



PRELIMINARY DETERMINATION
ON PERMIT APPLICATION

Date of Mailing: December 7, 2015

Name of Applicant: Exxon Mobil Corporation

Source: Helena Bulk Terminal

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 2829-04.

Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Resources Management Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by December 22, 2015. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,

A handwritten signature in cursive script that reads "Julie A. Merkel".

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

A handwritten signature in cursive script that reads "Shawn Juers".

Shawn Juers
Environmental Engineer
Air Quality Bureau
(406) 444-2049

JM:SJ

Enclosures

MONTANA AIR QUALITY PERMIT

Issued To: Exxon Mobil Corporation MAQP #2829-04
c/o Exxon Mobil Helena Terminal Application Complete: 11/20/2015
3120 Highway 12 Preliminary Determination Issued: 12/7/15
East Helena, Montana 59601 Department's Decision Issued:
Permit Final:
AFS #: 049-0010

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

SECTION I: Permitted Facilities

A. Plant Location

The facility is located at 3120 Highway 12 East, near the eastern boundary of the Helena city limit. The legal description of the facility property is the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 28, Township 10 North, Range 3 West, in Lewis and Clark County, Montana.

B. Current Permit Action

On October 20, 2015, the Department of Environmental Quality – Air Quality Bureau (Department) received from Exxon Mobil Corporation an application for installation of a Soil Vapor Extraction and Air Sparge system for remediation purposes. On November 20, 2015, the Department received additional information requested regarding Best Available Control Technology review. Based on on-site testing and the proposed design and operation, the Potential to Emit will be no more than 8.5 tons per year of volatile organic compounds (VOC). The current permit action adds this system to the permitted equipment list in Section I.A of the permit analysis and provides the required Montana Environmental Policy Act review. No new permit conditions or limitations are included or deemed necessary. Estimated emissions from the remediation project will be required to be reported in the annual emissions inventory.

SECTION II: Product Loading Rack and Vapor Recovery System

A. Conditions and Limitations

1. Exxon Mobil shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart XX, *Standards of Performance for Bulk Gasoline Terminals* (ARM 17.8.340 and 40 CFR 60, Subpart XX).
2. Exxon Mobil's loading rack shall be equipped with a vapor recovery system (VRU) designed to collect the organic compound liquids or vapors displaced from gasoline and distillate tank trucks during product loading (ARM 17.8.749).

3. The vapor recovery system shall be designed to prevent any Volatile Organic Compound (VOC) vapors collected at one loading rack from passing to another loading rack (ARM 17.8.749).
4. The loading of liquid product into tank trucks shall be limited to vapor-tight gasoline and distillate tank trucks using the following procedures (ARM 17.8.749):
 - a. Exxon Mobil shall obtain the vapor tightness documentation described in the test methods and procedures contained in Attachment 2 to this permit or Department of Transportation (DOT) certification methods for each gasoline and distillate tank truck that is to be loaded at the permitted loading rack;
 - b. Exxon Mobil shall require the tank identification number to be recorded as each gasoline and distillate tank truck is loaded at the terminal; and
 - c. Exxon Mobil shall take the necessary steps to ensure that the non-vapor-tight gasoline and distillate tank truck will not be reloaded at the permitted loading rack until vapor tightness documentation for that tank truck is obtained.
5. Exxon Mobil shall act to ensure that loading of gasoline and distillate tank trucks at the permitted loading rack are made only into tank trucks equipped with vapor recovery equipment that is compatible with the terminal's vapor recovery system (ARM 17.8.749).
6. Exxon Mobil shall act to ensure that the terminal's and the tank truck's vapor recovery systems are connected during each loading of a gasoline and distillate tank truck at the permitted loading rack (ARM 17.8.749).
7. The vapor recovery and liquid loading equipment shall be designed and operated to prevent gauge pressure in the gasoline and distillate tank truck from exceeding 4,500 Pascals (Pa) (450 millimeters (mm) of water) during product loading. This level shall not be exceeded when measured by the procedures specified in the test methods and procedures contained in Attachment 2 to this permit (ARM 17.8.749).
8. No pressure-vacuum vent in the permitted terminal's vapor recovery system shall begin to open at a system pressure less than 4,500 Pa (450 mm of water) (ARM 17.8.749).
9. The total organic compound emissions to the atmosphere from the vapor recovery system due to loading liquid product into gasoline tank trucks shall not exceed 35 milligrams per liter (mg/L) of gasoline loaded (ARM 17.8.749).
10. Loading of gasoline and distillate tank trucks shall be restricted to the use of submerged fill (ARM 17.8.749).
11. Hydrocarbons adsorbed in the activated carbon shall be recovered and returned to the appropriate product storage tank (ARM 17.8.749).

