Date of Mailing: October 2, 2020

Name of Applicant: Bridger Pipeline, LLC

Source: Sandstone Station Crude Oil Storage Facility

Dear Mr. Dundas:

Montana Air Quality Permit #5242-00 is deemed final as of June 2, 2020, by the Department of Environmental Quality (Department). This permit is for two floating roof crude oil storage tanks. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

Troy M. Burrows
Air Quality Scientist
Air Quality Bureau
(406) 444-1452

JM:TMB
Enclosures

MONTANA AIR QUALITY PERMIT

Issued To:	MAQP: #5242-00
Bridger Pipeline, LLC	Application Complete: 3/23/2020
Sandstone Station	Preliminary Determination Issued: 4/10/2020
PO Drawer 2360	Department's Decision Issued: 5/15/2020
Casper, WY 82601	Permit Final: 6/2/2020

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Bridger Pipeline, LLC (Bridger), 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

Bridger owns and operates an existing 216,000-barrel (bbl) internal floating roof (IFR) crude oil storage tank (Tank 1) and proposes to install an additional 160,000-bbl IFR crude oil storage tank (Tank 2) at an oil storage station called the Sandstone Station.

B. Plant Location

The Sandstone Station is located approximately nine miles west of Baker, Montana, on the north side on US Highway 12. The legal description of the facility site is the SE ¼ of the NE ¼ of Section 4, Township 7 North, Range 58 East, in Fallon County, Montana.

Section II: Conditions and Limitations

A. Emission Limitations

1. Tank 1 shall utilize internal floating roof design (ARM 17.8.752).

2. Tank 2 shall utilize internal floating roof design (ARM 17.8.752).

3. Bridger 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).

4. Bridger 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).

5. Bridger 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).

6. Bridger shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 60, Subpart Kb (ARM 17.8.340 and 40 CFR 60, Subpart Kb).

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 (Department) may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

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

D. Notification

Bridger shall provide the Department with written notification of the actual start-up date of Tank 2 postmarked within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – Bridger shall allow the Department'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 Bridger fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Bridger 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 Department's decision may request, within 15 days after the Department 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 Department'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 Department'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 Department's decision on the application is final 16 days after the Department'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 Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Bridger 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
Bridger Pipeline, LLC – Sandstone Station
MAQP #5242-00

I. Introduction/Process Description

Bridger Pipeline, LLC (Bridger) owns and operates a crude oil tank storage facility referred to as the Sandstone Station. The Sandstone Station is located 9 miles west of Baker, Montana, in the SE ¼ of the NE ¼ of Section 4, Township 7 N, Range 58 E, in Fallon County, Montana.

A. Permitted Equipment

1. A 216,000-barrel (bbl) Internal Floating Roof (IFR) storage tank
2. A 160,000-bbl IFR storage tank

B. Source Description

Sandstone Station is a crude oil storage facility supporting the Bridger Pipeline.

C. Response to Public Comments

Person/Group Commenting	Permit Reference	Comment	Department Response
Bridger Pipeline	II.A.1 and II.A.2	Bridger questions the necessity and purpose of the 12-month rolling throughput limitations and requests their removal.	The 12-month rolling throughput limitations were based on the information provided in the application for determining and defining the maximum potential emission levels from the tanks. Because there is not a practical measurement methodology for monitoring the actual emissions from these storage tanks, the Department established a design standard of internal floating roof in conjunction with throughput limitations for the application of BACT. Considering that the estimated maximum throughput levels were a highly conservative estimate of maximum expected production, and in consideration of other recently permitted similar sources, the12-month rolling throughput limitation and corresponding recordkeeping conditions were removed.

D. Additional Information

Bridger has selected the Floating Roof tank design utilizing internal floating roofs as BACT for both tanks. This storage method is required by 40 CFR 60, Subpart Kb for tanks meeting specific capacity and pressure criteria. Therefore, IFR design is considered suitable BACT for these tanks.

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 (Department). Upon request, the Department 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 Department, 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 Department.

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

   Bridger 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 Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department 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}

Bridger 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, Bridger 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 17.8.322 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 considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.

