



Montana Department of
ENVIRONMENTAL **Q**UALITY

Steve Bullock, Governor
Tracy Stone-Manning, Director

P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

September 17, 2013

Richard Slotness
Malteurop North America, Inc
415 North US Highway 87
Great Falls, MT 59404

Dear Mr. Slotness:

Montana Air Quality Permit #3238-07 is deemed final as of September 17, 2013, by the Department of Environmental Quality (Department). This permit is for the Malteurop North America Inc. plant in Great Falls, Montana. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Julie A. Merkel
Air Permitting Supervisor
Air Resources Management Bureau
(406) 444-3626

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

JM:SJ
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #3238-07

Malteurop North America Incorporated
415 North US Highway 87
Great Falls, MT 59404

September 17, 2013



MONTANA AIR QUALITY PERMIT

Issued To: Malteurop North America Incorporated Montana Air Quality Permit: #3238-07
415 North US Highway 87 Application Received: July 17, 2013
Great Falls, MT 59404 Preliminary Decision Issued: August 14, 2013
Department Decision Issued: August 30, 2013
Permit Final: September 17, 2013
AFS: #013-0035

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Malteurop North America Incorporated (Malteurop), 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 Malteurop facility is located approximately 2 miles north of the City of Great Falls, Montana, and approximately ½ mile west of Black Eagle Road. The legal description of the facility site is the NE ¼ of the SE ¼ of Section 30, Township 21 North, Range 4 East, in Cascade County, Montana.

B. Current Permit Action

On July 17, 2013, the Department of Environmental Quality – Air Resources Management Bureau (Department) received an application from Bison Engineering, Inc., on behalf of Malteurop, for modification of their current MAQP and associated Title V Operating Permit. Malteurop plans to revise its grain handling system to improve efficiency and enhance dust control within the grain processing workhouse. The proposed baghouse replacement will result in a net increase of 12,160 dry standard cubic feet per minute (dscfm) of baghouse air flow capacity. Malteurop proposes to remove Product Load-Out Baghouse BF03 and add a new fabric filter baghouse (BF04) which would complement existing baghouse BF01 and also control product load-out of particulate emissions (currently controlled by BF03).

SECTION II: Conditions and Limitations

A. Operational Requirements

1. Malt and salable malt by-product production shall be limited to 16,000,000 bushels during any rolling 12-month time period (ARM 17.8.749).
2. Malteurop shall not receive more than 456,000 tons of barley during any rolling 12-month time period (ARM 17.8.749).
3. Malteurop shall install, operate, and maintain three fabric filter baghouses, including BF01 – Main Process Baghouse, BF02 – Grain Receiving Baghouse, and BF04 – Product Load-Out and Grain Processing Baghouse, for the control of particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀) from affected operations (ARM 17.8.752).

4. Malteurop shall install, operate, and maintain the Product Load-Out and Grain Processing Baghouse for the control of filterable Particulate Matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$) emissions from affected operations (ARM 17.8.752).
5. Malteurop shall house all barley preparation processes within the workhouse and shall utilize fabric filter baghouse control for emissions from the barley preparation processes (ARM 17.8.752).
6. Malteurop shall unload all barley shipments to underground hoppers. Malteurop shall utilize fabric filter baghouse emission control on the hoppers (ARM 17.8.752).
7. Malteurop shall load all malt and salable malt by-product for shipment via covered conveyors. Malteurop shall utilize fabric filter baghouse emission control on the conveyors (ARM 17.8.752).
8. Each material transfer point for grain receiving and off-loading shall incorporate an enclosure (at least three-sided) for fugitive emission control (ARM 17.8.752).
9. Malteurop shall not cause or authorize the production, handling, storage, or transportation of any material without taking reasonable precautions to control emissions of particulate matter (ARM 17.8.308).
10. Malteurop 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).
11. Malteurop 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.9 and II.A.10 (ARM 17.8.752).
12. Elemental sulfur burning for kiln operations shall be limited to 200 pounds of sulfur per kiln batch (ARM 17.8.749).
13. Total elemental sulfur burning for kiln operations (cumulative for all three kilns) shall be limited to 146,000 pounds during any rolling 12-month time period (ARM 17.8.749).
14. Total elemental sulfur burning for kiln operations (cumulative for all three kilns) shall not exceed 2,190 hours during any rolling 12-month time period (ARM 17.8.749).
15. Malteurop shall burn only pipeline-quality natural gas for the kiln operations process heaters (ARM 17.8.752).
16. Malteurop shall utilize dry low oxides of nitrogen (NO_x) combustion technology to control emissions from the HEATEC Heater #1 (25 million British thermal units per hour (MMBtu/hr)), the HEATEC Heater #2 (42 MMBtu/hr), and HEATEC Heater #3 (57.7 MMBtu/hr) (ARM 17.8.752).
17. The HEATEC Heater #4 shall not exceed 57.7 MMBtu/hr rated input capacity (ARM 17.8.749).

18. Malteurop shall install and operate the HEATEC Heater #4 with low NO_x burners and flue gas recirculation (ARM 17.8.752).
19. The design of each kiln shall include a screw auger for movement of malt product/by-product out of the kiln and the kiln heat exchanger shall be located at the top of each kiln (ARM 17.8.749).

B. Emission Limitations

1. PM₁₀ emissions from the main fabric filter baghouse (BF01) shall be limited to the following (ARM 17.8.749):
 - i. 0.010 grains per dry standard cubic foot (gr/dscf) of air-flow
 - ii. 5.73 pounds per hour (lb/hr)
2. PM₁₀ emissions from the grain receiving fabric filter baghouse (BF02) shall be limited to the following (ARM 17.8.749):
 - i. 0.010 gr/dscf of air-flow
 - ii. 0.62 lb/hr
3. PM₁₀ emissions from the product load-out and grain processing baghouse (BF04) shall be limited to the following (ARM 17.8.752):
 - i. 0.010 gr/dscf of air-flow
 - ii. 1.37 lb/hr
4. Emissions from the MOCO process Heater #1 (53.4 MMBtu/hr capacity) shall not exceed the following (ARM 17.8.749):

NO _x	5.24 lb/hr calculated on a 1-hour averaging period
Carbon monoxide (CO)	4.40 lb/hr calculated on a 1-hour averaging period
5. Emissions from the Johnston process Heater #1 (24.4 MMBtu/hr capacity) shall not exceed the following (ARM 17.8.749):

NO _x	2.39 lb/hr calculated on a 1-hour averaging period
CO	2.01 lb/hr calculated on a 1-hour averaging period
6. Emissions from the Johnston process Heater #2 (24.4 MMBtu/hr capacity) shall not exceed the following (ARM 17.8.749):

