ADMINISTRATIVE AMENDMENT
TO MONTANA AIR QUALITY PERMIT

Date of Mailing: June 3, 2016

Name of Applicant: CHS, Inc.

Source: Glendive Bulk Petroleum Terminal

Location: Southeast ¼ of Section 33, Township 16 North, Range 55 East in Dawson County

Proposed Action: The Department of Environmental Quality (Department) proposes to issue an Administrative Amendment, with conditions, to the above-named permittee. The permit will be assigned #2947-06. The permittee may appeal the Department's decision to the Board of Environmental Review (Board). A request for hearing must be filed by June 20, 2016. This permit shall become final on June 21, 2016, unless the Board orders a stay on the permit.

Proposed Conditions: See attached.

Procedures for Appeal: The permittee may request a hearing before the Board. Any appeal must be filed before the final date stated above. The request for 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 hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, Montana 59620.

For the Department,

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

Ed Warner
Lead Engineer – Permitting Services Section
Air Quality Bureau
(406) 444-2467

JM:EW
Enclosure

MONTANA AIR QUALITY PERMIT

Issued to: CHS, Inc.
Glendive Bulk Petroleum Terminal
P.O. Box 909
Laurel, MT 59044

MAQP: #2947-06
Administrative Amendment (AA) Request
Received: 6/03/2016
Department's Decision on AA: 6/03/2016
Permit Final:
AFS #: 021-0003

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to CHS, Inc. (CHS) pursuant to Sections 75-2-204, 211, and 215 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

CHS owns and operates the Glendive Bulk Petroleum Terminal which stores and transfers petroleum products (gasoline, diesel, and burner fuel) received from the CHS Refinery in Laurel, Montana and distributes these products to regional markets via tank truck. This facility is located in the Southeast ¼ of Section 33, Township 16 North, Range 55 East in Dawson County and approximately 1 mile west of the city of Glendive, Montana. The Permit Analysis has an updated description explaining the permitted equipment list.

B. Current Permit Action

On June 3, 2016, the Department of Environmental Quality (Department) received an administrative amendment request from CHS which would allow for the operation of a temporary portable Vapor Combustion Unit (VCU) in place of the existing VCU due to operational issues that CHS has been experiencing with it. The request included information that described how the temporary portable VCU could be treated as a like kind replacement and that the MAQP could be administratively amended to allow for operation of only a single VCU at any time. The current permit action updates the permit conditions related to the VCU to allow for a like kind replacement and only allow for the operation of a single VCU at any given time in accordance with ARM 17.8.745(2) and ARM 17.8.764(1)(b).

Section II: Conditions and Limitations

A. Emission Limitations

1. CHS 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).

2. CHS 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).

3. CHS shall treat all unpaved portions of 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.1 (ARM 17.8.749).

4. CHS shall be limited to a maximum of 225,000,000 gallons of gasoline (including ethanol) throughput for the truck loadout operation during any rolling 12-month period (ARM 17.8.1204).

5. CHS shall be limited to a maximum of 478,000,000 gallons of distillate product throughput for the truck loadout operation during any rolling 12-month period (ARM 17.8.1204).

6. Vapors collected from the Tank Truck Loading Rack shall be routed to the vapor combustion unit (VCU) at all times (ARM 17.8.752).

7. CHS shall not operate more than one VCU at any given time and demonstrate that any replacement VCU can be considered a like-kind replacement (ARM 17.8.749).

8. CHS shall install, operate, and maintain a vapor collection system to collect volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from the tank truck loading rack during product loading, and vent those emissions to the VCU. In the event that the VCU is inoperable, CHS may load diesel fuel (only) into trucks in dedicated diesel service (ARM 17.8.752; ARM 17.8.340; and 40 CFR 60, Subpart XX).