12. Storage tanks annual throughputs shall be limited to the amounts listed in the following table (ARM 17.8.749):

Tank Serial # (prev ID)	Product	Permitted Annual Throughput (million gallons per year) (MMgal/yr)
301	Gasoline	170
302	Gasoline	170
303	Distillate	100
304	Distillate	100
305	Denatured Ethanol	170
306 (302A)	Gasoline	170
008	Additive	De minimis
009	Additive	De minimis
UST (10)	Interface (=Transmix)	0.25
UST (11)	Interface (=Transmix)	0.25
12	Additive	De minimis
13	Heating Oil	De minimis
UST (14)	Wastewater	De minimis
15	Additive	De minimis

13. Product loading shall be limited to the amounts listed in the following table (ARM 17.8.749).

Product Loaded	Permitted Annual Throughput (MMgal/yr)
Gasoline	170
Jet	100
Diesel	100
Interface	0.50
Additives, Wastewater & Heating Oil	De minimis – no limit

B. Testing Requirements

1. The VRU shall be tested for total organic compounds on an every 4-years basis to demonstrate compliance with the emission limitations contained in Section II.A.9 (ARM 17.8.105).
2. Process rates during testing must be at specific conditions that are representative of maximum operating capacity or maximum permitted operating capacity, unless otherwise agreed upon by the Department and Exxon Mobil (ARM 17.8.106).
3. Exxon Mobil shall use the test methods and procedures contained in Attachments 2 and 3 to this permit to determine compliance with Sections II.A.7 and II.A.9 of this permit (ARM 17.8.105)
4. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
5. The Department may require further testing (ARM 17.8.105).

C. Inspection Requirements

Each calendar month, the vapor recovery system, the vapor control system, and each loading rack that loads gasoline and distillate tank trucks shall be inspected for total organic compounds liquid or vapor leaks during product transfer operations. For purposes of this requirement, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected (ARM 17.8.105 and ARM 17.8.749).

D. Recordkeeping Requirements

1. The tank truck vapor tightness documentation required in Section II.A.4 of this permit shall be kept on file at the terminal, in a permanent form, and be made available for inspection and shall be updated at least once per year to reflect current test results as determined by Environmental Protection Agency (EPA) Method 27 (ARM 17.8.749).
2. A record of each monthly leak inspection, required under Section II.C of this permit, shall be kept on file at the terminal. Inspection records shall include, at a minimum, the following information (ARM 17.8.749):
 - a. Date of inspection;
 - b. Findings (may indicate no leaks discovered or the location, nature, and severity of each leak);
 - c. Leak determination method;
 - d. Corrective action (date each leak repaired and reasons for any repair interval in excess of 15 calendar days); and
 - e. Inspector name and signature.
3. Exxon Mobil shall maintain daily records of gasoline, distillate, and interface throughput. This shall include all products shipped and received at the loading racks (ARM 17.8.749).
4. All records compiled in accordance with this permit must be maintained by Exxon Mobil as a permanent business record for at least 5 years following the date of the measurement, must be available for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

SECTION III: Product Storage Tanks

A. Limitations and Conditions

1. Exxon Mobil shall not store petroleum liquid with a maximum true vapor pressure greater than 10.5 kilo Pascals (kPa) (1.5 pounds per square inch atmospheric (psia)) in the permitted petroleum liquid storage tank unless (ARM 17.8.749):

- a. The tank is equipped with an internal floating roof equipped with a closure seal or seals to close the space between the roof edge and tank wall;
 - b. The tank is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and
 - c. All openings, except stub drains, are equipped with covers, lids, or seals such that:
 - i. The cover, lid, or seal is in the closed position at all times, except when in actual use;
 - ii. The automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports; and
 - iii. The rim vents are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
2. Exxon Mobil shall maintain secondary, vapor mounted seals on all gasoline storage tanks (ARM 17.8.749).

B. Inspection Requirements

For all gasoline tanks, Exxon Mobil shall visually inspect the internal floating roof and its closure seal or seals through roof hatches at least once every 12 months (ARM 17.8.105 and ARM 17.8.749).

C. Recordkeeping Requirements

1. Exxon Mobil shall record any change in products stored in the permitted storage tanks that are allowed within the restrictions of this permit (ARM 17.8.749).
2. The following records shall be maintained by Exxon Mobil, on site, for a minimum of 5 years and shall be made available to the Department upon request (ARM 17.8.749):
 - a. The types of volatile petroleum liquids stored in the permitted tanks;
 - b. The maximum true vapor pressure of the liquid as stored; and
 - c. The results of the inspections required in Section III.B of this permit.
3. For exempted sources containing a petroleum liquid with a true vapor pressure greater than 10.5 kPa (1.5 psia), the following records shall be maintained by Exxon Mobil, on site, for a minimum of 5 years and shall be made available to the Department upon request (ARM 17.8.749):
 - a. The average monthly storage temperature;

- b. The type of liquid stored; and
 - c. The maximum true vapor pressure for any petroleum liquid with a true vapor pressure greater than 10.5 kPa (1.5 psia).
4. All records compiled in accordance with this permit must be maintained by Exxon Mobil as a permanent business record for at least 5 years following the date of the measurement, must be available for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

D. Reporting Requirements

Exxon Mobil shall maintain records of the inspections required in Section III.B. of this permit on-site, and submit the records to the Department upon request (ARM 17.8.749).