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

   b. 40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Storage Vessels). This regulation applies to storage vessels with a capacity of ~75 cubic meters (m^3), which is approximately 471 barrels (bbl), that are used to store Volatile Organic Liquids (VOL) for which construction, reconstruction or modification commenced after July 23, 1984. Storage vessels are exempt if they have a capacity greater than 151 m^3 (approximately 950 bbl) and store liquids with a maximum true vapor pressure less than 3.5 kilopascals (kPa). This facility contains two vessels for storing VOLs (petroleum) constructed after July 23, 1984 and have a maximum true vapor pressure greater than 3.5 kPa. Therefore, both storage vessels are subject to 40 CFR 60, Subpart Kb.

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 Department. Bridger 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 Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. 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 Department 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. Bridger 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. Bridger 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. Bridger submitted an affidavit of publication of public notice for the 2/28/2020 issue of the Fallon County Times, a newspaper of general circulation in the Town of Baker in Fallon County, Montana, 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 Department 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 Department 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 Bridger 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 Department'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 17.8.762 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.

12. 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).

13. 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.

14. 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 Department.

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 Department 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 #5242-00 for Bridger, the following conclusions were made:

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

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

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

d. This facility is subject to a current NSPS (40 CFR 60, Subparts A and Kb).

e. This facility is not subject to any current NESHAP.

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

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

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

III. BACT Determination

A BACT determination is required for each new or modified source. Bridger 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 Bridger in permit application #MAQP 5242-00, addressing some available methods of controlling VOC emissions from the crude oil storage tanks. The Department reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determination.

A number of potential control options for storage tanks were identified by reviewing information from the following sources:

- Technologies defined in 40 CFR 60, Subpart Kb;
- Technologies applied to similar types of sources in practice (as determined by the RBLC and other sources of information); and

- Technologies that could reasonably be applied to this source type via technology transfer.

Technologies identified as a result of this search can be divided into two general categories: 1) Design and/or work practice standards and 2) Add-on controls. Based on these categories, the technologies assessed for BACT include:

- Fixed roof tanks;
- Fixed roof with submerged fill;
- Fixed roof tanks equipped with conservation (pressure/vacuum) vents;
- Floating roof tanks (internal or external);
- Fixed roof tanks equipped with vapor collection and control equipment.

Floating Roof Tanks: Floating roof tanks are commonly used to control emissions from tanks that store light liquids, such as petroleum products. In fact, this storage method is required by 40 CFR 60, Subpart Kb for tanks holding such liquids. Installation of floating roof tanks at the facility is technically feasible, and the existing 216,000 bbl tank at the facility is already a floating roof tank. Floating roof tank design can achieve the maximum degree of emissions reduction for this type of source; therefore, no further analysis is required. Bridger proposed, and the Department concurs, that floating roof design tanks represents BACT for Tank 1 and Tank 2 at the Sandstone Station. Because there is not a practical measurement methodology for monitoring the actual emissions from these storage tanks, the Department has established a design standard of internal floating roof for the application of BACT.

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

IV. Emission Inventory

VOC and HAPs emissions were calculated using Tanks ESP. Documentation of the program inputs and outputs were included in the permit application and are available at the Department.

Emitting Unit	PM(fil)	PM_{10}(fil)	$PM_{2.5}$(fil)	PM(cond)	SO_X	NO_X	VOC	CO	HAPs
Tank 1	--	--	--	--	--	--	22.40	--	0.70
Tank 2	--	--	--	--	--	--	4.70	--	0.15
Fugitive Leaks (Valves, fittings, components)	--	--	--	--	--	--	1.06	--	0.03
Fugitive Road Dust	0.07	0.02	0.002	--	--	--	--	--	--
Totals	0.07	0.02	0.002	0.00	0.00	0.00	28.16	0.00	0.88

- Total PM_{10} emissions are 0.02 TPY, determined by the sum of PM10(fil) + PM(cond)
- Total $PM_{2.5}$ emissions are 0.002 TPY, determined by the sum of PM2.5(fil) + PM(cond)
- Total Particulate Matter emissions are 0.07 TPY, determined by the sum of PM(fil) + PM(cond)