9. CHS shall not cause or authorize emissions to the atmosphere from the VCU due to the loading of liquid product:

   a. Volatile organic compound (VOC) emissions not to exceed 35.0 milligrams per liter (mg/L) of product loaded (ARM 17.8.752; ARM 17.8.340; and 40 CFR 60, Subpart XX).

   b. Carbon monoxide (CO) emissions to exceed 10.0 milligrams per liter (mg/L) of product loaded (ARM 17.8.752).

   c. Oxides of nitrogen (NOx) emissions not exceed 4.0 milligrams per liter (mg/L) of gasoline loaded (ARM 17.8.752).

   d. Any visible emissions that exhibit an opacity of 10% or greater (ARM 17.8.316); and

   e. Any particulate emissions in excess of 0.10 gr/dscf corrected to 12% carbon dioxide (CO_2) (ARM 17.8.316).

10. Loading of tank trucks shall be restricted to the use of submerged fill and dedicated normal service (ARM 17.8.749).

11. CHS shall ensure that loading of product tank trucks at the loading racks are made only into tank trucks with vapor collection systems compatible with the terminal's vapor collection system, and that the systems are connected during each loading of product (ARM 17.8.340 and 40 CFR 60, Subpart XX).

12. The vapor recovery system shall be designed to prevent any VOC vapors collected at one loading rack from passing to another loading rack (ARM 17.8.340 and 40 CFR 60, Subpart XX).

13. No pressure-vacuum vent in the vapor collection system shall begin to open at a system pressure less than 4,500 Pascal (Pa) (450 millimeters [mm] of water) (ARM 17.8.340 and 40 CFR 60, Subpart XX).

14. The vapor collection system and liquid loading equipment shall be designed and operated to prevent gauge pressure in the gasoline tank truck from exceeding 4,500 Pa (450 mm of water) during product loading. This level shall not be exceeded when measured by the procedures specified 40 CFR 60.503(d) (ARM 17.8.340 and 40 CFR 60, Subpart XX).

15. Loading of product into gasoline tank trucks shall be limited to vapor-tight tank trucks using the procedures listed under 40 CFR 60.502(e) (ARM 17.8.340 and 40 CFR 60, Subpart XX):

    a. CHS shall obtain the vapor tightness documentation described in EPA Method 27, or another method approved by the Department, for each gasoline tank truck that is loaded at the loading racks;

    b. CHS shall require the tank truck identification number to be recorded as each gasoline tank truck is loaded at the terminal; and

    c. CHS shall take the necessary steps to ensure that any non-vapor tight gasoline tank truck will not be loaded at the loading racks until vapor tightness documentation for that tank truck is obtained

16. CHS shall not store petroleum liquid with a true vapor pressure greater than 10.5 kiloPascals (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 or external floating roof equipped with a closure device 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.

17. CHS shall ensure the following (ARM 17.8.749):

    a. Any open-ended lines shall have plugs, caps, or a second valve installed on the open end.

    b. All pumps used in gasoline service shall be equipped with either a single or double mechanical seal system.

18. CHS shall comply with all applicable standards, limitations, and the reporting, record keeping, and notification requirements contained in 40 Code of Federal Regulation (CFR) Part 60 Subpart XX, *Standards of Performance for Bulk Gasoline Terminals* (ARM 17.8.340 and 40 CFR Part 60 Subpart XX).

19. CHS shall comply with all applicable standards, limitations, reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart BBBBBB, *National Emission Standards for Hazardous Air Pollutants for Sources Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities* (ARM 17.8.342 and 40 CFR 63 Subpart BBBBBB).

B. Testing and Monitoring Requirements

1. The VCU shall be initially tested for total VOC's, and compliance demonstrated with the VOC emission limitation contained in Section II.A.8.a within 60 days after achieving the maximum production rate, but no later than 180 days of initial startup and every four years after the initial test (ARM 17.8.105).

2. Compliance with the vapor recovery and liquid loading equipment gauge pressure limit contained in Section II.A.13 shall be demonstrated every 5 years, or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105).

3. CHS shall use the test methods and procedures in 40 CFR Subpart XX (ARM 17.8.105).

4. All source tests shall be conducted in accordance with 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 and Repair Requirements

1. Each calendar month, the vapor recovery system, the VCU, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this requirement, detection methods incorporating sight, sound, or smell are acceptable (ARM 17.8.749).

2. Each calendar month, all valves, flanges, pump seals, and open-ended lines shall be inspected for total organic compound leaks each calendar month. For purposes of this requirement, detection methods incorporating sight, sound, or smell are acceptable (ARM 17.8.749).

