal laws. Minor air quality impacts would be anticipated for the proposed action.

Secondary Impacts: Impacts from the operation of the Ekalaka I and Ekalaka II Pump Station are to be restricted by an MAQP and therefore should have minor secondary air quality impacts.

4. VEGETATION COVER, QUANTITY AND QUALITY:

There are no known rare or sensitive plants or cover types present in the site area. No fragile or unique resources or values, or resources of statewide or societal importance, are present. DEQ conducted research using the Montana Natural Heritage Program (MTNHP) website and ran the query titled "Environmental Summary Report" dated August 31, 2023. The proposed action is located adjacent to the existing Ekalaka I Pump

Direct Impacts: The information provided above is based on the information that DEQ had available to it at the time of completing this EA and provided by the applicant. Available information includes the permit application, analysis of aerial photography, topographic maps, geologic maps, soil maps, and other research tools. As the proposed action would be located within the ONEOK facility adjacent to Ekalaka I Pump Station, the vegetation is very limited at the site. The aerial photo contained in the air quality permit application does not appear to show much vegetation in the area. No impacts to vegetation cover, quantity and quality are expected.

Secondary Impacts: No secondary impacts are expected since land disturbance at the Ekalaka I and Ekalaka II Pump Station would occur in an area with minimal vegetation.

5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

As described earlier in Section 4. Vegetation Cover, DEQ conducted research using the MTNHP website and ran the query titled "Environmental Summary Report" dated August 31, 2023, which produced the following species of concern (SOC): Greater Sage Grouse and Snapping Turtle. This area is not in any sage grouse habitat, but they still have the potential to be in this area. The sage grouse was noted to be within the search polygon. Avian species may be in the proximity of the Ekalaka I and Ekalaka II Pump Station due to the remote area.

Direct Impacts: The potential impact (including cumulative impacts) to terrestrial, avian and aquatic life and habitats would be negligible, due to the long-term industrial nature of the site.

Secondary Impacts: No secondary impacts to terrestrial, avian and aquatic life and habitats stimulated or induced by the direct impacts analyzed above or from the construction and operation of the Ekalaka II Pump Station.

6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

As described in Section 5 above, DEQ conducted a search using the MTNHP webpage. The search used a polygon that overlapped the site and produced the list of species of concern identified in Section 6.

Direct Impacts: Among the SOC from the MTNHP list, these species would not be displaced by the proposed action as the site is industrial. The potential impact (including cumulative impacts) to species (including sage grouse) would be negligible.

Secondary Impacts: The proposed action and the construction and operation of the Ekalaka II Pump Station, would have no secondary impacts to endangered species because the permit conditions are protective of human and animal health and all lands involved in the proposed action are currently used for industrial operations and would not change the effect to the environment.

7. HISTORICAL AND ARCHAEOLOGICAL SITES:

The Montana State Historic Preservation Office (SHPO) was contacted to conduct a file search for historical and archaeological sites within Section 33 Township 2 North, Range 60 East. SHPO provided a report dated September 1, 2023, that indicated there have been zero reported sites within the designated search location. It was noted that there had been three previously conducted cultural resource inventories done in the area. It is SHPO's position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are within the Area of Potential Effect, and are over fifty years old, SHPO recommends that they be recorded, and a determination of their eligibility be made prior to any disturbance taking place.

However, should structures need to be altered, or if cultural materials are inadvertently discovered during this proposed action, SHPO requests their office be contacted for further investigation.

Direct Impacts: The search by SHPO has identified zero historical and archaeological sites, the Ekalaka II Pump Station addition is not expected to impact any locations that are not already in industrial activity. Therefore, no impacts to historical and archeological sites would be expected.

Secondary Impacts: No secondary impacts to historical and archaeological sites are anticipated since the proposed action and construction and operation of the Ekalaka I and Ekalaka II Pump Station are located on land currently in industrial use.