****** CO = carbon monoxide
(fil) = filterable
HAPs = hazardous air pollutants
hp = horsepower
lb = pound
N/A = not applicable
ND = no data available
NO_X = oxides of nitrogen
PM = particulate matter
PM_{10} = particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$ = particulate matter with an aerodynamic diameter of 2.5 microns or less
SO_2 = sulfur dioxide
TPH = tons per hour
TPY = tons per year
VOC = volatile organic compounds
yr = year

Inventory reflects maximum allowable emissions for all pollutants based on maximum production and year-round operation (8,760 hours). The facility did not take limits on production or hours of operation.

TanksESP Output Data: Existing 216,000 bbl IFR Tank (Tank 1)

Sample Calculation of Estimated Emissions - Floating-Roof Tanks page 1

The emissions estimates calculated below are based on EPA's AP-42 Chapter 7.1 (Post 2018) emission factors and equations.

Company: **Bridger Pipeline LLC - Sandstone Terminal**
Location: **Miles City, Montana**
Calculations for Tank No.: **Tank 1, RVP = 10**
Emission estimates per EPA's AP-42 Chapter 7.1 (Post 2018), for: **annual**

Meteorological Data:

Avg Atmos Pressure, Pa:	13.37	psia	
Avg Ambient Temp, Taa:	45.8165753	degrees F	
Avg Daily Solar Insolation, I:	1305.2411	Btu / ft^2 day	shell color: **white paint**
Avg Wind Speed, V:	10.309589	mph	shell condition: **New**
			shell alpha: **0.17**

Tank Data:

Tank Type:	IFRT		roof color: **white paint**
Average alpha:	0.17		roof condition: **New**
Tank Diameter, D:	180	ft	roof alpha: **0.17**
Rim Seal Type:	Mechanical-Shoe Primary with NO Secondary		

$Lr = [(Kra + Krb V^n) D] \times [P^* Mv Kc]$ per AP-42 equation 2-3
$Lr = [Fr] \times [P^* Mv Kc]$ defining a Rim Seal Emission Factor, Fr
$Fr = [(Kra + Krb V^n) D]$

Rim Seal Emission Factor (Fr): 1,044 lb-mol/yr

$Ld = [(Kd Sd) D^2] \times [P^* Mv Kc]$ per AP-42 equation 2-18
$Ld = [Fd] \times [P^* Mv Kc]$ defining a Deck Seam Emission Factor, Fd
$Fd = [(Kd Sd) D^2]$

Deck Seam Emission Factor (Fd): 0 lb-mol/yr

$Lfi = [Ffi] \times [P^* Mv Kc]$ per AP-42 equation 2-13
$Ffi = Nfi [Kfi]$ per AP-42 equation 2-14
$Kfi = [Kfai + Kfbi (Kv V)^{mi}]$ per AP-42 equation 2-15

Guidepole Emission Factor (Ffgp):	56	lb-mol/yr	
Deck Fittings Emission Factor (Ffi-n):	2,596	lb-mol/yr	(all deck fittings other than the guidepole)
Total Emission Factors (Fr + Fd + Ff):	3,696	lb-mol/yr	
Number of columns, Nc:	27		
Effective column diameter, Fc:	1	feet	

Service Data:

Service (stored liquid):	Crude Oil RVP_X		
Product Factor, K_C:	0.4		
Reid VaporPressure:	10	psi	(if specified)
ASTM Distillation Slope:	0		(if specified)
Molecular Weight, M_v:	66	lb/lb-mol	given
Liquid Bulk Temp, Tb:	46.5	degrees F	
Constant Temp Tank?	NO		tank must be insulated for temperature to be constant
Liquid Bulk Temp Basis?	calculated from ambient, per AP-42 equation 1-31, 2-8, 2-9, 2-11, or 2-12		
Liquid Surface Temp, Tla:	47.3	degrees F	per AP-42 equation 2-5, 2-6, 2-7, or 2-10
True Vapor Pressure, Pva:	6.009	psia	per AP-42 equation 1-24, 1-25, 1-26

$P^* = [Pva/Pa] / [1 + (1 - Pva/Pa)^{0.5}]^2$

Vapor Pressure Function, P*:	0.1481	dimensionless	per AP-42 equation 2-4
Liquid density, Wl:	7.1	lb/gal	
Clingage factor, Cs:	0.0060	bbl per 1000 sq.ft.	