3. CHS 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. Delay of repair of equipment for which a leak has been detected will be allowed if repair is technically infeasible without a source shutdown. Such equipment shall be repaired before the end of the first source shutdown after detection of the leak (ARM 17.8.749).

D. Reporting and Recordkeeping Requirements

1. CHS shall document, by month, the product throughput for the truck loading rack. By the 25th day of each month, CHS shall total the amount of throughput for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.4 and II.A.5. A written summary of the monthly product throughputs and 12-month rolling averages for the last calendar year shall be submitted along with annual emission inventory (ARM 17.8.749).

2. CHS shall record any change in products stored in the permitted storage tanks which are allowed within the restrictions of this permit (ARM 17.8.749).

3. The tank truck vapor tightness documentation required in Section II.A.14 of this permit shall be kept on file at the terminal in a permanent form, available for inspection. The documentation file for each gasoline and gasoline/ethanol blend truck shall be updated at least once per year to reflect current test results. The documentation shall include the information listed in 40 CFR 60.505(b) (ARM 17.8.340 and 40 CFR 60, Subpart XX).

4. For sources containing a petroleum liquid with a true vapor pressure greater than 10.5 kilopascal (kPal) [1.5 pound per square inch atmospheric (psia)], CHS shall record the following (ARM 17.8.749):

   a. The types of volatile petroleum liquids stored in the permitted tanks;

   b. The weekly Reid vapor pressure of the liquid as stored;

   c. The weekly averaged storage temperature; and

5. For sources containing a petroleum liquid with a true vapor pressure less than 10.5 kPa [1.5 psia], CHS shall record the following (ARM 17.8.749):

   a. The types of volatile petroleum liquids stored in the permitted tanks;

   b. The weekly averaged storage temperature.

6. A record of each monthly leak inspection required under Section II.C.1 and II.C.2 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 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's name and signature.

7. All records compiled in accordance with this permit must be maintained by CHS 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).

8. CHS 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 emission 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 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).

9. CHS 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). CHS 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).

10. CHS shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

E. Notification

CHS shall notify the Department of the initial start-up date of the VCU or any like-kind replacement postmarked within 15 days after the actual start-up date (ARM 17.8.749).

Section III: General Conditions

A. Inspection – CHS 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 continuous emission monitoring equipment 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 CHS fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving CHS 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 therefore, 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, as amended by the 1991 Legislature, failure to pay the annual operation fee by CHS may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit (MAQP) Analysis
CHS, Inc.
Glendive Bulk Petroleum Terminal
MAQP #2947-06

I. Introduction/Process Description

CHS, Inc. (CHS) owns and operates a bulk terminal which stores and transfers petroleum and ethanol products received from the CHS Refinery in Laurel, Montana, and distributes them to regional markets via tank truck. This facility is located in the Southeast (SE) ¼ of Section 33, Township 16 North, Range 55 East in Dawson County and approximately 1 mile west of the Glendive city limits.

On December 4, 2014, the Department of Environmental Quality – Air Quality Bureau (Department) received from CHS a de minimis notification regarding the addition of six above ground storage tanks that were previously owned by Exxon Mobil Corporation. These tanks are owned and operated by CHS, although a percentage of Exxon Mobil Corporation product is still utilized in these tanks.

A. Permitted Equipment

The facility consists of the following operations and equipment:

1. Product Storage Tanks

ID	Tank Type	Tank Contents	Capacity [bbl]	Date Constructed
Tank 1	EFR	Regular Unleaded Gasoline	54,000	< 1960
Tank 2	VFR	#1 Diesel	25,000	< 1960
Tank 3	VFR	#2 Diesel	25,000	< 1960
Tank 4	VFR	#2 Diesel	25,000	< 1960
Tank 5	EFR	Transmix	10,000	< 1960
Tank 6	IFR	Ethanol	10,000	< 1960
Tank 7	VFR	Ethanol	1,000	< 1960
Tank 8	VFR	Ethanol	3,000	< 1960
Tank 9	IFR	Premium Unleaded Gasoline	31,000	1971
Tank 10	VFR	Diesel	140,000	2015
Tank 601	IFR	Gasoline	25,000	< 1960
Tank 602	IFR	Gasoline	40,000	< 1960
Tank 603	VFR	Diesel	16,000	< 1960
Tank 604	VFR	Diesel	20,000	< 1960
Tank 605	VFR	Diesel	16,000	< 1960
Tank 607	VFR	Diesel	10,000	< 1960

