November 15, 2016

CHS Incorporated
5325 10th Avenue North
Great Falls, MT 59405

Dear Mr. Kubler:

The Department of Environmental Quality (Department) has made its decision on the Montana Air Quality Permit application for CHS Incorporated. The application was given permit number 2842-03. The Department's decision may be appealed to the Board of Environmental Quality (Board). A request for hearing must be filed by November 30, 2016. This permit shall become final on December 1, 2016, unless the Board orders a stay on the permit.

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.

Conditions: See attached

For the Department,

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

Craig Henrikson P.E.
Environmental Engineer
Air Quality Bureau
(406) 444-6711

JM:CH

Enclosure

MONTANA AIR QUALITY PERMIT

Issued To: CHS Incorporated
5325 10th Avenue North
Great Falls, MT 59405

MAQP: #2842-03
Application Received: 8/19/2016
Additional Information Received: 9/21/2016
Preliminary Determination Issued: 10/27/2016
Department's Decision Issued: 11/15/2016
Permit Final:
AFS #: 013-0015

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to CHS Incorporated (CHS), 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 CHS facility is located in Section 3, Township 20 North, Range 4 East, in Cascade County, Montana.

B. Current Permit Action

On August 19, 2016, the Department of Environmental Quality – Air Quality Bureau (Department) received a request from CHS to incorporate the installation and operation of a 250 horsepower natural gas-fired boiler, a new pellet mill and associated cooler with a cyclone, and storage bins and associated equipment. The current permit action adds this equipment and updates the permit to reflect current language and rule references used by the Department. Additional information was also requested on September 13, 2016, in regards to existing equipment in the permit that is no longer in service. Additional information from the request was received on September 21, 2016. Corrections to the Township, Range, and Section were also made in the permit and the permit analysis.

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 on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

2. 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).

3. 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).

4. CHS shall not cause or authorize the production, handling, transportation or storage of any material unless reasonable precautions to control particulate matter are taken. Such emissions of airborne particulate matter from any stationary source shall not exceed an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308).

5. CHS shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.4 (ARM 17.8.749).

6. CHS shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in Title 40 Code of Federal Regulations (40 CFR) 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (ARM 17.8.340 and 40 CFR 60, Subpart Dc).

7. CHS shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 63, Subpart DDDDDDD – National Emission Standards for Hazardous Air Pollutants for Area Sources: Prepared Feeds Manufacturing (ARM 17.8.342 and 40 CFR 63, Subpart DDDDDDD).

B. Testing Requirements

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

2. The Department may require testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. 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.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. 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 emissions unit,*** change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

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

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 monitoring equipment such as continuous emission monitoring systems (CEMS) or continuous emission rate monitoring systems (CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if 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 therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by 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 Analysis
CHS Incorporated
Permit #2842-03

I. Introduction/Process Description

CHS Incorporated (CHS) owns and operates a livestock feed processing facility. The facility is located in Section 3, Township 20 North, Range 4 East, in Cascade County, Montana.

A. Permitted Equipment

The equipment used at this facility includes, but is not limited to:

1. Grain Receiving (2 pits: One from trucks and one from railcars);
2. 8 Elevator Legs (Enclosed);
3. 65 Storage Bins located inside the building
4. 10 Storage Bins located outside the facility;
5. Hammermill located inside the building;
6. Mixing Scale;
7. Pellet Mill & Cooler #1 (Vented to a Cyclone);
8. Pellet Mill and Cooler #2 (Vented to a Cyclone)'
9. Feed Shipping/Loadout with partial enclosure and Cyclone;
10. Natural Gas Boiler #1;
11. Natural Gas Boiler #2;
12. Steam Rolling Process line;
13. Crumbler located inside the building;
14. Mixer located inside the building;
15. Bagging line located inside the building; and
16. Texturizer system located inside the building.

B. Source Description

This facility receives various grains and produces feed used for livestock. The grain is received via truck and railcar, then it is ground and stored for future use. From this point, it is converted into various size products using one of the pellet mills and steam rolling line, and then shipped out as product in bulk, bag, or pellets.

C. Permit History

On May 13, 1976, GTA Feeds (GTA) received permit #67-051376 and permit #66-051376 from the Cascade County Health Department for the operation of a grain elevator and animal feed manufacturing facility. On July 27, 1994, by order of the Board of Environmental Review, the Cascade County Air Pollution Control Program transferred its air quality permitting program to the Department of Environmental Quality (Department). The Department re-issued all Cascade County Air Quality permits as Montana Air Quality Permits (MAQP). **MAQP #2842-00** replaced any Cascade County permits held by GTA.