8. SAGE GROUSE EXECUTIVE ORDER:

The project would not be in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: http://sagegrouse.mt.gov. An approval letter with a comprehensive mitigation approach addressing project impacts and deviations from Executive Order 12-2015 was received from the Montana Sage Grouse Habitat Conservation Program on September 26, 2018.

Direct Impacts: The proposed action is not located within Sage Grouse habitat, so no direct impacts would occur.

Secondary Impacts: No secondary impacts to sage grouse or sage grouse habitat would be expected since the proposed action is not located within Sage Grouse habitat.

9. AESTHETICS:

The proposed action would occur on private land. The nearest residents to the proposed action reside to the southeast at a distance of approximately 3 miles. It is not expected that the nearest residences to the proposed site would experience any noticeable change in noise levels. Standard noise reducing methods would be employed to minimize the risk that noise levels would rise above current baseline levels. An example of noise minimization includes enclosing compressors and pumps. The noise levels at the property boundary would not be expected to change.

The Ekalaka I and Ekalaka II Pump Stations are situated on approximately 15.4 acres. Approximately 10 of these acres are to be utilized for the construction and future location of the Ekalaka II Pump Station. The construction activity at the Ekalaka site associated with the Ekalaka II Pump Station will disturb approximately 10 of the 15.4 acres.

Direct Impacts: There would be temporary construction activities including noise and dust. Equipment planned for construction could include backhoes, graders/dozers, dump trucks and various other types of smaller equipment. Once the proposed action is constructed, no discernable change in noise level would be expected during operations after the construction of Ekalaka II Pump Station. The pump station profile would change slightly with the construction of the new pump station and equipment. Impacts would be negligible and short-term. Noise levels are not expected to change beyond the pump station boundary.

Secondary Impacts: The addition of the Ekalaka II Pump Station would not expect to have an impact on the aesthetics because it would be situated on property currently in industrial use and its noise would not be expected to differ any from the surrounding Ekalaka I Pump Station.

10. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

The site is located in an area characterized by industry. The operation of Ekalaka I and Ekalaka II Pump Stations would increase the capacity of the existing NGL pump station. Energy usage would increase, and additional transmission lines would be run to the site.

Direct Impacts: During construction of the proposed action there would be a minor increase in energy use to construct the proposed action. Once operational, energy and electric demands would continue for the duration of the facility's lifetime at or near current levels. See the Air Quality and Water Quality sections of the EA to review the potential impacts from the proposed action regarding air and water resources.

Secondary Impacts: During operations, the proposed action would allow to increase capacity of the pump station upon the completion of Ekalaka II. These changes are expected to have no significant change in impact.

11. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:

The site is already an existing industrial pump station.

Direct Impacts: No other environmental resources are known have been identified in the area beyond those discussed above. Hence, there is no impact to other environmental resources.

Secondary Impacts: No secondary impacts to other environmental resources are anticipated as a result of the proposed action of the construction and operation of Ekalaka II Pump Station.

12. HUMAN HEALTH AND SAFETY:

The applicant would be required to adhere to all applicable state and federal safety laws. The access to the public would continue to be restricted to this property.

Direct Impacts: Negligible changes in impacts to human health and safety are anticipated as a result of this project action, as it is already an existing pump station.

Secondary Impacts: No secondary impacts to human health and safety are anticipated as a result of the proposed action of the construction and operation of the Ekalaka II Pump Station.

13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:

The site is currently a combination of an area that is not zoned and a utility subdivision exemption. There is no agricultural activity at the site**.**

Direct Impacts: The proposed action would not increase or decrease the reduce the amount of land associated with the Ekalaka site location once the Ekalaka II Pump Station constructed and

operated as it is being constructed on existing property adjacent to the Ekalaka I Pump Station. Impacts on the industrial, commercial, and agricultural activities and production in the area would be negligible.

Secondary Impacts: No secondary impacts to industrial, commercial, and agricultural activities and production are anticipated as a result of the proposed action of the construction and operation of the Ekalaka II Pump Station.