EFR, external floating roof storage tank
VFR, vertical fixed roof storage tank
IFR, internal floating roof storage tank

2. Tank Truck Loading Rack

   Tank truck loading of gasoline and distillate is accomplished at the product truck loading rack. The truck loading rack consists of five (5) distillate loading arms and five (5) gasoline loading arms. A vapor recovery system captures the gasoline vapors from the tank truck loading operation and thermally oxidizes the vapors in a John Zink enclosed vapor combustion unit (VCU).

3. Fugitive Emissions

   Fugitive emissions are from total facility valves, flanges, pump seals, and other such components.

B. Source Description

The CHS - Glendive Terminal is a bulk gasoline terminal which stores and transfers petroleum products (gasoline, diesel, and burner fuel) received from the CHS refinery in Laurel, Montana and distributes them to regional markets via truck.

Petroleum products from Exxon Mobil bulk fuel storage tanks are also loaded onto trucks at the CHS - Glendive Terminal's truck loadout facility. CHS owns and operates the tanks and loadout operations.

C. Permit History

Cenex Pipeline Terminal (Cenex) purchased the terminal with eight of the current nine tanks on site in 1960. Tank #9 was constructed in 1971. **MAQP #359** was issued to the Glendive bulk terminal in 1971. **MAQP #1895** became final on June 10, 1984, for the Glendive bulk terminal to operate a bottom loading truck rack and a carbon adsorption vapor recovery unit. Also, Exxon Mobil maintained a land lease land from CHS and marketed petroleum products through six Exxon Mobil owned tanks. Exxon Mobile utilized the Cenex loading rack for product distribution

On April 27, 1997, the Department issued **MAQP #2947-00** to the Cenex Glendive bulk terminal. The permit action limited the throughput on the truck loading rack in order to maintain emissions below the Title III MACT and Title V Operating Permit applicability thresholds. Also, the permit allowed Cenex to replace their existing vapor recovery unit (VRU) with the VCU. Because a VCU met the definition of an incinerator under MCA 75-2-215, a determination that the emissions from the VCU will constitute a negligible risk to public health was required. Cenex and the Department identified the following hazardous air pollutants emitted from the VCU used in the health risk assessment. These constituents are typical components of gasoline.

- Benzene
- Ethyl Benzene
- Hexane
- Toluene
- Xylenes

The reference concentrations for Ethyl Benzene and Hexane were obtained from EPA's IRIS database. The risk information for the remaining hazardous air pollutants where provided from the January 1992 CAPCOA Risk Assessment Guidelines. The model performed by Cenex for the hazardous air pollutants identified above demonstrated compliance with the negligible risk requirement. MAQP #2947-00 replaced MAQP #1895 and MAQP #359.

On May 30, 1997, **MAQP #2947-01** was issued to Cenex. The Department received a request for modification dated May 12, 1997. The modification clarified that Section III.A.1(a) included external floating roof tanks, as well as the previously-stated internal floating roof tanks. MAQP #2947-01 replaced MAQP #2947-00.

The permit action was an alteration of MAQP #2947-01 to change the name of the facility to Cenex Harvest States Cooperative (CHS Cooperative). **MAQP #2947-02** replaced MAQP #2947-01.

On February 3, 2014, the Department received correspondence from CHS which requested changes to the MAQP to more accurately reflect current operational status and regulatory applicability of the facility. The administrative permit action incorporated the following changes;

- Changed all reference of ownership and operation of the Glendive Bulk Petroleum Terminal to CHS, Inc.
- Changed the facility description from bulk gasoline terminal to bulk petroleum product terminal to reflect actual operations.
- Eliminated reference to the VRU, as CHS only operates a VCU for destruction of emissions from tank loading rack.
- Revised the language for tank inspections to remove discrepancies related to tank seal systems.
- Removal of the requirement to perform weekly Reid vapor pressure measurements for products with a true vapor pressure less than 10.5 kilopascals (kPa).
- Incorporated reference to 40 Code of Federal Regulation (CFR) 63, Subpart BBBBBB, National Emission Standards for Hazardous Air Pollutants for Sources Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.
- Incorporated de minimis changes to tank configurations for Tanks #6, #7 and #8 as defined and approved in the Department correspondence dated August 12, 2011.