SECTION IV: Fugitive Emission Sources

A. Limitations and Conditions

Exxon Mobil shall ensure that (ARM 17.8.749):

- 1. All valves used shall be high quality valves containing high quality packing;
- 2. All open-ended valves shall be of the same quality as the valves described above. Any open-ended line or valve shall be sealed with a second valve, blind flange, cap, or plug; and
- 3. All pumps used in gasoline service shall be equipped with a single mechanical seal system.

B. Inspection and Repair Requirements

- 1. Each calendar month, all valves, flanges, pump seals, and open-ended lines shall be inspected for total organic compounds, liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable (ARM 17.8.105 and ARM 17.8.749).
- 2. Each calendar quarter, all pump seals shall be instrument tested for total organic compounds, liquid or vapor leaks. When an instrument reading of 10,000 parts per million (ppm) or greater is measured, or if there are indications of liquid dripping from the equipment, it shall be determined that a leak has been detected (ARM 17.8.749).
- 3. Exxon Mobil shall (ARM 17.8.749):
 - a. Make a first attempt at repair for any leak not later than 5 calendar days after the leak is detected; and

- b. Repair any leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section IV.B.4 below.
4. Delay of repair of equipment for which a leak has been detected will be allowed if repair is technically infeasible without a process unit shutdown. Such equipment shall be repaired before the end of the first process unit shutdown after detection of the leak (ARM 17.8.749).

C. Recordkeeping Requirements

A record of each monthly leak inspection required under Section IV.B.1 of this permit shall be kept on file at the terminal. Inspection records shall include, at a minimum, the following information (ARM 17.8.749):

1. Date of inspection;
2. Findings (may indicate no leaks discovered or location, nature, and severity of each leak);
3. Leak determination method;
4. Corrective action (date each leak repaired and reasons for any repair interval in excess of 15 calendar days); and
5. Inspector name and signature.

SECTION V: Additional Requirements

- A. Exxon Mobil 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 and sources identified in Section I.A of 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). Exxon Mobil shall submit the following information annually to the Department by March 1 of each year; the information may be submitted along with the annual emission inventory (ARM 17.8.505).

1. The type of petroleum liquid stored in each tank;
2. The true vapor pressure of the petroleum liquid stored in each tank;
3. The annual throughput of petroleum liquids for each tank in gallons; and
4. The annual throughput of petroleum liquids for each loading rack in gallons.

For reporting purposes, the equipment shall be identified using the tank numbers contained in Section I.A of the Permit Analysis.

- B. Exxon Mobil shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a 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 or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up 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(1)(d) (ARM 17.8.745).
- C. All records compiled in accordance with this permit must be maintained by Exxon Mobil 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 (ARM 17.8.749).

SECTION VI: General Conditions

- A. Inspection – Exxon Mobil 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 (CEMS, 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 Exxon Mobil fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Exxon Mobil 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 Department personnel at the location of the permitted source.
- G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Exxon Mobil 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).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Exxon Mobil shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

ATTACHMENT 2
Exxon Mobil - Helena Marketing Terminal
Test Methods and Compliance Procedures

1. In determining compliance with Section II.A.7 of this permit, the following procedures shall be used:
 - a. Calibrate and install a pressure measurement device (liquid manometer or equivalent instrument) capable of measuring up to 500 millimeters (mm) (20 inches (in.)) of water gauge pressure with ± 2.5 mm (0.10 in.) of water precision;
 - b. Connect the pressure measurement device to a pressure tap in the terminal's vapor recovery system, located as close as possible to the connection with the gasoline tank truck; and
 - c. During the performance test, record the pressure every 5 minutes while a gasoline tank truck is being loaded, and record the highest instantaneous pressure that occurs during each loading. Every loading position shall be tested at least once during the performance test.
2. In determining compliance with the mass emission limitations in Section II.A.9 of this permit, the following reference methods shall be used:
 - a. In determining volume at the exhaust vent, EPA Method 2A for all other vapor control systems; and
 - b. In determining total organic compounds concentration at the exhaust vent, EPA Method 25A or 25B. The calibration gas shall be either propane or butane.
3. Immediately prior to a performance test required to determine compliance with Sections II.A.7 and II.A.9 of this permit, all potential sources of vapor and liquid leakage from the terminal's vapor recovery system equipment shall be monitored for leaks according to the procedures in Attachment 3 to this permit. The monitoring shall be conducted only while a gasoline tank truck is being loaded. A reading of 10,000 parts per million by volume (ppmv), or greater, as methane, shall be considered a leak. All leaks shall be repaired prior to conducting the performance test.
4. The test procedure for determining compliance with Sections II.A.7 and II.A.9 of this permit is as follows:
 - a. All testing equipment shall be prepared and installed as specified in the appropriate test methods;
 - b. The time period for a performance test shall be not less than 6 hours; during which, at least 300,000 L (80,000 gal) of gasoline are loaded. If the throughput criterion is not met during the initial 6 hours, the test may be either continued until the throughput criterion is met, or resumed the next day with another complete 6 hours of testing. As much as possible, testing should be conducted during the 6-hour period in which the highest throughput normally occurs; and