NO _x	2.39 lb/hr calculated on a 1-hour averaging period
CO	2.01 lb/hr calculated on a 1-hour averaging period
7. Emissions from the HEATEC process Heater #1 (27.0 MMBtu/hr capacity) shall not exceed the following (ARM 17.8.749):

NO _x	1.32 lb/hr calculated on a 1-hour averaging period
CO	2.22 lb/hr calculated on a 1-hour averaging period

8. Emissions from the HEATEC process Heater #2 (34.4 MMBtu/hr capacity) shall not exceed the following (ARM 17.8.749):

NO _x	1.69 lb/hr calculated on a 1-hour averaging period
CO	2.83 lb/hr calculated on a 1-hour averaging period

9. Emissions from the HEATEC process Heater #3 (57.7 MMBtu/hr capacity) shall not exceed the following (ARM 17.8.749):

NO _x	2.83 lb/hr calculated on a 1-hour averaging period
CO	4.75 lb/hr calculated on a 1-hour averaging period

10. Emissions from the HEATEC process Heater #4 (57.7 MMBtu/hr capacity) shall not exceed the following (ARM 17.8.752):

NO _x	2.11 lb/hr calculated on a 1-hour averaging period
CO	2.83 lb/hr calculated on a 1-hour averaging period

11. Sulfur dioxide (SO₂) emissions from each kiln shall be limited to 33.33 lb/hr during elemental sulfur burning (ARM 17.8.749).

12. Malteurop 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).

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

C. Testing Requirements

1. Malteurop shall conduct Method 5 and Method 9 performance source testing, or another Method as may be approved by the Department, on the main process baghouse (BF01) and monitor compliance with the particulate and opacity limitations in Section II.B.1 and Section II.B.12, respectively. After the initial source tests, additional source testing shall be conducted on an annual basis, or according to another source testing/monitoring schedule as may be approved by the Department in writing (ARM 17.8.105 and ARM 17.8.749).
2. Malteurop shall conduct Method 5 and Method 9 performance source testing, or another Method as may be approved by the Department, on the grain receiving baghouse (BF02) and the Product Load-Out and Grain Processing Baghouse (BF04) to monitor compliance with the particulate limitations of Section II.B.2 and II.B.3 and opacity limitations in Section II.B.12. After the initial source tests, additional source testing shall be conducted on an every 2-year basis, or according to another source testing/monitoring schedule as may be approved by the Department in writing (ARM 17.8.105 and ARM 17.8.749).
3. Malteurop shall conduct performance source testing for NO_x and CO, concurrently, on the MOCO process Heater #1 to monitor compliance with the emission limitations in Section II.B.4. After the initial source tests, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).

4. Malteurop shall conduct performance source testing for NO_x and CO, concurrently, on the Johnston process Heater #1 to monitor compliance with the emission limitations in Section II.B.5. After the initial source tests, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).
5. Malteurop shall conduct performance source testing for NO_x and CO, concurrently, on the Johnston process Heater #2 to monitor compliance with the emission limitations in Section II.B.6. After the initial source tests, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).
6. Malteurop shall conduct performance source testing for NO_x and CO, concurrently, on the HEATEC process Heater #1 to monitor compliance with the emission limitations in Section II.B.7. After the initial source tests, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).
7. Malteurop shall conduct performance source testing for NO_x and CO, concurrently, on the HEATEC process Heater #2 and to monitor compliance with the emission limitations in Section II.B.8. After the initial source tests, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).
8. Malteurop shall conduct performance source testing for NO_x and CO, concurrently, on the HEATEC process Heater #3 to monitor compliance with the emission limitations in Section II.B.9. After the initial source tests, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).
9. Within 60 days after startup, but no later than 180 days after initial startup of the Heater #4, Malteurop shall conduct performance source testing for NO_x and CO, concurrently, on the HEATEC process Heater #4 to monitor compliance with the emission limitations in Section II.B.10. After the initial source tests, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).
10. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of operations, Malteurop shall conduct performance source testing on the kiln stacks to monitor compliance with the SO₂ emission limit in Section II.B.11. The source test shall be conducted while sulfur is being burned in the batch process. After the initial source test, additional source testing shall be conducted as required by the Department (ARM 17.8.105 and ARM 17.8.749).
11. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
12. The Department may require further testing (ARM 17.8.105).

D. Notification Requirements

Malteurop shall notify the Department, in writing, of the startup of the project permitted in MAQP #3238-07. The notice shall be submitted to the Department within 15 days of the actual startup date (postmark and/or email date).

E. Operational Reporting Requirements

1. Malteurop 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. Malteurop shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745(1), 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 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(l)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Malteurop 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).
4. Malteurop shall document, by month, the total amount (in tons) of malt and salable malt by-product produced annually at the facility. By the 25th day of each month, Malteurop shall total the malt and salable malt by-product produced for the previous month. The monthly information will be used to monitor compliance with the rolling 12-month limitation in Section II.A.1. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
5. Malteurop shall document, by month, the total amount (in tons) of barley received annually by the facility. By the 25th day of each month, Malteurop shall total the amount (in tons) of barley received during the previous month. The monthly information will be used to monitor compliance with the rolling 12-month limitation in Section II.A.2. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Malteurop shall document, per kiln batch, the total amount (in pounds) of elemental sulfur burned. Malteurop shall maintain on-site records of the amount of sulfur burned per kiln batch to monitor compliance with the limitation in Section II.A.12. A written report of the compliance verification shall be submitted with the annual emission inventory (ARM 17.8.749).
7. Malteurop shall document, by month, the total amount (in pounds) of elemental sulfur burned for kiln operations. By the 25th day of each month, Malteurop shall total the amount (in pounds) of elemental sulfur burned during the previous month. The monthly information will be used to monitor compliance with the rolling 12-month limitation in Section II.A.13. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

8. Malteurop shall document, by month, the total hours of elemental sulfur burning for kiln operations. By the 25th day of each month, Malteurop shall total the hours of elemental sulfur burning during the previous month. The monthly information will be used to monitor compliance with the rolling 12-month limitation in Section II.A.14. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Malteurop 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 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 Malteurop fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Malteurop 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 Malteurop 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
Malteurop North America Incorporated
MAQP #3238-07

I. Introduction/Process Description

A. Permitted Equipment

Malteurop North America Incorporated (Malteurop) owns and operates a barley malt manufacturing plant with a malt and salable malt by-product production capacity of 16 million bushels per year. The Malteurop plant incorporates the following equipment:

- Four steeping vessels, each 20-meters in diameter
- 8 germinating vessels, each 31-meters in diameter
- Three natural gas fired kilns incorporating the 7 permitted process heaters with a maximum rated heat input of 276.34 million British thermal units per hour (MMBtu/hr) heat input capacity
- A barley washer
- 80 silos for storing barley and malt products
- Three process fabric filter baghouses including a main process fabric filter baghouse (BF01) with an air-flow capacity of 66,800 dry standard cubic feet per minute (dscfm), a grain (barley) receiving fabric filter baghouse (BF02) with an air-flow capacity of 7,250 dscfm, and a product load-out and grain processing fabric filter baghouse (BF04) with an air-flow capacity of 16,000 dscfm
- Associated equipment

B. Source Description

The Malteurop facility is located approximately 2 miles north of the City of Great Falls, Montana, and approximately ½ mile west of Black Eagle Road. The legal description of the facility site is the NE ¼ of the SE ¼ of Section 30, Township 21 North, Range 4 East, in Cascade County, Montana.

Malt is the processed form of barley grain and a basic ingredient in the production of beer. Malting is the process by which barley is transformed into malt. The process begins with “steeping” or soaking of clean barley kernels in large tanks of water called “steeping vessels.” After steeping, the barley is then removed from the steeping vessels and placed in a germinating vessel. After a period of germination, the barley is dried and roasted in a kiln to stop the germination process and reduce the moisture content of the product, now considered malt. At this stage of the process, the malt product can be easily stored and/or shipped to various locations for further processing.

Construction and operation of the proposed malting plant occurred in two phases. After construction of Phase I, the malting plant had capacity to produce from 8 to 10 million bushels of malt per year. After construction of Phase II, the malting plant capacity increased to a maximum of 16 million bushels of malt per year. The entire malting plant encompasses approximately 10 acres of land.

C. Permit History

On May 17, 2003, International Malting Company, LLC (IMC) was issued final **Montana Air Quality Permit (MAQP) #3238-00** for the operation of a barley malt manufacturing plant with an initial Phase I malt and salable malt by-product production capacity of 10 million bushels per year and a final plant (after Phase II) capacity of 16 million bushels per year. The initially permitted IMC plant incorporated the following equipment:

- Four steeping vessels, each 20-meters in diameter
- 8 germinating vessels, each 31-meters in diameter
- Three natural gas fired kilns incorporating 12 primary process heaters rated at 19.1 million British thermal units per hour (MMBtu/hr) heat input capacity per process heater and two natural gas fired booster process heaters rated at 21 MMBtu/hr and 38 MMBtu/hr heat input capacity, respectively
- A barley washer
- 80 silos for storing barley and malt products
- 8 process fabric filter baghouses (Baghouse #1 through Baghouse #8)
- Associated equipment

In addition, potential emissions from the initially proposed and permitted plant exceeded the applicable major source Title V permitting thresholds; therefore, on February 26, 2005, IMC was issued final and effective Title V Operating Permit **#OP3238-00**.

On April 12, 2005, the Department of Environmental Quality – Air Resources Management Bureau (Department) received a complete application for the modification of IMC's MAQP #3238-00. Specifically, the modification included the replacement of 8 fabric filter baghouses (total air-flow capacity of 215,000 dscfm) with a single fabric filter baghouse (air-flow capacity of 66,800 dscfm); replacement of the 14 previously permitted process and booster heaters (total heat input capacity 288.2 MMBtu/hr) with 6 proposed process heaters (total heat input capacity of 218.64 MMBtu/hr); modification of the heating system from air-to-air heat exchangers to air-to-glycol heat exchangers; change in plant layout and configuration; increase in the allowable fabric filter baghouse grain loading limit from 0.005 grains per dry standard cubic feet (gr/dscf) to 0.010 gr/dscf; and a reduction in the allowable amount of elemental sulfur (S) combusted per batch of malt from 500 pounds of S per batch (lb/batch) to 200 lb S/batch.

Prior to this permit action, potential oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter/particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM/PM₁₀) emissions from IMC facility operations exceeded applicable Title V major source permitting thresholds. The changes resulted in a reduction in total facility potential emissions of all regulated pollutants to a level less than Title V major source permitting thresholds. Therefore, the permit action resulted in IMC being permitted as a minor source of emissions, as defined under the Title V permitting program. On June 21, 2005, the Department revoked IMC's Title V operating permit.

Finally, IMC requested that the Department remove the kilns from the emission inventory as potential PM/PM₁₀ emitters. The kilns were re-designed from what was originally analyzed and permitted and according to IMC, no particulate emissions would result from the newly designed kiln operations. Because IMC was unable to provide technical information supporting this claim and because published information contained in the Environmental Protection Agency's (EPA), AP-42, Compilation of Air Pollutant Emissions Factors, indicated that the kiln operations do in fact emit PM/PM₁₀, the Department denied this request and maintained kiln PM/PM₁₀ emissions in the emission inventory under the permit action. **MAQP #3238-01** replaced MAQP #3238-00.

On July 6, 2005, the Department received a complete permit application from IMC for the modification of MAQP #3238-01. Specifically, IMC proposed the installation and operation of two new fabric filter baghouse control units for grain receiving and product load-out operations, respectively. The baghouse controlling grain receiving operations has a maximum nominal flow rate of 7,250 dscfm and a PM₁₀ emission limit of 0.01 grains per dry standard cubic feet (gr/dscf) resulting in the Potential to Emit (PTE) 2.72 tons per year (TPY) of PM₁₀. The product load-out baghouse will have a maximum nominal flow rate of 3,480 dscfm and a PM₁₀ emission limit of 0.01 gr/dscf, resulting in the PTE 1.31 TPY of PM₁₀.

In addition, the main process baghouse (BF01) flow rate used in the ambient air quality impact analysis conducted for MAQP #3238-01 was incorrectly reported as 59,335 actual cubic feet per minute (acfm). The correct flow rate for the affected unit is 77,404 acfm (66,800 dscfm). The modeling analysis submitted for the affected permit action addressed this correction.

Further, on August 22, 2005, the Department received comments from IMC on the Department's Preliminary Determination (PD). Specifically, IMC requested the removal of the 1-hour averaging time period requirement for the applicable baghouse pound per hour (lb/hr) emission rate limits and the removal of the applicable baghouse flow-rate limitations included in the PD.