In addition, the administrative amendment updated the rule references and language used by the Department. **MAQP #2947-03** replaced MAQP #2947-02.

Upon review of the administrative amendment issued final April 5, 2014, CHS provided comment and requested clarification to several conditions within MAQP #2947-03. Based on comments by CHS the Department issued an amendment to provide clarification to specific conditions and remove redundant requirements addressed in the applicable Maximum Available Control Technology (MACT) standards. Clarification and adjustments to the conditions and limitations of the MAQP were as follows;

- The testing and monitoring requirements language within Section II.B.1 only require testing of volatile organic compounds from the VCU.
- Removed the requirement to submit the inspections, required under Section II.C, to the Department. Conditions within Section II.D include provisions that inspection records be maintained at the plant site for inspection by the Department, and must be submitted to the Department upon request.
- Removed the inspection requirements of Section II.C.1 of MAQP #2947-03, as these were addressed by 40 CFR 63, Subpart BBBBBB.

MAQP #2947-04 replaced MAQP #2947-03.

On April 15, 2015, the Department received from CHS an administrative amendment request to update the MAQP to reflect the current emitting units at the facility added in the past through the de minimis permitting exclusions provided for in ARM 17.8.745. This permit action added 7 tanks to the facility, as well as recognized two operational changes in service. **MAQP #2947-05** replaced MAQP #2947-04.

D. Current Permit Action

On May 23, 2016, the Department received a notification from CHS for the proposed operation of a temporary portable VCU in place of the existing VCU due to operational issues that CHS has been experiencing with it. The notification also explained that CHS intends to replace both the existing permanent VCU and the portable temporary VCU with a new larger VCU at a future date. The Department requested additional information from CHS in a June 2, 2016 correspondence in order to justify that the proposed temporary VCU could be treated as a like kind replacement and for CHS to request that the MAQP be administratively amended to allow for the operation of only a single VCU at any time. CHS provided this additional information and administrative amendment request on June 3, 2016. The current permit action updates the permit conditions related to the VCU to allow for a like kind replacement and allow for the operation of a single VCU at any given time in accordance with ARM 17.8.745(2) and ARM 17.8.764(1)(b). In addition, the Department has updated the Permit Analysis to reference the appropriate rules and statutes applying to incinerators. **MAQP #2947-06** replaces MAQP #2947-05.

E. Additional Information

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

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the 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).

   CHS 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 (SO_2)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO_2)
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone (O_3)
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide (H_2S)
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead (Pb)
10. ARM 17.8.223 Ambient Air Quality Standards for Particulate Matter with an Aerodynamic Diameter of Ten Microns or Less (PM_{10})

CHS 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 are taken to control emissions of airborne particulate matter. (2) Under this rule, CHS 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 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 or authorize to be discharged into the atmosphere PM in excess of the amount set forth in this rule.

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

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

7. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.

8. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, NSPS. CHS 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 XX – Standards of Performance for Bulk Gasoline Terminals applies to loading racks at bulk gasoline (incl. denatured ethanol) terminals that load product into gasoline (incl. denatured ethanol) tank trucks which commenced construction or modification after December 17, 1980.

9. 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 Part 63 as listed below.

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart as listed below:

   b. 40 CFR 63, Subpart BBBBBB – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities establishes national emission limitations and management practices for hazardous air pollutants (HAPs) emitted from area source gasoline distribution bulk terminals, bulk plants, and pipeline facilities. This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices. Subpart BBBBBB applies to each area source bulk gasoline terminal that is not subject to the control requirements of 40 CFR 63, Subpart R. The Glendive Bulk Petroleum Terminal is not subject to the provisions of 40 CFR 63, Subpart R therefore, it is subject to the provisions of 40 CFR 63, Subpart BBBBBB. The compliance dates and the required recordkeeping, reporting, best management practices, and emissions limitations vary depending on the compliance methods chosen.