- c. For intermittent vapor control systems:
 - i. The vapor holder level shall be recorded at the start of the performance test. The end of the performance test shall coincide with a time when the vapor holder is at its original level; and
 - ii. At least two startups and shutdowns of the vapor processor shall occur during the performance test. If this does not occur under automatically controlled operation, the system shall be manually controlled.
- d. The volume of gasoline dispensed, during the performance test period at all loading racks whose vapor emissions are controlled by the vapor processing system being tested, shall be determined. This volume may be determined from terminal records or from gasoline dispensing meters at each loading rack;
- e. An emission testing interval shall consist of each 5-minute period during the performance test. For each interval:
 - i. The reading from each measurement instrument shall be recorded; and
 - ii. The volume exhausted and the average total organic compounds concentration in the exhaust vent shall be determined as specified in the appropriate test method. The average total organic compounds concentration shall correspond to the volume measurement by taking into account the sampling system response time.
- f. The mass emitted during each testing interval shall be calculated as follows:

$$M_{ei} = 10^{-6} K V_{es} C_e$$

where:

M_{ei} = Mass of total organic compounds (milligrams (mg)) emitted during testing interval i.

V_{es} = Volume of air-vapor mixture exhausted (cubic meters (m^3)), at standard conditions.

C_e = Total organic compounds concentration (measured as carbon) at the exhaust vent (ppmv).

K = Density of calibration gas (milligrams/cubic meter (mg/m^3)) at standard conditions (1.83×10^6 for propane; 2.41×10^6 for butane).

s = Standard conditions, 20° C and 760 millimeters of mercury (mm Hg).

g. The total organic compounds mass emissions shall be calibrated as follows:

$$E = \frac{\sum_{i=1}^n M_{ei}}{L}$$

Where:

E = Mass of total organic compounds emitted per volume of gasoline loaded, mg/L.

L = Total volume of gasoline loaded, L.

n = Number of testing intervals.

5. Alternate test methods may be used for determining compliance only after approval from the Department.

ATTACHMENT 3
Leak Detection Methods for Volatile Organic Compounds (VOC's)
Test Methods and Compliance Procedures

1. Permittees required to carry out a leak detection monitoring program shall comply with the following requirements:
 - a. Monitoring shall be performed in accordance with EPA Method 21 of 40 Code of Federal Regulations (CFR) Part 60, Appendix A;
 - b. The detection instrument shall meet the performance criteria of EPA Method 21;
 - c. The detection instrument shall be calibrated before and after use on each day of its use by the methods specified in Method 21. Failure to achieve a post-use calibration precision of less than 10 percent shall constitute grounds for rejecting all tests performed since the last pre-use calibration. In such cases, required leak tests must be redone;
 - d. Calibration gases shall be:
 - i. Zero air (less than 10 ppm of hydrocarbon in air); and
 - ii. A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
 - e. The detection instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in EPA Method 21.
2. When equipment is tested for compliance with the requirement that there be no detectable emissions, the test shall comply with the following:
 - a. The requirements of (1)(a) through (1)(e) of this attachment shall apply and shall be met; and
 - b. The background level shall be determined as set forth in EPA Method 21.
3. Alternate test methods may be used for determining compliance only after approval from the Department.

Montana Air Quality Permit Analysis
Exxon Mobil Corporation
Helena Marketing Terminal
MAQP #2829-04

I. Introduction/Process Description

Exxon Mobil Corporation (Exxon Mobil) owns and operates a bulk distribution terminal for petroleum products located at 3120 Highway 12 East, near the eastern edge of the Helena city limits. The property's legal description is the SE¹/₄ of the NE¹/₄ of Section 28, Township 10 North, Range 3 West, in Lewis and Clark County. The facility is known as the Helena Marketing Terminal.

A. Permitted Equipment

The facility consists of the following equipment:

Product	Serial #	Tank Type	Seal Type	Capacity (bbls)	Diameter (ft)	Year Mfg	Permitted Throughput (MMgal/yr)	Tank Color
Gasoline	301	IFR	Double Seal	15,000	52	1955	170	white
Gasoline	302	IFR	Double Seal	30,000	75	1955	170	white
Distillate - Diesel	303	Fixed	Vented	15,000	52	1955	100	lt gray
Distillate - Jet	304	Fixed	Vented	15,000	52	1955	100	lt gray
Denatured Ethanol	305	IFR	Double Seal	15,000	52	1955	170	beige
Gasoline	306 (=302 A)	IFR	Double Seal	15,000	52	1955	170	white
Additive	08	Fixed	Vented	240	10.5	1987	De minimis	white
Additive	09	Horizontal	Vented	70	6	1987	De minimis	white
Interface	10	UST	Vented	36	-	1981	0.25	-
Interface	11	UST	Vented	48	-	1988	0.25	-
Additive	12	Horizontal	Vented	24	5	1993	De minimis	white
Stormwater	14	UST	Vented	381	9'3"	1993	De minimis	-
Additive	15	Fixed	Vented	238	10 x 17.4	2006	De minimis	white
Additive	-	Horizontal	Vented	18	4	-	De minimis	white
Product loading rack with three gasoline-loading arms and three distillate-loading arms. Gasoline and distillate loading activities are to be submerged filled with dedicated normal service. Tank truck loading and unloading of gasoline and distillate is accomplished at the product loading rack. Interface and additive unloading and interface loading is accomplished at a separate loading location away from the main loading rack.								
A John Zink Carbon Adsorption/Absorption Gasoline Vapor Recovery System (VRU) removes the gasoline and additive vapors from the incoming air/hydrocarbon vapor mixture. Interface and distillate are loaded without the use of the VRU.								
Fugitive Emissions from total facility valves, flanges, pump seals, open-ended lines, and oil/water separators.								
Up to 8.5 tons per year of VOC emissions from remediation-related Soil Vapor Extraction and Air Sparge system.								