Based on the information contained in the comment letter, the Department recognized that the 1-hr averaging times for the lb/hr applicable baghouse emission limits have the effect of creating an overly stringent compliance demonstration for the affected units, in this case. Further, because the permit imposes grain loading and lb/hr emission limits on the baghouse(s) and because these limits together ensure that compliant actual emissions will not exceed emissions analyzed under the ambient air quality impact analysis conducted for the permit modification, the Department determined that the baghouse flow-rate limitations represented redundant permit requirements, in this case. Therefore, the Department modified the compliance source test requirement for the affected units to specify that the testing, including averaging times, be conducted pursuant to Method 5 and removed the subject baghouse flow-rate conditions under the Date of Decision (DD). **MAQP #3238-02** replaced MAQP #3238-01.

On November 16, 2006, the Department received notification of proposed changes in operations at the IMC facility in accordance with the provisions contained in the Administrative Rules of Montana (ARM) 17.8.745 (de minimis rule). Specifically, IMC proposed a change in the actual location of the facility fabric filter baghouses and kiln vents, updates to the kiln building dimensions, a change in the type of emission source for baghouse BF03 from a point source to a volume source, and a change in the type of emission source for the kiln vents from volume sources to point sources. The Department determined that all proposed changes can be accomplished in accordance with the de minimis rule.

However, in accordance with ARM 17.8.745(1)(a)(iii) because the current permit action would result in changed conditions of operation at the IMC facility that would affect the plume rise or dispersion characteristics of IMC emissions, IMC was required to submit an ambient air impact analysis (modeling) to demonstrate compliance with the applicable standards. A detailed discussion of ambient impacts associated with the changed conditions of operation at the IMC facility is contained in Section VI, Ambient Air Impact Analysis, of the Permit Analysis to this permit. Further, in accordance with ARM 17.8.745(1)(a)(i) and ARM 17.8.745(2), because the proposed permit action would change the stack on BF02 and BF03 from a vertical to horizontal or downward exhaust and thereby violate an existing condition in the IMC permit (Section II.A.17, MAQP #3238-02), an Administrative Amendment in accordance with ARM 17.8.764 is required for the current permit action. Because modeling conducted for the current permit action shows compliance with all applicable standards without relying on unobstructed vertical

stacks for BF02 and BF03, Section II.A.17 of MAQP #3238-02, which required unobstructed vertical stacks on the affected units, was removed under the current permit action. **MAQP #3238-03** replaced MAQP #3238-02.

On February 14, 2008, the Department received a request for an administrative amendment to MAQP #3238-03 to change the corporate name from IMC to Archer Daniels Midland Company – Malting. This permit action changed the name on MAQP #3238-03. **MAQP #3238-04** replaced MAQP #3238-03.

On February 9, 2009, the Department received a request for an administrative amendment to MAQP #3238-04 to change the corporate name from Archer Daniels Midland Company – Malting to Malteurop. This permit action changed the name on MAQP #3238-04 and updated the permit to reflect the current permit language and rule references used by the Department. **MAQP #3238-05** replaced MAQP #3238-04.

On January 26, 2009, the Department received a de minimis request regarding the relocation of the product load-out baghouse (BF03). This request was reviewed and approved via letter dated March 18, 2009. There were no changes in emissions associated with the change. The request was made to improve worker safety and allow easier access for maintenance. The de minimis request and approval was inadvertently not added to MAQP #3238-05 but was incorporated into the MAQP #3238-06 permit action.

On October 12, 2011, the Department received a permit modification request to add a new natural gas fired heater to the facility. Additionally, Malteurop requested to update the description of an existing boiler from “Future Plant Heater” to “HEATEC Heater #3”. The newest heater is identical to the HEATEC Heater #3 and minor description edits for HEATEC Heater #3 were incorporated to reflect the “input” heater ratings rather than the “output” rating. Each of HEATEC Heaters #3 and #4 have an input rating of 57.7 MMBtu/hr. The potential emissions associated with HEATEC Heater #3 were increased to match HEATEC Heater #4 and updated in the emission inventory within the permit analysis. Additionally, the heater input ratings for the other existing heaters were revised slightly based on information provided by Malteurop and the CO and NO_x limits adjusted accordingly based on AP 42 emission factors. **MAQP #3238-06** replaced MAQP #3238-05.

D. Current Permit Action

On July 17, 2013, the Department of Environmental Quality – Air Resources Management Bureau (Department) received an application from Bison Engineering, Inc., on behalf of Malteurop, for modification of their current MAQP and associated Title V Operating Permit. Malteurop plans to revise its grain handling system to improve efficiency and enhance dust control within the grain processing workhouse. The proposed baghouse replacement will result in a net increase of 12,160 dry standard cubic feet per minute (dscfm) of baghouse air flow capacity. Malteurop proposes to remove Product Load-Out Baghouse BF03 and add a new fabric filter baghouse (BF04) which would complement existing baghouse BF01 and also control product load-out of particulate emissions (currently controlled by BF03). MAQP #3238-07 replaces MAQP #3238-06.

E. Response to Public Comments

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 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 test, 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).

Malteurop 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 four 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 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Malteurop 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 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Malteurop 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 is not an NSPS affected source because it does not meet the applicability definition of any NSPS subpart in 40 CFR Part 60.

40 CFR 60, Subpart DD, Standard of Performance for Grain Elevators. This subpart does not apply to the proposed facility because the facility does not meet or exceed the grain storage capacity of an affected source as defined in this 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. Malteurop submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 When Permit Required--Exclusions. 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 facility to obtain an air quality permit or permit modification if they construct, modify or use any air contaminant sources that have the PTE greater than 25 tons per year of any pollutant. Malteurop has the PTE more than 25 tons per year of total PM, PM₁₀, sulfur dioxide (SO₂), NO_x, and CO; 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 are not subject to 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. The current permit action is an administrative amendment and does not require an application. (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. Malteurop submitted an affidavit of publication of public notice for the July 11, 2013 issue of the *Great Falls Tribune*, a newspaper of general circulation in the Town of Great Falls, MT 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 Malteurop 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 one 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 has emissions greater than major source thresholds for greenhouse gas emissions. However, the current permit action does not present an increase in greenhouse gas emissions greater than 75,000 tons per year. The source is otherwise a minor source of all other emissions with respect to PSD. Therefore, specific to this action, the source is not a major stationary source since this facility is not a listed source, the facility's potential to emit is below 250 tons per year of any criteria pollutant, and this action does not increase the potential greenhouse gas emissions by more than 75,000 tons per year. No review from a PSD standpoint was required for this action.