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. CHS 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. CHS was not required to submit a fee as the action was an administrative amendment.

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. CHS has a PTE greater than 25 tons per year of 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. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (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 not required for the current permit action because the permit change is considered an administrative permit change.

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 CHS 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.

15. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to the Department for incineration facilities subject to 75-2-215, Montana Code Annotated (MCA).

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 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).

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 single HAP, PTE > 25 tons/year of combined 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 #2947-06 for CHS, the following conclusions were made:

   a. CHS has requested that federally-enforceable permit operation limits be established to maintain the facility's PTE to less than 100 tpy for any pollutant.

   b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tpy of combined HAPs.

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

   d. This facility is subject to current NSPS (40 CFR 60, Subpart XX).

   e. This facility is subject to current NESHAP standard (40 CFR 63, Subpart BBBBBB).

   f. This source is not a Title IV affected source.

   g. This source is not a solid waste combustion unit.

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

   CHS requested federally-enforceable permit limitations to remain a minor source of emissions with respect to Title V. Based on these limitations, the Department

determined that this facility is not subject to the Title V Operating Permit Program. However, in the event that the EPA makes minor sources that are subject to NSPS obtain a Title V Operating Permit; this source will be subject to the Title V Operating Permit Program.

i. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.

i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.

ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 17.8.1204(3)(a) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

I. MCA 75-2-103, Definitions provided, in part, as follows:

1. "Incinerator" means any single or multiple-chambered combustion device that burns combustible material, alone or with a supplemental fuel or catalytic combustion assistance, primarily for the purpose of removal, destruction, disposal, or volume reduction of all or any portion of the input material.

2. "Solid waste" means all putrescible and nonputrescible solid, semisolid, liquid, or gaseous wastes, including, but not limited to...air pollution control facilities.

J. MCA 75-2-215, Solid or hazardous waste incineration – additional permit requirements:

1. MCA 75-2-215 requires air quality permits for all new commercial solid waste incinerators; therefore, CHS must obtain an air quality permit for the VCU.

2. MCA 75-2-215 requires the applicant to provide, to the Department's satisfaction, a characterization and estimate of emissions and ambient concentrations of air pollutants, including hazardous air pollutants from the incineration of solid waste. The Department determined that the information submitted in the initial MAQP application was sufficient to fulfill this requirement.

3. MCA 75-2-215 requires that the Department reach a determination that the projected emissions and ambient concentrations constitute a negligible risk to public health, safety, and welfare. The Department completed a health risk assessment based on an emissions inventory and ambient air quality modeling for this MAQP application. Based on the results of the emission inventory, modeling, and the health risk assessment, the Department determined that CHS complies with this requirement.

4. MCA 75-2-215 requires the application of pollution control equipment or procedures that meet or exceed BACT. The Department determined that the design of the incinerator and operating the incinerator according to the manufacturer-recommended operation procedures constitutes BACT.

III. BACT Determination

A BACT determination is required for each new or modified source. CHS 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 used.

A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

IV. Emission Inventory

Potential to Emit in Tons Per Year Allowable Flow Proportioned through Tanks						
Source	**VOC**	**$PM/PM_{10}/PM_{2.5}$**	**NO_X**	**CO**	**SO_2**	**HAPs**
Tank 1	7.95					
Tank 2	0.36					
Tank 3	0.27					
Tank 4	0.27					
Tank 5	5.96					
Tank 6	0.09					
Tank 7	0.39					
Tank 8	0.99					
Tank 9	1.18					
Tank 10	2.07					
Tank 601	1.75					
Tank 602	2.03					
Tank 603	0.16					
Tank 604	0.21					
Tank 605	0.22					
Tank 607	0.11					
Truck Loading Gasoline	33.08	ND*	3.78	9.45	ND**	
Truck Loading Diesel	2.10					
Fugitive Emissions	0.46					
TOTAL:	59.65		3.78	9.45		0.80

*No Data available for PM emissions, however, non-smoking flares are generally assumed to have nearly negligible PM emissions.