On June 22, 1999, the Department received a request to modify MAQP #2842-00. The modification was to transfer the facility name from GTA Feeds to Land O'Lakes/Harvest States Feeds. A steam rolling process line was also added to the facility. **MAQP #2842-01** replaced MAQP #2842-00.

On February 4, 2009, the Department received a request to amend MAQP #2842-01. The amendment was to change the facility name from Land O'Lakes/Harvest States Feeds to CHS. The permit language and rule references were updated to reflect current Department practices. **MAQP #2842-02** replaced MAQP **#**2842-01.

D. Current Permit Action

On August 19, 2016, the Department received a request from CHS to incorporate the installation and operation of a 250 horsepower natural gas-fired boiler, a new pellet mill and cooler with a cyclone, and storage bins and associated equipment. The current permit action adds this equipment and updates the permit to reflect current language and rule references used by the Department. Other equipment has also been removed over time, and the emission inventory has been updated to reflect those changes. This modification request is in response to MDEQ's warning letter dated July 29, 2016, regarding the installation of unpermitted equipment. The Township, Range, and Section were also corrected in both the permit and permit analysis. **MAQP #2842-03** replaces MAQP #2842-02.

E. CHS Comments on Preliminary Determination

Permit Reference	**Comment**	**Department Response**
Permit Analysis, Section I, Item A.2 and A.7	Please reword A.2 to indicate that there is a total of "8 Elevator Legs (Enclosed)". None of these elevators legs are vented to a cyclone. These eight elevator legs include the two mixing legs noted in Item A.7. Please remove Item A.7.	Modified as requested.
Permit Analysis, Section I, Item A.3	Please change "52" to "65" as there are a total of 65 dry storage bins inside the building.	Modified as requested.
Permit Analysis, Section I, Item A.5., Permitted Equipment	Please add the following wording "located inside the building" after Hammermill.	Modified as requested.
Permit Analysis, Section I, Item A., Permitted Equipment	Please add the following equipment: a) Crumbler located inside the building, b) Mixer located inside the building, c) Bagging line located inside the building, and d) Texturizer system located inside the building.	Modified as requested.
Permit Analysis, Section I, Item I.B, Source Description	Please remove the word "blocks" from the second sentence. Blocks are no longer manufactured at this facility. The equipment that formed the blocks was removed prior to 2005.	Modified as requested.
Permit Analysis, Section IV, Emission Inventory	Please remove the reference to "Cyclone Controlled" as the Hammermill is located inside the building and is not connected to a cyclone.	Modified as requested.

F. Additional Information

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

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. 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
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

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 be 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 particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

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

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

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 Part 60, Standards of Performance for New Stationary Sources (NSPS). This facility originally was not an NSPS affected source because it did not meet the definition of any NSPS subpart defined in 40 CFR Part 60. However, with the addition of a new Hurst natural gas boiler, Subpart Dc will now be applicable.

   a. 40 CFR 60, Subpart Dc-Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units applies to all affected facilities constructed, modified, or reconstructed after June 9, 1989 and that has maximum design heat input capacity of 100 million Btu/hr or less, but greater than 10 million Btu/hr. The Clever Brooks boiler used at this facility was manufactured prior to June 9, 1989; therefore, 40 CFR 60, Subpart Dc does not apply to this source. The new Hurst boiler was manufactured in 2014 with a heat rating of 10.5 million Btu/hr and therefore Subpart Dc applies.

   b. 40 CFR 60, Subpart DD-Standards of Performance for Grain Elevators applies to all affected facilities constructed, modified, or reconstructed after August 3, 1978, that have the capacity to store 1 million bushels of grain. This facility does not have the ability to store greater than 1 million bushels of grain; therefore, 40 CFR 60, Subpart DD does not apply to this facility.

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 Part 63, as listed below:

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to an NESHAP Subpart as listed below:

   b. 40 CFR 63, Subpart DDDDDDD—National Emission Standards for Hazardous Air Pollutants for Area Sources: Prepared Feeds Manufacturing. The facility is now subject to Subpart DDDDDDD as a result of ingredients covered under the Subpart.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. CHS submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

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

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

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year (TPY) of any pollutant. CHS has a PTE greater than 25 TPY of particulate matter (PM) and particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}); 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. CHS 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. CHS submitted an affidavit of publication of public notice for the August 19, 2016, issue of the *Great Falls Tribune* a newspaper of general circulation in the City of Great Falls in Cascade County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

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

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

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving 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.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

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

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

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

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

   a. PTE > 100 TPY of any pollutant;

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

   c. PTE > 70 TPY of 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 #2842-03 for CHS, the following conclusions were made:

   a. The facility's PTE is less than 100 TPY for any pollutant.