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or a lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #3238-06 for Malteurop, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for all regulated pollutants except for greenhouse gases (GHG). The facility's GHG emissions calculated as carbon dioxide equivalent (CO₂e) exceeds 100,000 tons/year.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not subject to any current NSPS.
 - e. This facility is not subject to any current National Emission Standards for Hazardous Air Pollutants (NESHAP) standards except 40 CFR 61, Subpart M, National Emission Standard for Asbestos.
 - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
 - g. This source is an EPA designated Title V source for Greenhouse Gases.

Prior to MAQP #3238-01, facility operations resulted in emissions of PM, NO_x, and CO which exceeded the applicable Title V major source permitting threshold(s); therefore, the facility was a Title V major source and received final and effective Title V Operating Permit #OP3238-00 on February 26, 2005. However, MAQP #3238-01 modified operations to the extent that potential emissions of all regulated pollutants fell below the applicable Title V threshold(s) making the facility a minor source of emissions as defined under the Title V permit program. Based on that permit action, the Department revoked Title V Operating Permit #OP3238-00 on June 21, 2005. After July 1, 2011, Malteurop is again subject to Title V because it is a major source of regulated pollutants based on GHG emissions.

On May 7, 2010, EPA published the "light duty vehicle rule" (Docket # EPA-HQ-OAR-2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG "Tailoring Rule" (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52,

70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs. Phase II of the Tailoring Rule requires that as of July 1, 2011, sources that did not hold a Title V permit that had potential facility-wide emissions equal to or exceeding 100,000 TPY of CO₂e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit. Therefore, Malteurop was required to apply for a Title V Operating Permit no later than July 1, 2012. Malteurop submitted their application on October 12, 2011 and was issued a final and effective Title V Operating Permit #OP3238-01 on May 31, 2013.

III. BACT Determination

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

Several particulate control technologies were reviewed for applicability in enhancing dust control within the grain processing workhouse. The pollutants of concern are particulate matter, particulate matter with an aerodynamic diameter of 10 microns or less, and particulate matter with an aerodynamic diameter of 2.5 microns or less. Electrostatic Precipitators, Wet Scrubbers, and Fabric Filter Baghouses were reviewed.

Electrostatic Precipitators was proposed as not technically feasible by Malteurop, due to the variable and generally low particulate loadings levels and relatively small exhaust flow rates. Further, electrostatic precipitators would be expected to present a large cost effectiveness compared to other technologies, as electrostatic precipitators are usually employed on large industrial sources, and use large amounts of electricity to treat large exhaust gas flow rates. The Department agreed that further consideration of electrostatic precipitators was not warranted.

The typical control efficiencies of fabric filter baghouses are 99-99.9%. For wet scrubbers, the control efficiency is typically 80%-99.9%. Wet scrubbers also create potential wastewater concerns. Therefore, fabric filters were proposed as BACT for this case, and with the highest control efficiency of remaining technologies, the Department agreed without need for further analyses.

The BACT limits determined for PM₁₀ were 0.01 grains per dry standard cubic foot (gr/dscf) and 1.37 pound per hour (lb/hr). This would result in estimated PM_{2.5} emissions of 0.0017 gr/dscf and 0.23 lb/hr. The proposed BACT technology, control efficiency, and corresponding limits are consistent with other BACT determinations. The proposed BACT would be expected to present control costs comparable to other recently permitted similar sources, and is capable of achieving the appropriate emissions standards.

IV. Emission Inventory

Emissions Source	Potential to Emit in Tons/Year							
	PM	PM ₁₀	PM _{2.5}	NO _x	CO	VOC	SO ₂	CO _{2e}
Main Process Baghouse	50.16	25.08	25.08					
Grain Receiving Baghouse	5.44	2.72	2.72					
Product Load Out and Grain Processing Baghouse	12.00	6.01	1.02					
MOCO Heater #1	1.74	1.74	1.74	22.93	19.26	1.26	0.14	27,684
Johnston Heater #1	0.80	0.80	0.80	10.48	8.80	0.58	0.06	13,023
Johnston Heater #2	0.80	0.80	0.80	10.48	8.80	0.58	0.06	13,023
Heatec #1	0.88	0.88	0.88	5.80	9.74	0.64	0.07	12,909
Heatec #2	1.12	1.12	1.12	7.39	12.41	0.81	0.09	21,687
Heatec #3	1.88	1.88	1.88	12.39	20.81	1.36	0.15	24,785
Heatec #4	1.88	1.88	1.88	9.22	12.38	1.36	0.15	29,817
SO ₂ Emissions - Kilns							36.50	
Fugitive Emissions: Grain Receiving Pits	0.80	0.18	0.18					
Fugitive Emissions: Malt Kilns (3)	25.84	23.12	23.12					
Fugitive Emissions: Malt Load-Out	1.17	0.39	0.39					
Fugitive Emissions: Vehicle Traffic - Paved Roads	0.75	0.43	0.43					
TOTAL --->	105.26	67.03	61.96	78.69	92.20	6.59	37.22	142,928
<i>TITLE V Applicability (Fugitives Excluded) ---></i>	<i>76.70</i>	<i>42.91</i>	<i>37.84</i>	<i>78.69</i>	<i>92.20</i>	<i>6.59</i>	<i>37.22</i>	<i>142,928</i>

Malteurop Emission Inventory Calculation Details

Main Process Baghouse Calculations

Air Flow Capacity: 66800 dscfm
 Operating Hours 8760 hours/year

PM Emissions:

Emission Factor 0.02 gr/dscf (EPA Baghouse Emission Factor)
 Calculations (0.02 gr/dscf) * (66,800.00 dscfm) * 60 min/hr * 1 lb/7000 gr) = 11.45 lbs/hr
 (11.45 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) = 50.16 TPY

PM₁₀ Emissions:

Emission Factor 0.01 gr/dscf (Permit Limit)
 Calculations (0.01 gr/dscf) * (66,800.00 dscfm) * 60 min/hr * 1 lb/7000 gr) = 5.73 lbs/hr
 (5.73 lbs/hr) * (8760 hrs/yr) *(0.0005 tons/lb) = 25.08 TPY

PM_{2.5} Emissions:

Emission Factor	0.01 gr/dscf (Permit Limit)		
Calculations	$(0.01 \text{ gr/dscf}) * (66,800.00 \text{ dscfm}) * 60 \text{ min/hr} * 1 \text{ lb/7000 gr} =$	5.73 lbs/hr	
	$(5.73 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	25.08 TPY	

Grain Receiving Baghouse

Calculations

Air Flow Capacity:	7250 dscfm
Operating Hours	8760 hours/year

PM Emissions:

Emission Factor	0.02 gr/dscf (EPA Baghouse Emission Factor)		
Calculations	$(0.02 \text{ gr/dscf}) * (7,250.00 \text{ dscfm}) * 60 \text{ min/hr} * 1 \text{ lb/7000 gr} =$	1.24 lbs/hr	
	$(1.24 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	5.44 TPY	

PM₁₀ Emissions:

Emission Factor	0.01 gr/dscf (Permit Limit)		
Calculations	$(0.01 \text{ gr/dscf}) * (7,250.00 \text{ dscfm}) * 60 \text{ min/hr} * 1 \text{ lb/7000 gr} =$	0.62 lbs/hr	
	$(0.62 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	2.72 TPY	

PM_{2.5} Emissions:

Emission Factor	0.01 gr/dscf (Permit Limit)		
Calculations	$(0.01 \text{ gr/dscf}) * (8,760.00 \text{ dscfm}) * 60 \text{ min/hr} * 1 \text{ lb/7000 gr} =$	0.62 lbs/hr	
	$(0.62 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	2.72 TPY	

Product Load-Out and Grain

Processing Baghouse

Calculations

Air Flow Capacity:	16,000 dscfm
Operating Hours	8760 hours/year

PM Emissions:

Emission Factor	0.02 gr/dscf (EPA Baghouse Emission Factor)		
Calculations	$(0.02 \text{ gr/dscf}) * (16,000 \text{ dscfm}) * 60 \text{ min/hr} * 1 \text{ lb/7000 gr} =$	2.74 lbs/hr	
	$(2.74 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	12.0 TPY	

PM₁₀ Emissions:

Emission Factor	0.01 gr/dscf (BACT Permit Limit)		
Calculations	$(0.01 \text{ gr/dscf}) * (16,000 \text{ dscfm}) * 60 \text{ min/hr} * 1 \text{ lb/7000 gr} =$	1.37 lbs/hr	
	$(1.37 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	6.01 TPY	

PM_{2.5} Emissions:

Emission Factor	0.002 gr/dscf (Estimate based on BACT Permit Limit)		
Calculations	$(0.002 \text{ gr/dscf}) * (16,000 \text{ dscfm}) * 60 \text{ min/hr} * 1 \text{ lb/7000 gr} =$	0.23 lbs/hr	
	$(0.27 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) =$	1.02 TPY	

MOCO Heater #1 (Up to 53.4 MMBTU/hr)

Heater Input Capacity	53.4	MMBtu/hr
Operating Hours	8760	hours/year
Natural Gas Heating Value	1020	MMBtu/MM scf (AP-42-Table 1.4-2)

PM Emissions:

Emission Factor	7.6	lb/MM scf (AP-42, Table 1.4-2)			
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (53.40 \text{ MMBtu}/\text{hour}) =$ $(0.40 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$			0.40	lbs/hr
				1.74	TPY

PM₁₀ Emissions:

Emission Factor	7.6	lb/MM scf (AP-42, Table 1.4-2)			
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (53.40 \text{ MMBtu}/\text{hour}) =$ $(0.40 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$			0.40	lbs/hr
				1.74	TPY

PM_{2.5} Emissions:

Emission Factor	7.6	lb/MM scf (AP-42, Table 1.4-2)			
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (53.40 \text{ MMBtu}/\text{hour}) =$ $(0.40 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$			0.40	lbs/hr
				1.74	TPY

NO_x Emissions

Emission Factor	100	lb/MM scf (AP-42, Table 1.4-2)			
Calculations	$(100 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (53.40 \text{ MMBtu}/\text{hour}) =$ $(5.24 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$			5.24	lbs/hr
				22.93	TPY

CO Emissions

Emission Factor	84	lb/MM scf (AP-42, Table 1.4-2)			
Calculations	$(84 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (53.40 \text{ MMBtu}/\text{hour}) =$ $(4.40 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$			4.40	lbs/hr
				19.26	TPY

VOC Emissions

Emission Factor	5.5	lb/MM scf (AP-42, Table 1.4-2)			
Calculations	$(5.5 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (53.40 \text{ MMBtu}/\text{hour}) =$ $(0.29 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$			0.29	lbs/hr
				1.26	TPY

SO₂ Emissions

Emission Factor	0.6	lb/MM scf (AP-42, Table 1.4-2)			
Calculations	$(0.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (53.40 \text{ MMBtu}/\text{hour}) =$ $(0.03 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$			0.03	lbs/hr
				0.14	TPY

Johnston Heater #1 (Up to 24.4 MMBTU/hr)

Heater Input Capacity	24.4	MMBtu/hr
Operating Hours	8760	hours/year
Natural Gas Heating Value	1020	MMBtu/MM scf (AP-42-Table 1.4-2)

PM Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.18 \text{ lbs/hr}$
 $(0.18 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.80 \text{ TPY}$

PM₁₀ Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.18 \text{ lbs/hr}$
 $(0.18 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.80 \text{ TPY}$

PM_{2.5} Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.18 \text{ lbs/hr}$
 $(0.18 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.80 \text{ TPY}$

NO_x Emissions

Emission Factor 100 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(100 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 2.39 \text{ lbs/hr}$
 $(2.39 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 10.48 \text{ TPY}$

CO Emissions

Emission Factor 84 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(84 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 2.01 \text{ lbs/hr}$
 $(2.01 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 8.80 \text{ TPY}$

VOC Emissions

Emission Factor 5.5 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(5.5 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.13 \text{ lbs/hr}$
 $(0.13 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.58 \text{ TPY}$

SO₂ Emissions

Emission Factor 0.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(0.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.01 \text{ lbs/hr}$
 $(0.01 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.06 \text{ TPY}$

Johnston Heater #2 (Up to 24.4 MMBTU/hr)

Heater Input Capacity	24.4	MMBtu/hr
Operating Hours	8760	hours/year
Natural Gas Heating Value	1020	MMBtu/MM scf (AP-42-Table 1.4-2)

PM Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.18 \text{ lbs/hr}$
 $(0.18 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.80 \text{ TPY}$

PM₁₀ Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.18 \text{ lbs}/\text{hr}$
 $(0.18 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 0.80 \text{ TPY}$

PM_{2.5} Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.18 \text{ lbs}/\text{hr}$
 $(0.18 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 0.80 \text{ TPY}$

NO_x Emissions

Emission Factor 100 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(100 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 2.39 \text{ lbs}/\text{hr}$
 $(2.39 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 10.48 \text{ TPY}$

CO Emissions

Emission Factor 84 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(84 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 2.01 \text{ lbs}/\text{hr}$
 $(2.01 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 8.80 \text{ TPY}$