** No data available for SO_2 emissions, however, because of the low sulfur content of the fuel, nearly negligible amounts of SO_2 would be expected.

*** Additional emissions inventory information available in 4/27/2015 correspondence

Gasoline/Ethanol Storage Tanks

Tank	Product	Capacity (bbls)	Roof Type	Maximum Throughput (gal/yr)
Tank 1	Reg. Unl.	54,000	External Floater	74,085,366
Tank 9	Prem. Unl.	31,000	Internal Floater	42,530,488
Tank 601	Reg. Unl.	25,000	Internal Floater	34,298,780
Tank 602	Reg. Unl.	40,000	Internal Floater	54,878,049
Tank 6	Ethanol	10,000	Internal Floater	13,719,512
Tank 7	Ethanol	1,000	Fixed Roof	1,371,951
Tank 8	Ethanol	3,000	Fixed Roof	4,115,854
	TOTAL	**164,000**		**225,000,000**

Total Gasoline Permit Throughput Limit 225,000,000 gallons

Diesel Storage Tanks

Tank	Product	Capacity (bbls)	Roof Type	Maximum Throughput (gal/yr)
Tank 2	#1 Diesel	25,000	Fixed Roof	43,140,794
Tank 3	#2 Diesel	25,000	Fixed Roof	43,140,794
Tank 4	#2 Diesel	25,000	Fixed Roof	43,140,794
Tank 10	#1 Diesel	140,000	Fixed Roof	241,588,448
Tank 603	#2 Diesel	16,000	Fixed Roof	27,610,108
Tank 604	#2 Diesel	20,000	Fixed Roof	34,512,635
Tank 605	#1 Diesel	16,000	Fixed Roof	27,610,108
Tank 607	#2 Diesel	10,000	Fixed Roof	17,256,318
	TOTAL	**277,000**		**478,000,000**

Total Diesel Permit Throughput Limit 478,000,000 gallons

Transmix Storage Tanks

Tank	Product	Capacity (bbls)	Roof Type	Annual Total
Tank 5	Transmix	10,000	External Floater	399,550

NOTE: Transmix maximum thoughput determined from very conservative pipeline delivery throughputs consistent with what was utilized to calculate the potential emissions in the original AQP #2947 application.

Emission Source: Truck Loading Gasoline/Ethanol

Tank	Product	Maximum Throughput (gallons)	Maximum Throughput (liters)	VOC Emission Factor [1] (mg/L of gasoline)	CO Emission Factor [2] (mg/L of gasoline)	NOx Emission Factor [3] (mg/L of gasoline)	Collection Efficiency [4]	VOC Emissions (lbs/yr)	CO Emissions (lbs/yr)	NOx Emissions (lbs/yr)
Tank 1	Reg. Unleaded	74,085,366	280,042,683	35.0	10.0	4.0	99.2%	21,783	6,224	2,489
Tank 9	Prem. Unleaded	42,530,488	160,765,244	35.0	10.0	4.0	99.2%	12,505	3,573	1,429
Tank 601	Reg. Unleaded	34,298,780	129,649,390	35.0	10.0	4.0	99.2%	10,085	2,881	1,153
Tank 602	Reg. Unleaded	54,878,049	207,439,024	35.0	10.0	4.0	99.2%	16,135	4,610	1,844
Tank 6	Ethanol	13,719,512	51,859,756	35.0	10.0	4.0	99.2%	4,034	1,153	461
Tank 7	Ethanol	1,371,951	5,185,976	35.0	10.0	4.0	99.2%	403	115	46
Tank 8	Ethanol	4,115,854	15,557,927	35.0	10.0	4.0	99.2%	1,210	346	138
	TOTAL	**225,000,000**	**850,500,000**					**66,155**	**18,902**	**7,561**

[1] Emission factor limit established in permit (mg of VOC per liter of gasoline loaded). Acutal emission factor determined from onsite testing is much lower.
[2] Emission factor limit established in permit (mg of CO per liter of gasoline loaded). Acutal emission factor determined from onsite testing is much lower.
[3] Emission factor limit established in permit (mg of NOx per liter of gasoline loaded). Acutal emission factor determined from onsite testing is much lower.
[4] Collection Efficiency per AP-42 Section 5.2, Figure 5.2-6