B. Source Description

Products manufactured in refineries are pumped to the terminal via the Yellowstone Pipeline for storage, and are then loaded directly into tractor trailers for delivery to a retail point. Due to pipeline limitations, product is also brought in via tractor trailer. Products

loaded at the facility include motor gasoline (gasoline) that is potentially blended with denatured ethanol, several different grades of distillate fuel, and interface. Interface consists of the mixture of water and hydrocarbons that can result from draining any off-specification product from the bottom of storage tanks; or any product drained from trailers prior to being loaded at the loading rack. Additives (including denatured ethanol) are added at the point of loading to enhance certain desirable product characteristics. Additives arrive at the terminal via truck.

The facility operates four internal floating roof tanks (#301, #302, #305 and #306) and four cone roof tanks (303, 304, 8, and 15). The floating roof tanks #301, #302, and #306 store gasoline. Tank #305 stores denatured ethanol. One of the cone roof tanks (304) stores jet, while a second (303) stores diesel. Additives are stored in Tanks 8 and 9. Dyed diesel is stored in tank 12. Tanks 9 and 12 are horizontal tanks. The final cone roof tank (7) stores interface. Another horizontal tank (13) stores heating oil for space heating. Total shell capacity of storage in the terminal is about 4.3 million gallons. As the plot plan shows, there are also two underground tanks used for storing interface.

Loading is affected for all products except interface at the loading rack. Products are pumped from storage on the terminal's property. Interface is loaded near the interface tanks away from the loading rack.

Each truck must have a "permissive", based on information about tightness certification contained in an on-board microchip. Without the permissive, the truck cannot be loaded without intervention by an Exxon Mobil employee. This system was installed throughout the Exxon Mobil terminal circuit to facilitate Clean Air Act, Standards of Performance for New Stationary Sources (NSPS), Department of Transportation (DOT) and state tightness certification requirements. Once a permissive has been received (the process requiring only seconds) the vapor recovery system (VRU) will then automatically activate. Although the VRU was designed to remove gasoline vapors, as standard operating practice the VRU is also used whenever distillate is being loaded.

C. Permit History

On July 22, 1994, Exxon Company, USA (Exxon), submitted a complete Montana Air Quality Permit (MAQP) Application to construct and operate a gasoline vapor recovery system at the Helena Marketing Terminal. In addition, Exxon requested that the permit include the entire bulk marketing terminal to establish mutually agreeable and enforceable permit limitations and conditions. Since the Helena Marketing Terminal was an existing source (operating at the same location prior to March 16, 1979), a Best Available Control Technology (BACT) determination was not required. However, a BACT analysis was submitted in the permit application and the Department of Health and Environmental Sciences Air Quality Division (AQD, predecessor to Department of Environmental Quality (Department)) used the analysis to review the existing control equipment. On September 24, 1994, **Permit #2829-00** was issued to Exxon.

On October 26, 2004, the Department received a letter from Exxon Mobil. Exxon Mobil notified the Department of a physical change to the existing distillate fuels loading rack. The change consists of the addition of a diesel fuel lubricity additive injection system. At the Department's request, Exxon Mobil provided the Potential to Emit (PTE) calculation for the proposed change on November 1, 2004. The permit action added the diesel fuel

lubricity additive injection system to the permit according to the provisions of the Administrative Rules of Montana (ARM) 17.8.745. In addition, the permit was updated to reflect current permit language and rule references used by the Department. Furthermore, the name on the permit was updated from Exxon to Exxon Mobil. **Permit #2829-01** replaced Permit #2829-00.

On June 13, 2007, the Department received a letter from Exxon Mobil, requesting amendments to their Helena Terminal MAQP. The changes included clarifying that the gasoline tanks (previously called Mogas) all had double seals rather than single seals; incorporating the 10,000-gallon lubricity tank installed in 2006; removing additive, wastewater and heating oil throughput limits to reflect the de minimis nature of emissions from these materials; and removing tank #007 which was dismantled in 2005. Further correspondence received on September 4, 2007, and September 10, 2007, requested the addition of regulatory reference to 40 Code of Federal Regulation (CFR) 60, Subpart XX; clarified Exxon Mobil's tank numbers; and requested removal of MAQP Section III.B.2, since Exxon Mobil did not have any tanks with single seals. **MAQP #2829-02** replaced MAQP #2829-01.