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

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

   d. This facility is subject to 40 CFR 60, Subpart Dc as a result of the new Natural Gas Boiler #2.

   e. This facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) standards, 40 CFR 63, Subpart A and 40 CFR 63 Subpart, DDDDDDD.

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

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

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

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 which is technically practicable and economically feasible, except that BACT shall be utilized. CHS provided the following analyses for the new Pellet Mill #2 and Cooler #2, the new Boiler #2, and for the reinstallation of an existing cyclone onto the steam rolling mill. The Department reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the Department in order to make the following BACT determination.

#2 Pellet Mill Cooler

A. Electrostatic Precipitator (ESP)

An ESP ionizes the contaminated air flowing between oppositely charged electrodes. These charged particles migrate toward the oppositely charged plates, which are eventually removed and collected at the bottom of the ESP. An ESP can handle large gas volumes and very efficiency at removing small particles with high removal efficiencies ranging from approximately 90% to 99%. While an ESP can achieve high removal efficiencies, the footprint, construction, installation, operation and maintenance costs of an ESP are significantly higher than other control technologies and best management practices. In addition, there are corresponding energy and environmental impacts associated with the operation of an ESP. For these reasons, CHS did not select an ESP as BACT for the #2 Pellet Mill Cooler and steam roller mill.

B. Baghouse

Fabric dust filtration equipment (baghouse) is used to collect dry particles from a gas stream. As the gas stream passes through the fabric dust filter, the dust particles are collected and retained by the fabric. A baghouse is very efficient at removing small particles and high particulate mass loadings, with removal efficiencies commonly ranging from 95% to 99%. A baghouse can achieve high removal efficiencies and the installation and operation costs of a baghouse are considerably less than an ESP. The construction, installation, and operation of a baghouse for the control of a small amount of particulate matter emissions would not be cost effective. In addition, there are energy and environmental impacts that would result relative to the small quantity of particulate matter removed by the baghouse. Therefore, a fabric filter for the #2 Pellet Mill Cooler and Steam Roller Mill was not selected as BACT.

C. Cyclone

Cyclonic separation is a method of removing particulates from an air, gas or liquid stream, with the use of filters, through vortex separation. Rotational effects and gravity are used to separate mixtures of solids and fluids. The method can also be used to separate fine droplets of liquid from a gaseous stream. Overall removal efficiencies can be 90% and higher. CHS has determined, and the Department concurs, that the installation of a new cyclone for the #2 Pellet Mill Cooler and the reinstallation of an existing cyclone on the Steam Roller Mill constitutes BACT.

Boiler #2

Boilers are capable of using a number of different fuels such as natural gas, propane, distillate fuel oil, wood, coal etc. The combustion of natural gas or propane in a boiler results in the lowest emissions of criteria pollutants. The use of low NOx burners in a natural gas-fired boiler results in lower NOx emissions. Typically, a low NOx burner would be specified at the time of purchase. Boiler #2 is already in service and it would be unreasonable at this time based on the size of the burner to convert the burner over to a low NOx burner design. Therefore, the use of good combustion practices and the use of natural gas as fuel is selected to represent BACT for this existing Boiler #2.

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

IV. Emission Inventory

	Emissions Tons/Year [PTE]						
	PM	PM10	PM2.5	CO	NOx	SO2	VOC
Grain Receiving	15.33	3.42	0.57	--	--	--	--
Elevator Legs/ Headhouse	64.12	35.74	6.10	--	--	--	--
Pellet Mill #1 and Associated Cooler #1	22.08	11.04	5.52	--	--	--	--
Pellet Mill #2 and Associated Cooler #2	22.08	11.04	5.52	--	--	--	--
Natural Gas Boiler #1	0.27	0.27	0.27	2.98	3.55	0.02	0.20
Natural Gas Boiler #2	0.34	0.34	0.34	3.79	4.51	0.03	0.25
Storage Bins	10.95	2.76	0.48	--	--	--	--
Steam Rolling Process Line	4.60	2.30	1.10	--	--	--	--
Hammermill	4.40	2.20	0.18				
Feed Shipping	1.45	0.35	0.18	--	--	--	--
Unpaved Haul Roads	39.95	11.01	0.18	--	--	--	--
EMISSION EXCLUDING ROADS	145.61	69.46	20.25	6.77	8.06	0.05	0.44

CO, carbon monoxide
NO_X, oxides of nitrogen
PM, particulate matter
PM_{10}, particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$, particulate matter with an aerodynamic diameter of 2.5 microns or less
SO_2, oxides of sulfur
TPY, tons per year
VOC, volatile organic compounds