14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

There currently are no permanent jobs located at the Ekalaka I and Ekalaka II Pump Station. Employees visit the site periodically, but it is an unmanned location. Some of the existing employees would also visit the Ekalaka II Pump Station

Direct Impacts: The proposed action would be expected to have only minor impacts on the overall distribution of employment. Some of the employees would be associated with both the Ekalaka II Pump Station and the Ekalaka I Pump Station upon startup of the Ekalaka II Pump Station. ONEOK did not describe any need for temporary contract jobs associated with the Ekalaka II Pump Station Project, outside of the construction personnel required during the construction phase of the Ekalaka II Pump Station.

Secondary Impacts: Although a number of temporary construction and contractor jobs will be associated with the construction of the Ekalaka II Pump Station, no secondary impact is expected on long term employment from the proposed action because the same employee base would be used between the two pump stations.

15. LOCAL AND STATE TAX BASE AND TAX REVENUES:

The proposed action would be expected to have minor impacts on the local and state tax base and tax revenue.

Direct Impacts: 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 this operation. A minor impact is expected on the tax base and revenue with the proposed action.

Secondary Impacts: No secondary impacts to local and state tax base and tax revenues are anticipated as a result of the proposed action of the construction and operation of the Ekalaka II Pump Station.

16. DEMAND FOR GOVERNMENT SERVICES:

The proposed action is in an industrial area.

Direct Impacts: Compliance review and assistance oversight by DEQ AQB would be conducted in concert with other area activity when in the vicinity. The proposed action would have only minor impacts on demand for government services, mainly through oversight by DEQ AQB.

Secondary Impacts: No secondary impacts are anticipated on government services with the proposed action and a minimal increase in impact would occur from the permitting and compliance needs associated with the new permit for the Ekalaka I and Ekalaka II Pump Station.

17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

An online search was conducted on September 5, 2023. No information was found concerning local city planning or city goals.

Direct Impacts: ONEOK's proposed action is on property which has no zoning other than utility subdivision exemption. No impacts from the proposed action would be expected relative to any local community planning goals as none were found.

Secondary Impacts: No secondary impacts to the locally-adopted environmental plans and goals are anticipated as a result of the proposed action.

18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

The current site of the proposed action is in an area of industrial use. Recreation opportunities are located to the north of the proposed action via water-activities on Coal Creek. No wilderness areas or other recreational sites are in the vicinity.

Direct Impacts: There would be no impacts to the access to wilderness activities as none are in the vicinity of the proposed action. Recreationalists on Coal Creek or would likely be able to see some of the construction activities and the noise would be nearly unchanged from the current Ekalaka I Pump Station noise.

Secondary Impacts: No secondary impacts to access and quality of recreational and wilderness activities are anticipated as a result of the proposed action or the construction of the Ekalaka II Pump Station which is wholly contained within the boundary of the Elk Creek Pipeline.

19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

The proximity of the proposed action to the City of Ekalaka would accommodate housing needs for workers. The site is currently unmanned, with employees visiting the site periodically. No new employees are anticipated due to the proposed action. Approximately 25 temporary workers will be present during the various construction stages of Ekalaka II Pump Station.

Direct Impacts: The project would not add to the population or require additional housing, therefore, no impacts to density and distribution of population and housing are anticipated.

Secondary Impacts: No secondary impacts to density and distribution of population and housing are anticipated as a result of the proposed action or the operation of the Ekalaka II Pump Station.

20. SOCIAL STRUCTURES AND MORES:

Based on the required information provided by ONEOK, DEQ is not aware of any native cultural concerns that would be affected by the proposed action on this existing facility.

Direct Impacts: The proposed action is located on an existing industrial site, no disruption of native or traditional lifestyles would be expected, therefore, no impacts to social structure and mores are anticipated.

Secondary Impacts: No secondary impacts to social structures and mores are anticipated as a result of the proposed operations or from the construction and operation of the Ekalaka II Pump Station on existing industrial property.

21. CULTURAL UNIQUENESS AND DIVERSITY:

Based on the required information provided by ONEOK, DEQ is not aware of any unique qualities of the area that would be affected by the proposed action on this existing facility.