On Feb 26, 2015, the Department received a letter from Exxon Mobil Corporation, requesting an administrative amendment to their Helena Terminal MAQP. The changes included revising the allowed contents of Tank #305 from gasoline to denatured ethanol. This project is referred to as the Ethanol Project in the request. This change provided for allowing on-site off-loading, storage and blending of denatured ethanol with motor gasoline (mogas). It also removed Tank 13 from the permitted list as that tank has been removed from the facility. Also under the project, Tank #305 was retrofitted with a new internal floating roof system, new tank coating, and piping infrastructure to accommodate the off-loading, storage and mixing at the loading rack. **MAQP #2829-03** replaced MAQP #2829-02.

D. Current Permit Action

On October 20, 2015, the Department received from Exxon Mobil Corporation an application for installation of a Soil Vapor Extraction and Air Sparge system for remediation purposes. On November 20, 2015, the Department received additional information as requested regarding Best Available Control Technology review. Based on on-site testing and the proposed design and operation, the Potential to Emit will be no more than 8.5 tons per year of VOC. The current permit action adds this system to the permitted equipment list in Section I.A of the permit analysis and provides the required Montana Environmental Policy Act review. No new permit conditions or limitations are included. Estimated emissions from the remediation project will be required to be reported in the annual emissions inventory. **MAQP #2829-04** replaces MAQP #2829-03.

E. Additional Information

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

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the ARM and are available, upon request, from the 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).

Exxon Mobil 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 PM₁₀

Exxon Mobil 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 (PM). (2) Under this rule, Exxon Mobil shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.
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 PM 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 PM 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.
6. 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.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR 60, NSPS. Exxon Mobil is considered an NSPS affected facility under 40 CFR 60 and is subject to the requirements of the following subparts.

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

40 CFR 60, Subpart XX – Standards of Performance for Bulk Gasoline Terminals applies to loading racks at bulk gasoline terminals that load product into gasoline tank trucks which commenced construction or modification after December 17, 1980. Subpart XX applies to Exxon Mobils' truck loading rack because adding the diesel lubricity container to the loading rack triggered Subpart XX.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR 63. Since the emission of Hazardous Air Pollutants (HAP) from the Exxon Mobil facility is less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAPs combined, the facility is not considered a major source. 40 CFR 63, Subpart BBBBBB will apply to the facility during and after completion of the Ethanol Project.
- D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:
1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.402 Requirements. Exxon Mobil must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP).
- E. 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. Exxon Mobil provided the appropriate application fee for this 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.
- F. 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 PTE greater than 25 tons per year of any pollutant. Exxon Mobil has a PTE greater than 25 tons per year of Volatile Organic Compounds (VOCs); therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements.
(1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Exxon Mobil 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. An affidavit of publication of public notice was posted in the October 11, 2015 version of the *Independent Record*, a newspaper in general circulation in the City of Helena area.
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 BACT analysis is discussed 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 Exxon Mobil 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 17.8.762 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.
11. 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).

12. 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.
13. 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.

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

H. 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 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 (PM₁₀) in a serious PM₁₀ 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 Air Quality Permit #2829-02 for Exxon Mobil, 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 PM₁₀ nonattainment area.
- d. This facility is subject to current NSPS (40 CFR 60, Subpart XX) and potentially to 40 CFR 60, Subpart K, Subpart Ka and Subpart Kb.
- e. This facility is subject to NESHAP standard 40 CFR 63, Subpart BBBBBB.
- f. This source is neither a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

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

III. BACT Determination

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

Exxon Mobil Corporation submitted a detailed BACT analysis on November 20, 2015, which is on file with the Department. The analysis submitted provided the following Total Annual Cost (TAC) estimates, including a review of utilizing of an existing onsite Vapor Recovery Unit (VRU):

Project Life = 5 years (CRF = 0.244)

Control Technology	Capital Cost	CRC	Operating Cost	TAC ^a
Activated Carbon	\$71,000	\$17,316	\$144,000	\$161,300
Catalytic Oxidizer	\$110,000	\$26,828	\$100,000	\$126,800
Thermal Oxidizer	\$125,000	\$30,486	\$124,000	\$154,500
Existing VRU	\$3,000,000	\$731,672	---	\$731,700

Project Life = 10 years (CRF = 0.142)

Control Technology	Capital Cost	CRC	Operating Cost	TAC ^a
Activated Carbon	\$71,000	\$10,109	\$144,000	\$154,100
Catalytic Oxidizer	\$110,000	\$15,662	\$100,000	\$115,700
Thermal Oxidizer	\$125,000	\$17,797	\$124,000	\$141,800
Existing VRU	\$3,000,000	\$427,133	---	\$427,100

a. TAC = total annual cost

Annual average project emissions were estimated utilizing a widely accepted assumption that the emissions will be reduced at a rate which can be modeled by a logarithmic decay equation. The resulting cost effectiveness of each technically feasible option resulted:

**Control Technology Cost-Effectiveness,
5-year Lifespan**

Control Technology	CE (\$/ton)
Activated Carbon	\$45,800
Catalytic Oxidizer	\$36,000
Thermal Oxidizer	\$43,800
Existing VRU	\$207,600

**Control Technology Cost-Effectiveness,
10-year Lifespan**

	CE (\$/ton)
Activated Carbon	\$45,500
Catalytic Oxidizer	\$34,100
Thermal Oxidizer	\$41,800
Existing VRU	\$126,000

The Department concurred with Exxon Mobil's submittal that technologically feasible control options are not cost effective in this case.