Grain Receiving Hopper Truck Assumed for All Operations SCC-3-02-005-52

Current Annual Totals 876,000 Tons Per Year As Submitted by CHS Permit Application
Calculations assume 50 tons per hour for each receiving unit (2 Total)
Operating Schedule:

Particulate Emissions: Emission Factor Determination **(Uncontrolled)**

PM Emissions Hopper Truck
Emission Rate 0.035 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.035 lb/ton) * 876000 tons/year * 0.0005 lb/ton= 15.33 tpy

PM10 Emissions
Emission Rate 0.0078 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.0078 lb/ton) * 876000 tons/year * 0.0005 lb/ton= 3.42 tpy

PM2.5 Emissions
Emission Rate 0.0013 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.0013 lb/ton) * 876000 tons/year * 0.0005 lb/ton= 0.57 tpy

Elevator Legs Headhouse and General Handling SCC-3-02-005-30 **Enclosed**

8 Legs each rated at 30 tons per hour (2,102,400)
Current Annual Totals 2,102,400 Tons Per Year

PM Emissions
Emission Rate 0.061 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.061 lb/ton) * 2102400 tons/year * 0.0005 lb/ton= 64.12 tpy

PM10 Emissions
Emission Rate 0.034 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.034 lb/ton) * 2102400 tons/year * 0.0005 lb/ton= 35.74 tpy

PM2.5 Emissions
Emission Rate 0.0058 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.0058 lb/ton) * 2102400 tons/year * 0.0005 lb/ton= 6.10 tpy

Pellet Mill #1 & Cooler #1 SCC-3-02-008-16 Cyclone Controlled
14 tons per hour
Current Annual Totals 122,640 Tons Per Year

PM Emissions
Emission Rate 0.360 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.36 lb/ton) * 122640 tons/year * 0.0005 lb/ton= 22.08 tpy

PM10 Emissions
Emission Rate 0.180 lb/ton [AP-42 Table 9.9.1-1 4/03] PM divided by 2
Calculations (0.18 lb/ton) * 122640 tons/year * 0.0005 lb/ton= 11.04 tpy

PM2.5 Emissions
Emission Rate 0.0900 lb/ton [AP-42 Table 9.9.1-1 4/03] PM10 divided by 2
Calculations (0.09 lb/ton) * 122640 tons/year * 0.0005 lb/ton= 5.52 tpy

Pellet Mill #2 & Cooler #2 SCC-3-02-008-16 Cyclone Controlled
14 tons per hour
Current Annual Totals 122,640 Tons Per Year

PM Emissions
Emission Rate 0.360 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.36 lb/ton) * 122640 tons/year * 0.0005 lb/ton= 22.08 tpy

PM10 Emissions
Emission Rate 0.180 lb/ton [AP-42 Table 9.9.1-1 4/03] PM divided by 2
Calculations (0.18 lb/ton) * 122640 tons/year * 0.0005 lb/ton= 11.04 tpy

PM2.5 Emissions
Emission Rate 0.0900 lb/ton [AP-42 Table 9.9.1-1 4/03] PM10 divided by 2
Calculations (0.09 lb/ton) * 122640 tons/year * 0.0005 lb/ton= 5.52 tpy

Natural Gas Boiler #1
Maximum process rate: 71.00 million standard cubic feet of natural gas burned per year (MMscf/yr)
8.27 MMBtu/hr
PM Emissions:

Emission Factor: 7.60 (lb/MMBtu) (AP-42, Table 1.4-2, Total PM, 7/98)
Calculation: (71 MMscf/hr)*(7.6 lb/MMBtu)*(1 ton/2000 lb)= 0.27 tpy

PM10 Emissions:
Emission Factor: 7.6 lb/MMBtu (AP-42, Table 1.4-2, PM=PM10, 7/98)
Calculation: (71 MMscf/hr)*(7.6 lb/MMBtu)*(1 ton/2000 lb)= 0.27 tpy

PM2.5 Emissions:
Emission Factor: 7.6 lb/MMBtu (AP-42, Table 1.4-2, PM=PM10, 7/98)
Calculation: (71 MMscf/hr)*(7.6 lb/MMBtu)*(1 ton/2000 lb)= 0.27 tpy

NOx Emissions:
Emission Factor: 100 lb/MMBtu (AP-42, Table 1.4-2, PM=PM10, 7/98)
Calculation: (71 MMscf/hr)*(100 lb/MMBtu)*(1 ton/2000 lb)= 3.55 tpy

CO Emissions
Emission Factor: 84 lb/MMBtu (AP-42, Table 1.4-1, 7/98)
Calculation: (71 MMscf/hr)*(84 lb/MMBtu)*(1 ton/2000 lb)= 2.98 tpy