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 action of the construction and operation of the Ekalaka II Pump Station on existing industrial property.

22. PRIVATE PROPERTY IMPACTS:

The proposed action would take place on privately-owned land by ONEOK. 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.

The closest residence is located approximately three miles to the southeast of the property boundary. Other residences are located approximately 850 feet directly to the east from the eastern property boundary.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?

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

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

23. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Due to the nature of the proposed action, no further direct or secondary impacts are anticipated from this project.

24. CLIMATE CHANGE-RELATED LITIGATION IN MONTANA:

DEQ is aware of the recent district court opinion in Held v. State, ruling the statutory prohibition on including greenhouse gas analyses in MEPA reviews unconstitutional.[1] That decision is being appealed to the Montana Supreme Court and final resolution is yet unsettled. While litigation is ongoing, and consistent with the court order, DEQ has started a process to assess and improve our environmental review processes, including consideration of future climate impact analyses.

Notes:
1 – Held v. State, No. CDV-2020-307 (Mont. 1st Jud. Dist. Ct. Aug. 14, 2023).

ADDITIONAL ALTERNATIVES CONSIDERED:

No Action Alternative: In addition to the analysis above for the proposed action, DEQ is considering a "no action" alternative. The "no action" alternative would deny the approval of the proposed action. 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.

Other Ways to Accomplish the Action: In order to meet the project objective to increase capacity of the current pump station, specific raw materials and energy inputs are necessary, and while the configuration for these processes could be modified for a different physical layout, the relative disturbed area and energy inputs and therefore the associated emissions would not be substantially different than the proposed action.

If the applicant demonstrates compliance with all applicable rules and regulations as required for approval, the "no action" alternative would not be appropriate. Pursuant to, § 75-1-201(4)(a), (MCA) DEQ "may not withhold, deny, or impose conditions on any permit or other authority to act based on" an environmental assessment.

CUMULATIVE IMPACTS:

Cumulative impacts are the collective impacts on the human environment within the borders 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 preimpact statement studies, separate impact statement evaluation, or permit processing procedures.

Currently, there is an air quality permit application from ONEOK regarding the need for a permit with the addition of the Ekalaka II Pump Station adjacent to the current Ekalaka I Pump Station. No other permit applications for this facility are currently pending before DEQ. Although additional permits may be necessary for this facility in the future, without a pending permit application containing the requisite information, DEQ cannot speculate about which permits may be necessary or which permits may be granted or denied. For example, at this time DEQ does not have sufficient information to determine whether or not a modification is required to the MPDES permit—and therefore cannot predict whether there would be a discharge associated with this proposed action. There may, therefore, be additional cumulative impacts (*e.g.* to water) associated with this facility in the future, but those impacts would be analyzed by future environmental reviews associated with those later permitting actions. (For example, if ONEOK applies for an MPDES permit modification DEQ will analyze the cumulative impacts of the already issued air quality permit and the then-pending MPDES permit.) This environmental review analyzes only the proposed action submitted by ONEOK, which is the air quality permit regulating the emissions from the equipment as listed in the "proposed action" section, above.

There are other sources of industrial emissions in the vicinity. The Ekalaka I and Ekalaka II Pump Stations would have emissions including CO, VOCs, NO_X and Hazardous Air Pollutants (HAPs) as detailed in MAQP #5294-00. These emissions are limited through enforceable conditions within the air quality permit. There is also the Big Gumbo Compressor Station and the South Baker Compressor station, in the neighboring county, approximately 25 miles away, that would have emissions. The Big Gumbo Compressor Station operates under MAQP #4061-02 and has limits in place for both NO_X, CO, and VOCs. The South Baker Compressor Station operates under MAQP#3281-02 and has limits in place for NO_x, CO, and VOCs. Collectively, these sources and the proposed action can all contribute to the ambient air quality and when future permit actions occur at ONEOK, these actions may require future analysis. The proposed action would not be expected to have any discernable

impact. No change in the EPA air quality designation would be expected. As of April 9, 2018, Carter County is classified as Attainment/Unclassifiable for all criteria pollutants.