VOC Emissions

Emission Factor 5.5 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(5.5 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.13 \text{ lbs}/\text{hr}$
 $(0.13 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 0.58 \text{ TPY}$

SO₂ Emissions

Emission Factor 0.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(0.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (24.40 \text{ MMBtu}/\text{hour}) = 0.01 \text{ lbs}/\text{hr}$
 $(0.01 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 0.06 \text{ TPY}$

Heatec #1 (Up to 27.0 MMBTU/hr)

Heater Input Capacity	27.0	MMBtu/hr
Operating Hours	8760	hours/year
Natural Gas Heating Value	1020	MMBtu/MM scf (AP-42-Table 1.4-2)

PM Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (27.00 \text{ MMBtu}/\text{hour}) = 0.20 \text{ lbs}/\text{hr}$
 $(0.20 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 0.88 \text{ TPY}$

PM₁₀ Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (27.00 \text{ MMBtu}/\text{hour}) = 0.20 \text{ lbs}/\text{hr}$
 $(0.20 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) = 0.88 \text{ TPY}$

PM_{2.5} Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (27.00 \text{ MMBtu}/\text{hour}) = 0.20 \text{ lbs/hr}$
 $(0.20 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.88 \text{ TPY}$

NO_x Emissions

Emission Factor 50 lb/MM scf (AP-42, Table 1.4-1) (Controlled Low NO_x burner)
 Calculations $(50 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (27.00 \text{ MMBtu}/\text{hour}) = 1.32 \text{ lbs/hr}$
 $(1.32 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 5.80 \text{ TPY}$

CO Emissions

Emission Factor 84 lb/MM scf (AP-42, Table 1.4-1)
 Calculations $(84 \text{ lb/MMscf}) * (1 \text{ MM scf}/8760 \text{ MMBTU}) * (27.00 \text{ MMBtu}/\text{hour}) = 2.22 \text{ lbs/hr}$
 $(2.22 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 9.74 \text{ TPY}$

VOC Emissions

Emission Factor 5.5 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(5.5 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (27.00 \text{ MMBtu}/\text{hour}) = 0.15 \text{ lbs/hr}$
 $(0.15 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.64 \text{ TPY}$

SO₂ Emissions

Emission Factor 0.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(0.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (27.00 \text{ MMBtu}/\text{hour}) = 0.02 \text{ lbs/hr}$
 $(0.02 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.07 \text{ TPY}$

Heatec #2 (Up to 34.41 MMBTU/hr)

Heater Input Capacity	34.4	MMBtu/hr
Operating Hours	8760	hours/year
Natural Gas Heating Value	1020	MMBtu/MM scf (AP-42-Table 1.4-2)

PM Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (34.41 \text{ MMBtu}/\text{hour}) = 0.26 \text{ lbs/hr}$
 $(0.26 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 1.12 \text{ TPY}$

PM₁₀ Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (34.41 \text{ MMBtu}/\text{hour}) = 0.26 \text{ lbs/hr}$
 $(0.26 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 1.12 \text{ TPY}$

PM_{2.5} Emissions:

Emission Factor 7.6 lb/MM scf (AP-42, Table 1.4-2)
 Calculations $(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (34.41 \text{ MMBtu}/\text{hour}) = 0.26 \text{ lbs/hr}$
 $(0.26 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 1.12 \text{ TPY}$

NO_x Emissions

Emission Factor	50 lb/MM scf (AP-42, Table 1.4-1) (Controlled Low NO _x burner)		
Calculations	$(50 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (34.41 \text{ MMBtu}/\text{hour}) =$ $(1.69 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	1.69 lbs/hr	7.39 TPY

CO Emissions

Emission Factor	84 lb/MM scf (AP-42, Table 1.4-1)		
Calculations	$(84 \text{ lb/MMscf}) * (1 \text{ MM scf}/8760 \text{ MMBTU}) * (34.41 \text{ MMBtu}/\text{hour}) =$ $(2.83 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	2.83 lbs/hr	12.41 TPY

VOC Emissions

Emission Factor	5.5 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(5.5 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (34.41 \text{ MMBtu}/\text{hour}) =$ $(0.19 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.19 lbs/hr	0.81 TPY

SO₂ Emissions

Emission Factor	0.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(0.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (34.41 \text{ MMBtu}/\text{hour}) =$ $(0.02 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.02 lbs/hr	0.09 TPY

Heatec #3 (Up to 57.7 MMBTU/hr)

Heater Input Capacity	57.7 MMBtu/hr
Operating Hours	8760 hours/year
Natural Gas Heating Value	1020 MMBtu/MM scf (AP-42-Table 1.4-2)

PM Emissions:

Emission Factor	7.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.43 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.43 lbs/hr	1.88 TPY

PM₁₀ Emissions:

Emission Factor	7.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.43 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.43 lbs/hr	1.88 TPY

PM_{2.5} Emissions:

Emission Factor	7.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.43 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.43 lbs/hr	1.88 TPY

NO_x Emissions

Emission Factor	50 lb/MM scf (AP-42, Table 1.4-1) (Controlled Low NO _x burner)		
Calculations	$(50 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(2.83 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	2.83 lbs/hr	12.39 TPY

CO Emissions

Emission Factor	84 lb/MM scf (AP-42, Table 1.4-1)		
Calculations	$(84 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(4.75 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	4.75 lbs/hr	20.81 TPY

VOC Emissions

Emission Factor	5.5 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(5.5 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.31 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.31 lbs/hr	1.36 TPY

SO₂ Emissions

Emission Factor	0.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(0.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.03 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.03 lbs/hr	0.15 TPY

Heatec #4 (Up to 57.7 MMBTU/hr)

Heater Input Capacity	57.7	MMBtu/hr
Operating Hours	8760	hours/year
Natural Gas Heating Value	1020	MMBtu/MM scf (AP-42-Table 1.4-2)

PM Emissions:

Emission Factor	7.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.43 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.43 lbs/hr	1.88 TPY

PM₁₀ Emissions:

Emission Factor	7.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.43 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.43 lbs/hr	1.88 TPY

PM_{2.5} Emissions:

Emission Factor	7.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(7.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.43 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.43 lbs/hr	1.88 TPY

NO_x Emissions

Emission Factor	37.23 lb/MM scf (Vendor BACT Proposal) (Controlled Low NO _x burner with FGR)		
Calculations	$(37.23 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(2.11 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	2.11 lbs/hr	9.22 TPY

CO Emissions

Emission Factor	49.98 lb/MM scf (Vendor BACT Proposal) (Controlled Low NO _x burner with FGR)		
Calculations	$(49.98 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(2.83 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	2.83 lbs/hr	12.38 TPY