VOC Emissions
Emission Factor: 5.5 lb/MMBtu (AP-42, Table 1.4-1, 7/98)
Calculation: (71 MMscf/hr)*(5.5 lb/MMBtu)*(1 ton/2000 lb)= 0.20 tpy

SO2 Emissions
Emission Factor: 0.6 lb/MMBtu (AP-42, Table 1.4-1, 7/98)
Calculation: (71 MMscf/hr)*(0.6 lb/MMBtu)*(1 ton/2000 lb)= 0.02 tpy

Natural Gas Boiler #2
Maximum process rate: 90.2 million standard cubic feet of natural gas burned per year (MMscf/yr)
PM Emissions:
Emission Factor: 7.6 (lb/MMBtu) (AP-42, Table 1.4-2, Total PM, 7/98)
Calculation: (90.2 MMscf/hr)*(7.6 lb/MMBtu)*(1 ton/2000 lb)= 0.34 tpy

PM10 Emissions:
Emission Factor: 7.6 lb/MMBtu (AP-42, Table 1.4-2, PM=PM10, 7/98)
Calculation: (90.2 MMscf/hr)*(7.6 lb/MMBtu)*(1 ton/2000 lb)= 0.34 tpy

PM2.5 Emissions:
Emission Factor: 7.6 lb/MMBtu (AP-42, Table 1.4-2, PM=PM10, 7/98)
Calculation: (90.2 MMscf/hr)*(7.6 lb/MMBtu)*(1 ton/2000 lb)= 0.34 tpy

NOx Emissions:
Emission 100 lb/MMBtu (AP-42, Table 1.4-2, PM=PM10, 7/98)

Factor:
Calculation: (90.2 MMscf/hr)*(100 lb/MMBtu)*(1 ton/2000 lb)= 4.51 tpy

CO Emissions
Emission Factor: 84 lb/MMBtu (AP-42, Table 1.4-1, 7/98)
Calculation: (90.2 MMscf/hr)*(84 lb/MMBtu)*(1 ton/2000 lb)= 3.79 tpy

VOC Emissions
Emission Factor: 5.5 lb/MMBtu (AP-42, Table 1.4-1, 7/98)
Calculation: (90.2 MMscf/hr)*(5.5 lb/MMBtu)*(1 ton/2000 lb)= 0.25 tpy

SO2 Emissions
Emission Factor: 0.6 lb/MMBtu (AP-42, Table 1.4-1, 7/98)
Calculation: (90.2 MMscf/hr)*(0.6 lb/MMBtu)*(1 ton/2000 lb)= 0.03 tpy

Storage Bin Vent SCC-3-02-005-40 (Uncontrolled)
Current Annual Totals 876,000 Tons Per Year as Submitted by CHS (Equal to receiving rate)

PM Emissions

Emission Rate 0.025 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.025 lb/ton) * 876000 tons/year * 0.0005 lb/ton= 10.95 tpy

PM10 Emissions

Emission Rate 0.0063 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.0063 lb/ton) * 876000 tons/year * 0.0005 lb/ton= 2.76 tpy

PM2.5 Emissions

Emission Rate 0.0011 lb/ton [AP-42 Table 9.9.1-1 4/03]
Calculations (0.0011 lb/ton) * 876000 tons/year * 0.0005 lb/ton= 0.48 tpy

Steam Rolling Process Line **SCC-3-02-008-18** **Cyclone Controlled**
7 tons per hour
Current Annual Totals 61,320 Tons Per Year

PM Emissions
Emission Rate 0.150 lb/ton [AP-42 Table 9.9.1-2 4/03]
Calculations (0.15 lb/ton) * 61320 tons/year * 0.0005 lb/ton= 4.60 tpy

PM10 Emissions
Emission Rate 0.075 lb/ton [AP-42 Table 9.9.1-2 4/03] PM divided by 2
Calculations (0.075 lb/ton) * 61320 tons/year * 0.0005 lb/ton= 2.30 tpy

PM2.5 Emissions
Emission Rate 0.0375 lb/ton [AP-42 Table 9.9.1-2 4/03] PM10 divided by 2

Calculations (0.0375 lb/ton) * 61320 tons/year * 0.0005 lb/ton= 1.15 tpy

Hammermill SCC-3-02-008-17 Enclosed

15 tons per hour

Current Annual Totals 131,400 Tons Per Year

PM Emissions

Emission Rate 0.067 lb/ton [AP-42 Table 9.9.1-2 4/03]