A search was also conducted to locate any Growth Policy information for the city of Ekalaka, but none were found. It was mentioned in an online article in The Ekalaka Eagle, published on June 30, 2023, that the Carter County Planning Board has been authorized to create a growth policy for all of Carter County.

DEQ considered potential impacts related to this project and potential secondary impacts. Due to the limited activities in the analysis area, cumulative impacts related to this proposed action would be minor. The cumulative table for any direct and secondary impacts is located at the very end of this EA. See Table III.

PUBLIC INVOLVEMENT:

Scoping for this proposed action consisted of internal efforts to identify substantive issues and/or concerns related to the proposed action. Internal scoping consisted of internal review of the EA document by DEQ Air Permitting staff.

Internal efforts also included queries to the following websites/ databases/ personnel:
- Montana State Historic Preservation Office
- Montana DEQ
- Carter County
- Montana Natural Heritage Program
- Montana Cadastral Mapping Program

A fifteen-day public comment period occurred along with the Preliminary Determination on MAQP #5294-00 and was posted to the DEQ website.

OTHER GOVERNMENTAL AGENCIES WITH JURSIDICTION:

The proposed action would be fully located on privately-owned land. All applicable local, state, and federal rules must be adhered to, which, at some level, may also include other local, state, federal, or tribal agency jurisdiction. Other Governmental Agencies which may have overlapping or sole jurisdiction include but may not be limited to: City of Ekalaka, Carter County Commission or County Planning Department (zoning), Carter County Weed Control Board, Occupational Safety and Health Administration (worker safety), DEQ AQB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights), and MDT and Carter County (road access).

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

Under ARM 17.4.608, DEQ is required to determine the significance of impacts associated with the proposed action. This determination is the basis for the agency's decision concerning the need to prepare an environmental impact statement and refers to DEQ's evaluation of individual and

cumulative impacts. DEQ is required to consider the following criteria in determining the significance of each impact on the quality of the human environment:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact.

   "Severity" is analyzed as the density of the potential impact while "extent" is described as the area where the impact is likely to occur. An example could be that a project may propagate ten noxious weeds on a surface area of 1 square foot. In this case, the impact may be a high severity over a low extent. If those ten noxious weeds were located over ten acres there may be a low severity over a larger extent.

   "Duration" is analyzed as the time period in which the impact may occur while "frequency" is analyzed as how often the impact may occur. For example, an operation that occurs throughout the night may have impacts associated with lighting that occur every night (frequency) over the course of the one season project (duration).

2. 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.

3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts.

4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values.

5. The importance to the state and to society of each environmental resource or value that would be affected.

6. Any precedent that would be set as a result of an impact of the proposed action that would commit the DEQ to future actions with significant impacts or a decision in principle about such future actions.

7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The significance determination is made by giving weight to these criteria in their totality. For example, impacts with moderate or major severity may be determined to be not significant if the duration of the impacts is considered to be short-term. As another example, however, moderate or major impacts of short-term duration may be considered to be significant if the quantity and quality of the resource is limited and/or the resource is considered to be unique or fragile. As a final example, moderate or major impacts to a resource may be determined to be not significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.

Preparation of an EA is the appropriate level of environmental review under MEPA if statutory requirements do not allow sufficient time for an agency to prepare an environmental impact statement, pursuant to ARM 17.4.607. An agency determines whether sufficient time is available to prepare an environmental impact statement by comparing statutory requirements that establish when the agency must make its decision on the proposed action with the time required to obtain public review of an environmental impact statement plus a reasonable period to prepare a draft environmental review and,

if required, a final environmental impact statement.