Operational Data:

Throughput, Q: 118,625,000 bbl per year

Emissions Estimate for: annual
Days This Period: 365

Standing Storage Loss (Lr + Ld + Lf) = [Fr + Fd + Ff] × [P* Mv Kc] per AP-42 equations 2-2, 2-3, 2-13, 2-18 Star
Standing Storage Loss: 14,448.82 lb per year
Withdrawal Loss (Lwd) = [(0.943 Q Cs Wl)/D] × [1 + (Nc Fc)/D] per AP-42 equation 2-19
Withdrawal Loss: 30,445.48 lb per year
Total Emissions: 44,894.30 lb per year per AP-42 equation 2-1
22.4 tons per year

Sample Calculation of Estimated Emissions - Floating-Roof Tanks page 1

The emissions estimates calculated below are based on EPA's AP-42 Chapter 7.1 (Post 2018) emission factors and equations.

Company: **Bridger Pipeline LLC - Sandstone Terminal**
Location: **Miles City, Montana**
Calculations for Tank No.: **Tank 2, RVP = 8**
Emission estimates per EPA's AP-42 Chapter 7.1 (Post 2018), for: **annual**

Meteorological Data:

Avg Atmos Pressure, Pa:	13.37	psia		
Avg Ambient Temp, Taa:	45.8165753	degrees F		
Avg Daily Solar Insolation, I:	1305.2411	Btu / ft^2 day	shell color:	**white paint**
Avg Wind Speed, V:	10.309589	mph	shell condition:	**New**
			shell alpha:	**0.17**

Tank Data:

Tank Type:	IFRT		roof color:	**white paint**
Average alpha:	0.17		roof condition:	**New**
Tank Diameter, D:	155	ft	roof alpha:	**0.17**
Rim Seal Type:	Mechanical-Shoe Primary with Rim-Mounted Secondary			

Lr = [(Kra + Krb V^n) D] × [P* Mv Kc] per AP-42 equation 2-3
Lr = [Fr] × [P* Mv Kc] defining a Rim Seal Emission Factor, Fr
Fr = [(Kra + Krb V^n) D]

Rim Seal Emission Factor (Fr): **93** lb-mol/yr

Ld = [(Kd Sd) D^2] × [P* Mv Kc] per AP-42 equation 2-18
Ld = [Fd] × [P* Mv Kc] defining a Deck Seam Emission Factor, Fd
Fd = [(Kd Sd) D^2]

Deck Seam Emission Factor (Fd): **0** lb-mol/yr

Lfi = [Ffi] × [P* Mv Kc] per AP-42 equation 2-13
Ffi = Nfi [Kfi] per AP-42 equation 2-14
Kfi = [Kfai + Kfbi (Kv V)^m] per AP-42 equation 2-15

Guidepole Emission Factor (Ffgp):	56	lb-mol/yr	
Deck Fittings Emission Factor (Ffi-n):	1,681	lb-mol/yr	(all deck fittings other than the guidepole)
Total Emission Factors (Fr + Fd + Ff):	1,830	lb-mol/yr	
Number of columns, Nc:	32		
Effective column diameter, Fc:	1	feet	

Service Data:

Service (stored liquid):	Crude Oil RVP_X		
Product Factor, K_C:	0.4		
Reid VaporPressure:	8	psi	(if specified)
ASTM Distillation Slope:	0		(if specified)
Molecular Weight, M_V:	50	lb/lb-mol	given
Liquid Bulk Temp, Tb:	46.5	degrees F	
Constant Temp Tank?	NO		tank must be insulated for temperature to be constant
Liquid Bulk Temp Basis?	calculated from ambient, per AP-42 equation 1-31, 2-8, 2-9, 2-11, or 2-12		
Liquid Surface Temp, Tla:	47.3	degrees F	per AP-42 equation 2-5, 2-6, 2-7, or 2-10
True Vapor Pressure, Pva:	4.364	psia	per AP-42 equation 1-24, 1-25, 1-26