Calculations (0.067 lb/ton) * 131400 tons/year * 0.0005 lb/ton= 4.40 tpy

PM10 Emissions

Emission Rate 0.034 lb/ton [AP-42 Table 9.9.1-2 4/03] PM divided by 2

Calculations (0.0335 lb/ton) * 131400 tons/year * 0.0005 lb/ton= 2.20 tpy

PM2.5 Emissions

Emission Rate 0.0168 lb/ton [AP-42 Table 9.9.1-2 4/03] PM10 divided by 2

Calculations (0.01675 lb/ton) * 131400 tons/year * 0.0005 lb/ton= 1.10 tpy

Feed Shipping Truck Loadout SCC-3-02-008-03

Current Annual Totals 876,000 Tons Per Year as Submitted by CHS
Assumes all loaded out using Trucks

PM Emissions

Emission Rate 0.0033 lb/ton [AP-42 Table 9.9.1-1 4/03]

Calculations (0.0033 lb/ton) * 876000 tons/year * 0.0005 lb/ton = 1.45 tpy

PM10 Emissions

Emission Rate 0.0008 lb/ton [AP-42 Table 9.9.1-1 4/03]

Calculations (0.0008 lb/ton) * 876000 tons/year * 0.0005 lb/ton = 0.35 tpy

PM2.5 Emissions

Emission Rate 0.0004 lb/ton [AP-42 Table 9.9.1-1 4/03 PM10 divided by 2]

Calculations (0.0004 lb/ton) * 876000 tons/year * 0.0005 lb/ton = 0.18 tpy

Unpaved Roadways (Haul Roads)

Emission Factor $EF = k(s/12)^a * (W/3)^b$ [AP-42 13.2.2.2, 11/06]

EF, Emission Factor = lbs Emitted Per Vehicle Mile Traveled (VMT)

k, Empirical Constant PM = 4.9 [AP-42 Table 13.2.2-2, 11/06]

k, Empirical Constant PM_{10} = 1.5 [AP-42 Table 13.2.2-2, 11/06]

k, Empirical Constant $PM_{2.5}$ = 0.15 [AP-42 Table 13.2.2-2, 11/06]

s, Surface Material Silt Content (%) = 7.1 [AP-42 Table 13.2.2-1, 11/06]

W, Mean Vehicle Weight Loaded (tons) = 27 Application

a, Empirical Constant PM = 0.7 [AP-42 Table 13.2.2-2, 11/06]

a, Empirical Constant PM_{10} and $PM_{2.5}$ = 0.9 [AP-42 Table 13.2.2-2, 11/06]

b, Empirical Constant PM , PM10 and $PM_{2.5}$ =	0.45	[AP-42 Table 13.2.2-2, 11/06]	

PM Emissions(uncontrolled): PM30 Miles/Day estimated

Emission Factor	EF = 4.9 * (7.1/12)^0.7 * (27/3)^0.45 =	9.12	lbs/VMT		
Calculations	(9.12 lbs/VMT) * (48 miles/day) =			437.82	lbs/day
	(437.82 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			79.90	TPY
	50% Control Applied			39.95	TPY

PM_{10} Emissions(uncontrolled):

Emission Factor	EF = 1.5 * (7.1/12)^0.9 * (27/3)^0.45 =	2.51	lbs/VMT		
Calculations	(2.51 lbs/VMT) * (48 miles/day) =			120.67	lbs/day
	(120.67 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			22.02	TPY
	50% Control Applied			11.01	TPY

PM2.5 Emissions(uncontrolled):

Emission Factor	EF = 0.15 * (7.1/12)^0.9 * (27/3)^0.45 =	0.33	lbs/VMT		
Calculations	(0.33 lbs/VMT) * (48 miles/day) =			15.63	lbs/day
	(1.63 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			2.85	TPY
	50% Control Applied			1.43	TPY

V. Existing Air Quality

The air quality of the proposed area of operation is considered attainment/unclassified for all pollutants. A narrow area along 10th Avenue South (bounded by 9th Avenue South on the north, 11th Avenue South on the south, 54th Street South on the east and 2nd Street South on the west) was formerly classified as a non-attainment area for CO but has been re-designated to attainment area status under a limited maintenance plan (LMP) effective on July 8, 2002.

VI. Ambient Air Impact Analysis

The area surrounding the facility is predominantly industrial. The updated emission inventory and equipment changes at the facility is similar to the earlier totals and therefore, in the view of the Department, the amount of controlled emissions from this facility will not cause an exceedance 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.