SIGNIFICANCE DETERMINATION

The severity, duration, geographic extent, and frequency of the occurrence of the primary, secondary, and cumulative impacts associated with the proposed action would be limited. ONEOK proposes to modify operations at the Ekalaka I Pump Station by adding in the Ekalaka II Pump Station adjacent to the first pump station. The modification will occur completely on the Ekalaka I Pump Station property and will support the facility. The ONEOK project will be located on private land, within the city limits of Ekalaka, Montana. The estimated construction disturbance will be minimal at the pump station and estimated to consist of about 10 acres. All on-going activities will be within the original ONEOK boundary.

DEQ has not identified any significant impacts associated with the proposed action for any environmental resource. Approving ONEOK's air quality permit application would not set precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. The ONEOK application requests a new air quality permit for the Ekalaka I and Ekalaka II Pump Station. If ONEOK submits another permit application, DEQ is not committed to approve those applications. DEQ would conduct a new environmental assessment for any subsequent air quality permit applications sought by ONEOK. DEQ would make a decision on ONEOK's subsequent application based on the criteria set forth in the CAA.

DEQ's issuance of a new MAQP to ONEOK for this proposed operation also does not set a precedent for DEQ's review of other applications, including the level of environmental review. A decision of on the appropriate level of environmental review is made based on case-specific considerations of the criteria set forth in ARM 17.4.608.

DEQ does not believe that the proposed action has any growth-inducing or growth-inhibiting aspects or that it conflicts 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 state action is not predicted to significantly impact the quality of the human environment. Therefore, at this time, preparation of an EA is determined to be the appropriate level of environmental review under MEPA.

Environmental Assessment and Significance Determination Prepared By:

E.Hultin	**Air Quality Engineering Scientist**
Name	**Title**

EA Reviewed By:

J. Merkel	**Permitting Services Section Supervisor**
Name	**Title**

References

Air Quality Permit Application Received August 4, 2021
Response to Incompleteness DEQ Letter Air
Montana State Historical Preservation Office (SHPO) Report Received September 1, 2023
Montana Natural Heritage Program (Website Search Downloads) Last Download August 31, 2023
Montana Cadastral GIS Layer – Through-Out Project Up Until Decision Issuance
Air Quality Bureau Permitted Source List-GIS Layer
Air Quality Permit MAQP #4061-02
Air Quality Permit MAQP #3281-02
The Ekalaka Eagle Website – County Growth Policy Announcement Article

ABBREVIATIONS and ACRONYMS

AQB – Air Quality Bureau
ARM - Administrative Rules of Montana
BACT – Best Available Control Technology
BMP - Best Management Practices
CAA – Clean Air Act of Montana
CFR - Code of Federal Regulations
CO - carbon monoxide
DEQ – Department of Environmental Quality
DNRC – Department of Natural Recourses and Conservation
EA – Environmental Assessment
EIS – Environmental Impact Statement
EPA - U.S. Environmental Protection Agency
FCAA Federal Clean Air Act
MAQP – Montana Air Quality Permit
MCA – Montana Code Annotated
MEPA – Montana Environmental Policy Act
MPDES - Montana Pollutant Discharge Elimination System
MTNHP - Montana Natural Heritage Program
NO_X - oxides of nitrogen
ONEOK- ONEOK Elk Creek Pipeline – Ekalaka I & Ekalaka II Pump Station
PM - particulate matter
PM_{10} - particulate matter with an aerodynamic diameter of 10 microns and less
$PM_{2.5}$ - particulate matter with an aerodynamic diameter of 2.5 microns and less
PPAA - Private Property Assessment Act
Program - Sage Grouse Habitat Conservation Program
PSD - Prevention of Significant Deterioration
SHPO - Montana State Historic Preservation Office
SOC - Species of Concern
SO_2 - sulfur dioxide
tpy – tons per year
U.S.C. - United States Code
VOC - volatile organic compound