P* = [Pva/Pa] / [1 + (1 - Pva/Pa)$^{0.5}$]^2

Vapor Pressure Function, P*:	0.0985	dimensionless	per AP-42 equation 2-4
Liquid density, Wl:	7.1	lb/gal	
Clingage factor, Cs:	0.0060	bbl per 1000 sq.ft.	

Operational Data:

Throughput, Q: **18,250,000** bbl per year

Emissions Estimate for: **annual**
Days This Period: **365**

Standing Storage Loss (Lr + Ld + Lf) = [Fr + Fd + Ff] × [P* Mv Kc] per AP-42 equations 2-2, 2-3, 2-13,
Standing Storage Loss: **3,603.35** lb per year 2-18 Star
Withdrawal Loss (Lwd) = [(0.943 Q Cs Wl)/D] × [1 + (Nc Fc)/D] per AP-42 equation 2-19
Withdrawal Loss: **5,706.40** lb per year
Total Emissions: **9,309.75** lb per year per AP-42 equation 2-1
4.7 tons per year

Bridger Pipeline, LLC
Fallon County
Sandstone Station
EU04: Fugitive Emissions - Vehicle Traffic

These emissions are fugitive emissions which result from vehicle traffic inside the plant boundaries.
All roads at this facility are assumed to be unpaved.

For Unpaved Roads
Using: Equation (1a) of AP-42 Chapter 13.2.2 including precipitation mitigation

$E = k * (s/12)^a * (W/3)^b$

E = emission factor, (lb/vmt)
k = particle size multiplier (dimensionless) , TSP = 4.9, PM_{10} = 1.5, $PM_{2.5}$ = 0.15
a = particle size multiplier (dimensionless), TSP = 0.7, PM_{10} = 0.9, $PM_{2.5}$ = 0.9
b = particle size multiplier (dimensionless), TSP = 0.45, PM_{10} = 0.45, $PM_{2.5}$ = 0.45
s = silt content of road surface material (%)
W = mean vehicle weight, (ton)
p = number of days of precipitation

Plant Road silt content averaging[1]

Industry	Road Use	No. Samples	Silt Content % (Mean)	Weighted Sums
Copper smelting	Plant Road	3	17	51
Iron and steel production	Plant Road	135	6	810
Sand and gravel processing	Plant Road	3	4.8	14
Stone quarrying and processing	Plant Road	10	10	100
Western surface coal mining	Plant Road	2	5.1	10
	totals:	153	---	985
	Weighted Average:			6.4

Emission Factor Determination

Source	Particle Size Multiplier			Surface Silt Content	Empirical Constant		Mean Vehicle Weight	Empirical Constant	# of days >0.01 in. Precip.[2]	Emission Factors		
	PM k	PM_{10} k	$PM_{2.5}$ k	% s	PM a	PM_{10}, $PM_{2.5}$ a	ton W	(All) b	p*	PM (lb/VMT)	PM_{10} (lb/VMT)	$PM_{2.5}$ (lb/VMT)
Maintenance Vehicles	4.90	1.50	0.15	6.4	0.7	0.9	4.25	0.45	83	2.9	0.8	0.08

Source	Trips Per Day[3]	Trips Per Year	Distance per Trip[4] (miles)	VMT	Control Efficiency[5]	Emission Rates					
						PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Maintenance Vehicles	1	365	0.13	47.45	0%	0.38	0.10	0.010	0.07	0.02	0.002