Analysis Prepared By: C. Henrikson
Date: September 13, 2016

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy and Mining Division
Air Quality Bureau
1520 East Sixth Avenue
P.O. Box 200901
Helena, Montana 59620-0901
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: CHS Inc. – CHS Nutrition Great Falls

MAQP Number: #2842-03
Preliminary Determination Issued: 10/27/2016
Department Decision Issued: 11/15/2016
Permit Final:

1. *Legal Description of Site:* The CHS animal mill proposed modification is located at the existing facility approximately 0.5 miles northwest of Malmstrom Air Force Base. The legal site description is location is Section 3, Township 20 North, Range 4 East in Cascade County.

2. *Description of Project:* CHS is proposing to install a 250 horsepower natural gas-fired boiler, a new pellet mill and cooler with a cyclone, and storage bins and associated equipment. A complete list of the permitted equipment is included in Section I.A of the permit analysis.

3. *Objectives of Project:* Increased business and revenue. The proposed facility expansion would provide for process improvements.

4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no action" alternative. The "no action" alternative would deny the issuance of the MAQP to the facility. CHS would lack the process equipment to for creating their product and could potentially lose business to competitors. Any potential air emission increases that would be authorized by issuing the MAQP would not occur. However, the Department does not consider the "no action" alternative to be appropriate because CHS has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no action" alternative was eliminated from further consideration. Other alternatives considered were discussed in the Best Available Control Technology analysis.

5. *A listing of mitigation, stipulations, and other controls*: A list of enforceable conditions, including a BACT analysis, would be included in MAQP #2842-03.

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.

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 add a 250 horsepower natural gas-fired boiler, a new pellet mill and cooler with a cyclone, and storage bins and associated equipment. Conditions requiring control mechanisms have been placed within MAQP #2842-03 to ensure that only minor air quality impacts would occur. Additionally, limitations established within MAQP #2842-03 would minimize air pollution. Overall, any adverse impact on terrestrial and aquatic life and habitats is anticipated to be minor.

B. Water Quality, Quantity, and Distribution

This permitting action would have little or no effect on the water quality, water quantity, and distribution, as there would be no discharge to groundwater or surface water associated with the completed project. Therefore, the project would have minor, if any, impacts to water quality, quantity or distribution in the area.

C. Geology and Soil Quality, Stability, and Moisture

This permitting action would have a minor effect on geology and soil properties with land disturbances associated with construction of the facility. The Department determined that any impacts from deposition would be minor due to dispersion characteristics of pollutants, the atmosphere, and conditions that would be placed in MAQP #2842-03.

D. Vegetation Cover, Quantity, and Quality

The proposed project would have minor impacts on the surrounding vegetation because of new construction at the facility. The existing surrounding land is currently industrial in nature. The PM, PM_{10}, and $PM_{2.5}$ emissions from this project may have a minor effect on the surrounding vegetation; however, the air quality permit associated with this project would contain limitations to minimize the effect of the emissions on the surrounding environment. Overall, this project would have minor effects on the vegetation cover, quantity and quality.

E. Aesthetics

Addition of the 250 horsepower natural gas-fired boiler, a new pellet mill and cooler with a cyclone, storage bins and associated equipment would have minor impacts on the surrounding property from both the visual perspective, as well as noise pollution. Much of the new equipment is being installed inside the existing facility so there are not aesthetic changes.

F. Air Quality

The air quality of the area would realize minor impacts from the proposed project because the facility would emit the following air pollutants: PM, PM_{10}, and $PM_{2.5}$. A small amount of NOx, SO_2, CO and VOCs will also be emitted by the new boiler. These emissions would be minimized by limitations and conditions that would be

included in MAQP #2842-03. While deposition of pollutants would occur as a result of two new equipment, the Department determined that the impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants, the atmosphere (wind speed, wind direction, ambient temperature, etc.), and conditions that would be placed in MAQP #2842-03. The air concentration of pollutants would be relatively small, and the corresponding deposition of those air pollutants would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program, Natural Resource Information System (NRIS) on the original permit application. The area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. Search results identified no animal species of concern within the search radius. Because emission increases are minor, and disturbance is limited, the Department has determined that there will be a minor disturbance to unidentified unique, endangered, fragile, or limited environmental resources in the area.

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

The proposed project would have minor impacts on the demands for the environmental resources of air and water because the facility would be a source of air pollutants. Deposition of pollutants would occur as a result of operating the facility; however, as explained in Section 7.F of this EA, the Department determined that any impacts on air and water resources from the pollutants (including deposition) would be minor. The Department determined that controlled emissions from the source would not cause or contribute to a violation of any ambient air quality standard. Therefore, any impacts to air quality from the addition of the new equipment would be minor.