Table III: Summary of Potential Impacts

Potential Impact	Affected Resource and EA Section Reference	Severity, Extent, Duration, Frequency, Uniqueness and Fragility (UF)	Probabil-ity Impact Would Occur	Cumulative Impacts	Proposed Measures to Reduce Impact (by applicant)	Signifi-cant (yes/no)
Soil Disturbance	I. TOPOGRAPHY, GEOLOGY, AND SOIL QUALITY, STABILITY AND MOISTURE.	**S**-low: Approximately 10 acres will be utilized for the new pump station **E**-low: No major disturbance **D/F**- Impacts from proposed action will continue throughout the duration of operation **U/F**- Not unique or particularly fragile	Certain	The additional pump station will utilize approximate-ly 10 acres of the site location. The current land is pasture and will be converted to an aggregate surface.	None proposed	No
Water Usage	II. WATER QUALITY, QUANTITY, AND DISTRIBUTION	**S**-low: No major disturbance **E**-low: No major disturbance **D/F**- Impacts from proposed action will continue throughout the duration of operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No

VOC, NOX, and CO emissions release as well as fugitive dust	III. AIR QUALITY	**S**-low: ONEOK conservatively identified all sources that will increase emissions **E**-low: Emissions increased for CO, NOx, VOC **D/F**- Impacts from proposed action will continue throughout the duration of the mining operation **U/F**- Not unique or particularly fragile	Certain	There would be a minor impact on this site from the proposed action as it is an existing facility but will add an additional pump station.	None proposed	No
Impacts to Vegetation	IV. VEGETATION COVER, QUANTITY, AND QUALITY	S-low: ONEOK conservatively identified all sources that will increase emissions E-low: Area is already an existing facility and pasture. D/F- Impacts from proposed action will continue throughout the duration of the operation U/F- Not	Unlikely	There would be a minor impact on this site from the proposed action as it is an existing facility but will add an additional pump station.	None proposed	No

		unique or particularly fragile				
Habitat Impacts	V. TERRESTRIAL, AVIAN, AND AQUATIC LIFE AND HABITATS	S-low: Species of concern were identified for the county and ONEOK facility location E-low: Two species of concern in the proposed area D/F- Impacts from proposed action will continue throughout the duration of the operation U/F- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility with few reports of these species of concern on the property.	None proposed	No

Potential Impact	Affected Resource and EA Section Reference	Severity, Extent, Duration, Frequency, Uniqueness	Probabil-ity Impact Would Occur	Cumulative Impacts	Proposed Measures to Reduce Impact (by applicant)	Signifi-cant (yes/no)

		and Fragility (UF)				
Environmental Resources	VI. UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation. **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility and has been previously disturbed	None proposed	No
Impacts to Historical and Archaeological Sites	VII. HISTORICAL AND ARCHAEOLOGICAL SITES	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation. **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility with no historical or archeological sites at this facility.	SHPO recommendations would be followed by ONEOK upon discovery of a historical site.	No

Sage Grouse	VIII. SAGE GROUSE EXECUTIVE ORDER	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation. **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility, and an approved letter was received from the Montana Sage Grouse Habitat Conservation Program 9/26/2018	None proposed	No
Noise and Visual Changes	IX. AESTHETICS	**S**-low: Noise would not be expected to increase slightly above current levels onsite, and a second pump station will be constructed **E**-low: Will be permanent once construction of the second pump station is completed **D/F**- Impacts from proposed action will continue throughout the duration of the operation. **U/F**- Not	Certain	There would be limited change to the impact on this site from the proposed action as it is an existing facility and the closest residents are three miles away and would not be affected by the slight increase in noise levels.	Changes are occurring inside an existing building.	No

		unique or particularly fragile				

Potential Impact	Affected Resource and EA Section Reference	Severity, Extent, Duration, Frequency, Uniqueness and Fragility (UF)	Probability Impact Would Occur	Cumulative Impacts	Proposed Measures to Reduce Impact (by applicant)	Signifi-cant (yes/no)
Air	X. DEMANDS ON ENVRONMENTAL RESOURCES OF LAND, WATER, AIR, OR ENERGY	**S**-low: Minor impacts from an air quality perspective as emissions are increasing. Energy usage will also increase with the addition of the second pump station **E**-low: Minor impacts from an air quality perspective as emissions are increasing. **D/F**- Impacts from proposed action will continue throughout the duration of the operation.	Certain	There would be limited change to the impact on this site from the proposed action as it is an existing facility, but emissions are increasing.	None proposed	No