Notes
General Note: Haul road emissions based on fugitive emissions from regular work truck travel (approx. 4.25 ton trucks - i.e., Ford F250).
VMTs on personal vehicle travel within the Sandstone Station property boundary for the purpose of operation and maintenance.
The updated emissions calculations are equivalent to the original application.
1) Data from AP-42 Table 13.2.2-1. No Industry listed represents the Sandstone Station, therefor a weighted average has been determined from all plant roads listed in the table.
2) Mean Precipitation days >0.01in from https://www.currentresults.com/Weather/Montana/average-yearly-precipitation.php for Glendive, MT.
3) Estimate average number of trips.
4) Distance traveled per trip measured via Google Earth aerial imagery. Accounts for travel throughout property boundary.
5) No routine road watering is expected due to low traffic counts expected

V. Existing Air Quality

The air quality in the area is classified as "Better then National Standards" or unclassifiable/attainment of the NAAQS for criteria pollutants (40 CFR 81.327). There are no attainment areas within a reasonable distance of the site.

VI. Ambient Air Impact Analysis

The Department determined, based on NRIS and SHPO reports, existing facilities, and current air quality data that the impacts from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

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

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

VIII. VIII. Environmental Assessment

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

DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy & Mining Division
Air Quality Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Bridger Pipeline, LLC
Sandstone Station
PO Drawer 2360
Casper, WY 82601

Montana Air Quality Permit number (MAQP): 5242-00

EA Draft: 3/27/2020
EA Final: 5/15/2020
Permit Final: 6/02/2020

1. *Legal Description of Site:* Bridger Pipeline, LLC (Bridger) owns and operates a Crude Oil Tank Storage facility. The facility is located 9 miles west of Baker, Montana, in the SE ¼ of the NE ¼ of Section 4, Township 7 N, Range 58 E, in Fallon County, Montana, and is known as the Sandstone Station.

2. *Description of Project:* Bridger seeks the permitting of an existing internal floating roof (IFR) tank and the approval for the construction of a new IFR tank. The existing tank did not have sufficient emissions to require a MAQP prior to this change to the facility. However, the addition of a second tank and an increase in throughput at the facility results in a potential-to-emit (PTE) of Volatile Organic Compounds (VOCs) that exceed the 25 ton per year (tpy) permitting threshold pursuant to Administrative Rules of Montana (ARM) 17.8.743(1)(e), necessitating a MAQP.

3. *Objectives of Project:* To provide a storage and transfer facility for crude oil near Baker, Montana.

4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no-action" alternative. This would deny Bridger the authority to install and operate the storage and transfer facility in compliance with Montana air quality regulations. However, Bridger has complied with the requirements for applying for an MAQP for the facility. Therefore, the "no-action" alternative was eliminated from further consideration. Other alternatives considered were discussed in the BACT analysis, Section III, in the permit.

5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #5242-00.

6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. *SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS*: The following comments have been prepared by the Department.

   A. *Terrestrial and Aquatic Life and Habitats*

   As required under the Sage Grouse Executive Order, the proposed project information was reviewed and deemed not subject to review by the Montana Sage Grouse Oversight Team (MSGOT). Reference Section 7.H for details. The proposed project represents a small level of air emissions by industrial standards. Ground disturbance would occur to install a concrete pad upon which the new storage tank would be installed; however, the disturbance would occur on private property at the existing Bridger facility. No more than minor impacts to terrestrial and aquatic life and habitats would be expected.

   B. *Water Quality, Quantity and Distribution*

   The proposed project would not require any change to water quantity or distribution and is therefore not expected to have any impact on water quality.

   C. *Geology and Soil Quality, Stability and Moisture*

   Ground disturbance would occur to install a concrete pad upon which the new storage tank would be installed; however, the disturbance would occur on private property at the existing Bridger facility. No more than minor impacts to geology and soil quality, quantity, and moisture would be expected.

   D. *Vegetation Cover, Quantity, and Quality*

   Ground disturbance would occur to install a concrete pad upon which the new storage tank would be installed; however, the disturbance would occur on private property at the existing Bridger facility. No more than minor impacts to vegetation cover, quantity, and quality would be expected.

   E. *Aesthetics*

   The proposed installation location for the storage tank would be inside the existing property line and would be visible. However, Bridger Pipeline Sandstone Station is an existing facility which has been operating for years. The size and nature of the project would have minor impacts on the aesthetics.