IV. Emission Inventory

A complete emission inventory for each source within the Helena Marketing Terminal was submitted with Permit Application #2829-00. The emission inventories submitted included 1993 Base Year Emission Estimates, Proposed Annual Emissions at Average Conditions, Proposed Daily Emissions at Maximum Conditions, and Proposed Hourly Emissions at Maximum Conditions. The inventories included VOCs and all hazardous air pollutants emitted at the facility. The emission inventory does not include VRU controls for distillate loading because the actual recovery efficiency is not known.

The administrative amendment of MAQP #2829-03 resulted in a slight reduction in VOC emissions as the less volatile denatured ethanol has less VOC emissions than gasoline,

The project approved for in MAQP #2829-04 adds potentially up to 8.5 tons per year of VOC emissions. The emissions resulting from the project will decay with time; therefore, an emissions inventory is intentionally not updated as the potential to emit will be expected to change as remediation efforts continue.

V. Existing Air Quality

Exxon Mobil is located in the SE¹/₄ of the NE¹/₄ of Section 28, Township 10 North, Range 3 West, in Lewis and Clark County, Montana. This area is considered attainment for all criteria pollutants. The majority of the emissions from the facility are VOCs.

VI. Ambient Air Impact Analysis

In the view of the Department, any impacts from this permitting action will be minor. The maximum increase in allowable emissions is 8.5 tons per year. The Department believes this project 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. 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
Permitting and Compliance Division
Air Quality Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Exxon Mobil Corporation
Helena Bulk Terminal
3120 Highway 12 East
Helena, MT 59601

Montana Air Quality Permit Number: 2829-04

Preliminary Determination Issued: 12/7/2015

Department Decision Issued:

Permit Final:

1. *Legal Description of Site:* Section 28, Township 10 North, Range 3 West, in Lewis and Clark County, Montana
2. *Description of Project:* This project would permit the operation of soil vapor extraction and air sparge system.
3. *Objectives of Project:* To remediate hydrocarbon contaminated soil and groundwater.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. By denying issuance of the permit, Exxon Mobil would not be able to proceed with the remediation of the hydrocarbon-contaminated soil and groundwater. However, the Department does not consider the “no-action” alternative to be appropriate because Exxon Mobil demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration. The Best Available Control Technology analysis contemplated different pollution control alternatives that could be implemented as part of the proposed project.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #2829-04.
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. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			XX			Yes
B	Water Quality, Quantity, and Distribution			XX			Yes
C	Geology and Soil Quality, Stability and Moisture			XX			Yes
D	Vegetation Cover, Quantity, and Quality			XX			Yes
E	Aesthetics			XX			Yes
F	Air Quality			XX			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			XX			Yes
H	Demands on Environmental Resource of Water, Air and Energy			XX			Yes
I	Historical and Archaeological Sites			XX			Yes
J	Cumulative and Secondary Impacts			XX			Yes

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

The proposed project would not be expected to directly impact any habitat, and the level of air emissions from this project would not be expected to have any more than a minor impact, if any discernable impact at all, on any terrestrial and aquatic life and habitats. The property is currently operated as an industrial site with neighboring industrial and commercial activities as well as adjacent to highway traffic. No previously undisturbed ground is expected to be disturbed.

The level of emissions from this project is conservatively estimated to be up to 8.5 tons per year of Volatile Organic Compound emissions. Further, the emissions from this project would be expected to be temporary, likely intermittent, and with diminishing annual emissions with time as the remediation efforts continue.

B. Water Quality, Quantity and Distribution

The purpose of this project would be to remediate hydrocarbon contaminated soil and ground water. The media affected in removing hydrocarbons from the soil and ground water in this case would be air. Any impacts to water quality, quantity, and distribution would be expected to be minor, and in fact, the impacts of this project are expected to be beneficial to water quality.

C. Geology and Soil Quality, Stability and Moisture

The purpose of this project would be to remediate hydrocarbon contaminated soil and ground water. The media affected in removing hydrocarbons from the soil and ground

water in this case would be air. Any impacts to water quality, quantity, and distribution would be expected to be minor, and in fact, the impacts of this project are expected to be beneficial to soil quality.

D. Vegetation Cover, Quantity, and Quality

The project would not be expected to affect any plant species at the project site. The property is currently operated as an industrial site with neighboring industrial and commercial activities as well as adjacent to highway traffic. No previously undisturbed ground is expected to be disturbed.

E. Aesthetics

The property is currently operated as an industrial site with neighboring industrial and commercial activities as well as adjacent to highway traffic. The proposed project would fit within the character of the surrounding area.