Emission Source: Truck Loading Diesel

Tank	Product	Maximum Throughput (gallons)	VOC Emission Factor [1] (lb/1000 gal of diesel)	VOC Emissions (lbs/yr)
Tank 2	#1 Diesel	43,140,794	0.0094	407.6
Tank 3	#2 Diesel	43,140,794	0.0075	323.2
Tank 4	#2 Diesel	43,140,794	0.0075	323.2
Tank 10	#1/#2 Diesel	241,588,448	0.0094	2282.7
Tank 603	#2 Diesel	27,610,108	0.0075	206.8
Tank 604	#2 Diesel	34,512,635	0.0075	258.5
Tank 605	#1 Diesel	27,610,108	0.0094	260.9
Tank 607	#2 Diesel	17,256,318	0.0075	129.3
	Total	**478,000,000**		**4,192**

[1] Emission factor determined from EPA truck loading loss equation (AP-42, Section 5.2, 6/08)

Truck Loading Losses (AP-42, Section 5.2, 6/08)

#2 Diesel	
S = saturation factor (submerged loading with dedicated normal service) (AP-42, Section 5.2, Table 5.2.1, 6/08)	0.6
P = true vapor pressure of fuel oil, psia (46°F)	0.0039
M = molecular weight of vapors, lb/lb-mole	130
T = temperature of bulk liquid, °R	506
eff = control efficiency, % (assuming worst case - no combustion of diesel vapors)	0
L = loading loss, lb/1000 gal of diesel loaded	0.0075

#1 Diesel	
S = saturation factor (submerged loading with dedicated normal service) (AP-42, Section 5.2, Table 5.2.1, 6/08)	0.6
P = true vapor pressure of fuel oil, psia (44°F)	0.0049
M = molecular weight of vapors, lb/lb-mole	130
T = temperature of bulk liquid, °R	504
eff = control efficiency, % (assuming worst case - no combustion of diesel vapors)	0
L = loading loss, lb/1000 gal of diesel loaded	0.0094

FUGITIVE EMISSIONS

Equipment Type	Emission Factor - Light Liquid[1] (kg/hr/source)	Emission Factor - Gas [1] (kg/hr/source)	Number of Fittings	VOC Emissions [2] (lb/yr)	
Valves - Light Liquid Service	4.30E-05		500	186.1	
Valves - Gas Service		1.30E-05	70	17.5	
Pump Seals - Light Liquid Service	5.40E-04		40	416.3	
Pump Seals - Gas Service		6.50E-05	0	0.0	
Fittings (connectors, flanges, etc.) -	8.00E-06				
Fittings (connectors, flanges, etc.) - Gas Service		4.20E-05	350	283.3	
Others - Light Liquid Service	1.30E-04		5	12.5	
Others - Gas Service		1.20E-04	0	0.0	
			Total	**915.78**	**lb VOC / year**
				0.4579	**ton VOC / year**

[1] (EPA - Protocol for Equipment Leak Emission Estimates, Nov. 1995 Table 2-3)
Emission factors are for total organic compounds and include non VOC's such as methane and ethane
[2] Annual VOC emissions = # of fittings x Emission Factor x 8760 hr/yr x 2.2 lb/kg

V. Existing Air Quality

CHS is located in the SE¼ of Section 33, Township 16 North, Range 55 East in Dawson County. This area is considered unclassifiable/attainment for all National Ambient Air Quality Standards (NAAQS).

VI. Ambient Air Impact Analysis

As this permit action is administrative in nature and no associated increases emission will occur as a result, 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 and determined there are no taking or damaging implications.

YES	NO	
✓		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	✓	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	✓	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	✓	4. Does the action deprive the owner of all economically viable uses of the property?
	✓	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?
	✓	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	✓	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?
	✓	7a. Is the impact of government action direct, peculiar, and significant?
	✓	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	✓	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?
	✓	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 was not required under this administrative permitting action.

Analysis Prepared By: Ed Warner
Date: June 3, 2016