   F. *Air Quality*

   The proposed project represents a small level of air emissions by industrial standards. No more than minor impacts to air quality would be expected.

NRIS was consulted on this permit, and a few species were addressed in that report. These included the Bobolink (buffered by at least 150 meters from the site), non-cave bat roosts (buffered by at least 4500 meters from the source location), and Greater Sage Grouse. As required under the Sage Grouse Executive Order, the proposed project information was reviewed and deemed not required to submit this application to the Sage Grouse Program. Reference Section 7.H for details.

G. *Sage Grouse Executive Order*

General Habitat Area

The Department recognizes that the site location is within a Greater Sage Grouse General Habitat Area as defined by Executive Order No. 12-2015. The project site is approximately 3 miles inside the Greater Sage Grouse General Habitat boundary. However, as this project is an additional tank located within the boundary of an existing facility that was operational prior to the Executive Order, it is not required to be subject to the Sage Grouse program per paragraph 23 of the Executive Order.

H. *Demands on Environmental Resource of Water, Air and Energy*

The proposed project would not have impacts on the demand for water. The storage tanks would be a small source of air emissions by industrial standards and would be required by MAQP #5242-00 to be operated in a manner which minimizes negative impacts to air resources. No more than a minor impact to these environmental resources would be expected.

I. *Historical and Archaeological Sites*

According to the State Historic Preservation Office (SHPO), there has been one previously recorded site within the designated search locale (SE ¼ of the NE ¼ of Section 4, Township 7 N, Range 58 E, in Fallon County, Montana). This is for some buried phone lines that are off the property site. 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 to be altered and are over fifty years old, SHPO recommends that they be recorded and a determination of their eligibility be made. As long as there will be no disturbance or alteration to structures over fifty years of age, there is a low likelihood that cultural properties would be impacted.

J. *Cumulative and Secondary Impacts*

No more than minor impacts to the individual physical and biological considerations above would be expected. No more than minor cumulative and secondary impacts would be expected as a result of issuing MAQP #5242-00.

8. *SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:* The following comments have been prepared by the Department.

A. *Social Structures and Mores*

The project would be located at an existing industrial facility. No impacts to social structures or mores would be expected.

B. *Cultural Uniqueness and Diversity*

The project would be located at an existing industrial facility. No impacts to cultural uniqueness and diversity would be expected.

C. *Local and State Tax Base and Tax Revenue*

There would be no more than minor impacts to local and state tax base and revenue as a result of the proposed project.

D. *Agricultural or Industrial Production*

There would be no impacts to agricultural or industrial production as a result of this project.

E. *Human Health*

The proposed project would be a small source of air emissions by industrial standards. Impacts to human health would be minor.

F. *Access to and Quality of Recreational and Wilderness Activities*

There may be minor impacts to the access to and quality of recreational and wilderness activities as a result of this project.

G. *Quantity and Distribution of Employment*

There would be no impacts to quantity and distribution of employment as a result of this project.

H. *Distribution of Population*

There would be no impacts to the distribution of population as a result of this project.

I. *Demands for Government Services*

Issuance of MAQP #5242-00 would require some government services to review the application and draft the permit. In addition, government services would be required to conduct periodic inspections for verifying compliance with the MAQP. These demands would not be expected to have more than a minor impact.

J. *Industrial and Commercial Activity*

The proposed project would not be expected to have more than a minor impact on industrial and commercial activity. There would be construction activities associated with the installation of the new storage tank; however, would not be expected to have more than a minor impact on industrial and commercial activity.

K. *Locally Adopted Environmental Plans and Goals*

The Department is not aware of any locally adopted environmental plans and goals which would be affected by MAQP #5242-00.

L. *Cumulative and Secondary Impacts*

The Department found no more than minor impacts to the economic and social considerations above. No more than minor cumulative and secondary impacts would be expected.

Recommendation: No Environmental Impact Statement (EIS) is required.

The current permitting action is for the construction and operation of an additional crude oil storage tank at Bridger's Sandstone Station. MAQP #5242-00 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program – Montana Sage Grouse Conservation Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Quality Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Troy M. Burrows
Date: March 30, 2020