The proposed project would be expected to have minor impacts on the demand for the environmental resource of energy because of additional energy usage would be required at the site. The impact on the demand for the environmental resource of energy would be minor because the facility is existing and this project just expands the capacity by a small amount. Overall, the impacts for the demands on the environmental resources of water, air, and energy would be minor.

I. Historical and Archaeological Sites

Since the site is an existing facility, located in an industrial area, and because nearly all of the work takes place inside the existing building, the Department determined that the chance of the new equipment impacting any historical and archaeological sites in the area would be minor.

J. Cumulative and Secondary Impacts

The proposed project would cause minor effects on the physical and biological aspects of the human environment because the project would cause a slight increase in emissions of PM, PM_{10}, and $PM_{2.5}$ in the proposed area. However, conditions have been placed in MAQP #2842-03 to ensure that only minor air quality impacts would occur. Limitations would be established in the permit to minimize air pollution. Overall, any impacts to the physical and biological environment would be minor.

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

A. Social Structures and Mores

The proposed project would not cause disruption to any native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project is located in a largely industrial area. The proposed addition of the new equipment would not change the predominant use of the facility since it is already an operating grain mill and elevator for animal feed.

B. Cultural Uniqueness and Diversity

Only minor impacts to the cultural uniqueness and diversity of the area would be anticipated as the location is already largely industrial. Operation of the new equipment is not expected to require additional employees. In addition, based on previous cultural resource inventories in the area, SHPO stated that there is a low likelihood cultural properties will be impacted. Therefore, the cultural uniqueness and diversity of the area would not likely be affected.

C. Local and State Tax Base and Tax Revenue

The proposed project would result in minor impacts to the local and state tax base and tax revenue as a result of the proposed project. However, the proposed project would necessitate construction activities. However, any construction related jobs would be temporary and any corresponding impacts on the tax base/revenue in the area would be minor. Overall, any impacts to the local and state tax base and tax revenue would be minor.

D. Agricultural or Industrial Production

The land at the proposed location is currently used for industrial purposes. The proposed project would have a minor impact on agricultural production as area farmers already have access to the existing facility. However, because the facility expansion would be relatively small by industrial standards, only minor impacts to industrial production would be expected.

E. Human Health

The proposed project would result in minor, if any, impacts to human health. As explained in Section 7.F of this EA, deposition of pollutants would occur; however, the Department determined that the proposed project would comply with all applicable air quality rules, regulations, and standards. These rules, regulations, and standards are designed to be protective of human health. Overall any impacts to public health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would be implemented within an area currently utilized for industrial purposes. No impacts to access and quality of recreational and wilderness activities in the project area are anticipated.

G. Quantity and Distribution of Employment

The proposed project would have minor impacts on the quantity and distribution of employment as a limited number of temporary construction employees would be hired as a result of the proposed project. Any impacts to the quantity and distribution of employment would be minor due to the relatively small size of the facility.

H. Distribution of Population

The proposed project would have minor impacts on the employment and population of the area as only temporary construction employees would be required for the addition of the new equipment. However, any impacts to the quantity and distribution of employment from construction related employment would be minor due to the relatively small size of the facility and the relatively short time period that would be required for constructing the facility. Overall, any impacts to the distribution of population in the area would be minor.

I. Demands of Government Services

There would be minor impacts on the demands for government services because additional time would be required by government agencies to issue MAQP #2842-03 and, in the future, to assure compliance with applicable rules, standards, and conditions that would be contained in MAQP #2842-03. Overall, any demands for government services to regulate the facility or activities associated with the facility would be minor due to the relatively small size of the facility.

J. Industrial and Commercial Activity

Only minor impacts would be expected on local industrial and commercial activity because the proposed project would represent only a minor increase in the industrial and commercial activity in the area. The addition of new equipment would be a relatively small expansion and would take place at the existing facility location.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans and goals affected by issuing MAQP #2842-03. This permit would contain limits for protecting air quality and keeping facility emissions in compliance with any applicable ambient air quality standards. Because the project is small, any impacts from the facility would be minor.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area. Due to the relatively small size of the project, the industrial production, employment, and tax revenue (etc.) impacts resulting from the proposed project would be minor. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #2842-03.

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

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the addition of a 250 horsepower natural gas-fired boiler, a new pellet mill and cooler with a cyclone, storage bins and associated equipment. MAQP #2842-03 would include conditions and limitations to ensure the facility would operate in compliance with all applicable air quality rules and regulations. In addition, there are no major or unknown effects associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Natural Heritage Program and the Montana Historical Society.

Individuals or groups contributing to this EA: Montana Department of Environmental Quality, Montana Natural Heritage Program, Montana Historical Society.

EA prepared by: C. Henrikson
Date: September 13, 2016