F. Air Quality

The maximum emissions from this project would be up to 8.5 tons per year of Volatile Organic Compound emissions. No more than minor impacts to air quality would be expected at this level of emissions. Further, the emissions from this project would be expected to be temporary, likely intermittent, and with diminishing annual emissions with time as the remediation efforts continue.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project would not be expected to directly impact any habitat, and the level of air emissions from this project would not be expected to have any more than a minor impact, if any discernable impact at all, on any plant or animal species. The project would take place at an existing industrial site with volatile organic compound emissions, with adjacent industrial and commercial activity also having volatile organic compound emissions. The level of emissions from this project is conservatively estimated to be up to 8.5 tons per year of Volatile Organic Compound emissions. Further, the emissions from this project would be expected to be temporary, likely intermittent, and with diminishing annual emissions with time as the remediation efforts continue.

Impacts to any unique endangered, fragile, or limited environmental resources, if any discernable negative impacts at all, would be expected to be minor, and in fact, positive impacts to groundwater and soil are expected as a result of remediation of hydrocarbon contamination.

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

The project would emit up to 8.5 tons per year of volatile organic compounds removed from soil and water and released to the air. This level of emissions on an industrial scale is small. Energy requirements for the remediation efforts, on an industrial scale, would be expected to be very small. Positive impacts to water quality would be expected. Demands on water, air, and energy resources are expected to be minor.

I. Historical and Archaeological Sites

The property is currently operated as an industrial site with neighboring industrial and commercial activities as well as adjacent to highway traffic. No previously undisturbed surface is expected to be disturbed.

J. Cumulative and Secondary Impacts

No more than minor cumulative impacts (collective impacts on the human environment when considered in conjunction with other past, present, and future actions related to the proposed action) and secondary impacts (impacts that occur at a different location or later in time than the action that triggers the effect) would be expected.

8. *The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.*

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores			XX			Yes
B	Cultural Uniqueness and Diversity			XX			Yes
C	Local and State Tax Base and Tax Revenue			XX			Yes
D	Agricultural or Industrial Production			XX			Yes
E	Human Health			XX			Yes
F	Access to and Quality of Recreational and Wilderness Activities			XX			Yes
G	Quantity and Distribution of Employment			XX			Yes
H	Distribution of Population			XX			Yes
I	Demands for Government Services			XX			Yes
J	Industrial and Commercial Activity			XX			Yes
K	Locally Adopted Environmental Plans and Goals			XX			Yes
L	Cumulative and Secondary Impacts			XX			Yes

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

- A. Social Structures and Mores
- B. Cultural Uniqueness and Diversity

The project would take place on property that is currently operated as an industrial site with neighboring industrial and commercial activities and adjacent highway. No additional employees are required. Impacts, if any, would be expected to be minor.

- C. Local and State Tax Base and Tax Revenue

The project is not expected to affect the current operation of the facility. No additional employees are required. Impacts, if any, to local and state tax base and revenue would be expected to be minor.

D. Agricultural or Industrial Production

The project would take place on property that is currently operated as an industrial site with neighboring industrial and commercial activities and adjacent highway. The project is not expected to affect the current operation of the facility. Impacts, if any, to industrial or agricultural production would be expected to be minor.

E. Human Health

MAQP #2829-04 would permit a remediation project with up to 8.5 tons per year of Volatile Organic Compound emissions. The emissions would be expected to be temporary, likely intermittent, and the overall level of emissions would be expected to become smaller and smaller with time. No more than minor impacts to human health would be expected.

F. Access to and Quality of Recreational and Wilderness Activities

The project would take place on property that is currently operated as an industrial site with neighboring industrial and commercial activities and adjacent highway. Impacts, if any, to access to and quality of recreational and wilderness activities would be expected.

G. Quantity and Distribution of Employment

No change to the number of onsite employees would be expected. The project would, and has, required consulting services. No more than minor, if any, impact to quantity and distribution of employment would be expected.

H. Distribution of Population

No change to the number of onsite employees would be expected. The project would, and has, required consulting services. The project would take place at an existing and operating industrial site. No more than minor, if any, impacts to distribution of population would be expected.

I. Demands for Government Services

The project requires a Montana Air Quality Permit due to the amount of air emissions expected to exceed the 5 ton per year de minimis permitting exemption threshold. Minor impacts to demands for government services are expected.

J. Industrial and Commercial Activity

The project would take place on property that is currently operated as an industrial site with neighboring industrial and commercial activities and adjacent highway. No more than minor impacts to industrial and commercial activity would be expected.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans and goals which this project would negatively impact. The project would remediate hydrocarbon contaminated soil and water, and the associated air emissions are minor.

L. Cumulative and Secondary Impacts

No more than minor cumulative impacts (collective impacts on the human environment when considered in conjunction with other past, present, and future actions related to the proposed action) and secondary impacts (impacts that occur at a different location or later in time than the action that triggers the effect) would be expected.

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

The current permitting action is for the construction and operation of a remediation system and MAQP #2829-04 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

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau

EA prepared by: Shawn Juers

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