		U/F- Not unique or particularly fragile				
Air	XI. IMPACTS ON ENVIRONMENTAL RESOURCES	**S**-low: Minor impacts from an air quality perspective as emissions are increasing. **E**-low: Minor impacts from an air quality perspective as emissions are increasing. **D/F**- Impacts from proposed action will continue throughout the duration of the operation. **U/F**- Not unique or particularly fragile	Certain	There would be limited change to the impact on this site from the proposed action as it is an existing facility, but emissions are increasing.	None proposed	No

Human Health	XII. HUMAN HEALTH AND SAFETY	**S**-low: Minor impacts from an air quality perspective as emissions are increasing. **E**-low: Minor impacts from an air quality perspective as emissions are increasing. **D/F**- Impacts from proposed action will continue throughout the duration of the operation. **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility, but emissions are increasing.	None proposed	No
Agricultural and Industrial Activities	XIII. INDUSTRIAL, COMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility and has been previously disturbed	None proposed	No

Potential Impact	Affected Resource and EA Section Reference	Severity, Extent, Duration, Frequency, Uniqueness and Fragility (UF)	Probabil-ity Impact Would Occur	Cumulative Impacts	Proposed Measures to Reduce Impact (by applicant)	Signifi-cant (yes/no)
Employment	XIV. QUANITITY AND DISTRIBUTION OF EMPLOYMENT	**S**-low: No new employment opportunities **E**-low: No new employment opportunities **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No
Taxes	XV. LOCAL AND STATE TAX BASE AND TAX REVENUES	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No

Government Sources	XVI. DEMAND FOR GOVERNMENT SERVICES	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No
City Planning	XVII. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No
Potential Impact	**Affected Resource and EA Section Reference**	**Severity, Extent, Duration, Frequency, Uniqueness and Fragility (UF)**	**Probabil-ity Impact Would Occur**	**Cumulative Impacts**	**Proposed Measures to Reduce Impact (by applicant)**	**Signifi-cant (yes/no)**

Recreation	XVIII.ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVIITES	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No
Population and Housing	XIX. DENSITY AND DISTRIBUTION OF POPULATION AD HOUSING	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be no impacts due to no new jobs being created and therefore not increasing the population density or the need for housing.	None proposed	No

Societal	XX. SOCIAL STRUCTURE AND MORES	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No
Culture	XXI. CULTURAL UNIQUENESS AND DIVERSITY	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No

Potential Impact	**Affected Resource and EA Section Reference**	**Severity, Extent, Duration, Frequency, Uniqueness**	**Probabil-ity Impact Would Occur**	**Cumulative Impacts**	**Proposed Measures to Reduce Impact (by applicant)**	**Signifi-cant (yes/no)**

		and Fragility (UF)				
Property	XXII. PRIVATE PROPERTY IMPACTS	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No
Other Impacts	XXIII. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES	**S**-low: No major disturbances **E**-low: No major disturbances **D/F**- Impacts from proposed action will continue throughout the duration of the operation **U/F**- Not unique or particularly fragile	Unlikely	There would be limited change to the impact on this site from the proposed action as it is an existing facility.	None proposed	No

Definitions are quantified as follows:

• Short-term: Short-term impacts are defined as those impacts that would not last longer than the proposed operation of the site.

• Long-term: Long-term impacts are defined as impacts that would remain or occur following shutdown of the proposed facility.

1. Severity describes the density at which the impact may occur. Levels used are low, medium, high.

    The severity of an impact 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.

2. Extent describes the land area over which the impact may occur. Levels used are small, medium, and large.

3. Duration describes the time period over which the impact may occur. Descriptors used are discrete time increments (day, month, year, and season).

4. Frequency describes how often the impact may occur.

5. Probability describes how likely it is that the impact may occur without mitigation. Levels used are: impossible, unlikely, possible, probable, certain