VOC Emissions

Emission Factor	5.5 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(5.5 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.31 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.31 lbs/hr 1.36 TPY	

SO2 Emissions

Emission Factor	0.6 lb/MM scf (AP-42, Table 1.4-2)		
Calculations	$(0.6 \text{ lb/MMscf}) * (1 \text{ MM scf}/1020 \text{ MMBTU}) * (57.70 \text{ MMBtu}/\text{hour}) =$ $(0.03 \text{ lbs}/\text{hr}) * (8760 \text{ hrs}/\text{yr}) * (0.0005 \text{ tons}/\text{lb}) =$	0.03 lbs/hr 0.15 TPY	

Elemental Sulfur Burning

Molecular Weight (Sulfur)	32 lb/mol		
Molecular Weight (SO ₂)	64 lb/mol		
Batch Process Duration	36 hrs/batch (Company Information)		
Sulfur Burning Duration_ Batch Process	3hr/kiln batch (Company Information)		
Maximum Sulfur Burned/Batch	200 lb/kiln batch (Permit Limit)		
Barley Sulfur Absorption	75% (Company Conservative Estimate) (Translates to 25% Sulfur Remaining)		
Kiln Throughput Capacity	380 ton/batch/kiln (Company Information)		
Number of kilns	3 kilns		
Operating Hours	8760 hr/yr		
Combined Total Barley throughput Capacity	(For 3 kilns)		
Calculations:	$380 \text{ ton}/\text{batch}/\text{Kiln} * 1 \text{ batch}/36 \text{ hr}/\text{kiln} * 8760 \text{ hr}/\text{yr} * 3 \text{ kilns} =$	277400	ton/yr
Total Number of Batches Processed/Year (Combined 3 Kilns)			
277,400 tons/yr*1 batch/380 tons =		730	batches

Sulfur Burning Duration

Calculations:	$730 \text{ batches}/\text{yr} * 3 \text{ hr S burning}/\text{batch} =$	2190	hr S burning/yr
---------------	---	------	-----------------

SO₂ Emissions - Kilns

Calculations:	$200 \text{ lbs}/\text{kiln batch} * 1 \text{ kiln batch}/3 \text{ hrs} * 64 \text{ lbs SO}_2/32 \text{ lb S} * (1-.75) =$	33.33	lbs/hr
Calculations:	$33.33 \text{ lb}/\text{hr} * 3 \text{ hr}/\text{batch} * 730 \text{ batches}/\text{yr} * 0.0005 \text{ ton}/\text{lb} =$	36.50	tons/yr

Fugitive Emissions: Grain Receiving Pits

Barley Density	48 lb/bushel		
Process Rate	19,000,000 bushels/yr (Limit based on equipment Capacity)		
Calculations	$48 \text{ lb}/\text{bushel} * 19,000,000 \text{ bushels}/\text{yr} * 0.0005 \text{ ton}/\text{lb} =$	456000	tons/yr

PM Emissions

Emission Factor	0.035 lb/ton (AP-42, Table 9.9.1-1, SCC03-02-005, Hopper Truck)		
Emission Control	90% (3-sided enclosure)		
Calculations	$0.035 \text{ lb}/\text{ton} * 456,000 \text{ ton}/\text{yr} * (1-0.9) * 0.0005 \text{ tons}/\text{lb} =$	0.80	tons/yr

PM₁₀ Emissions

Emission Factor	0.0078 lb/ton (AP-42, Table 9.9.1-1, SCC03-02-005, Hopper Truck)		
Emission Control	90% (3-sided enclosure)		
Calculations	$0.0078 \text{ lb}/\text{ton} * 456,000 \text{ ton}/\text{yr} * (1-0.9) * 0.0005 \text{ tons}/\text{lb} =$	0.18	tons/yr

PM_{2.5} Emissions

Emission Factor	0.0078 lb/ton (AP-42, Table 9.9.1-1, SCC03-02-005, Hopper Truck)		
Emission Control	90% (3-sided enclosure)		
Calculations	0.0078 lb/ton*456,000 ton/yr * (1-0.9)*0.0005 tons/lb=	0.18	tons/yr

Fugitive Emissions: Malt Kilns (3)

Malt Density	34 lb/bushel		
Process Rate	16,000,000 bushels/yr (Company Information)		
Calculations	34 lb/bushel*16,000,000 bushels/yr*0.0005 tons/lb = 272,000 ton/yr		

PM Emissions

Emission Factor	0.19 lb/ton (AP-42, Table 9.9.1-2)		
Calculations	0.19 lb/ton*272,000 ton/yr *0.0005 tons/lb=	25.84	tons/yr

PM₁₀ Emissions

Emission Factor	0.17 lb/ton (AP-42, Table 9.9.1-2)		
Calculations	0.17 lb/ton*272,000 ton/yr *0.0005 tons/lb=	23.12	tons/yr

PM_{2.5} Emissions

Emission Factor	0.19 lb/ton (AP-42, Table 9.9.1-2)		
Calculations	0.19 lb/ton*272,000 ton/yr *0.0005 tons/lb=	23.12	tons/yr

Fugitive Emissions: Malt Load-Out (2 spouts @190 tph and 2 spouts at 100 tph)

Process Rate	272,000 ton/yr (Malt Production Capacity)		
--------------	---	--	--

PM Emissions

Emission Factor	0.086 lb/ton (AP-42, Table 9.9.1-1, SCC03-02-005-52, Truck)		
Emission Control	90% (3-sided enclosure)		
Calculations	0.086 lb/ton*272,000 ton/yr * (1-0.9)*0.0005 tons/lb=	1.17	tons/yr

PM₁₀ Emissions

Emission Factor	0.029 lb/ton (AP-42, Table 9.9.1-1, SCC03-02-005-52, Truck)		
Emission Control	90% (3-sided enclosure)		
Calculations	0.029 lb/ton*272,000 ton/yr * (1-0.9)*0.0005 tons/lb=	0.39	tons/yr

PM_{2.5} Emissions

Emission Factor	0.029 lb/ton (AP-42, Table 9.9.1-1, SCC03-02-005-52, Truck)		
Emission Control	90% (3-sided enclosure)		
Calculations	0.029 lb/ton*272,000 ton/yr * (1-0.9)*0.0005 tons/lb=	0.39	tons/yr

Fugitive Emissions: Vehicle Traffic - Paved Roads

Assumptions:

$$E = k \quad (\text{AP-42, Section 13.2.1.3, 10/02}) \\ (sL/2)^{0.65} * \\ (W/3)^{1.5}$$

Where:

k = 0.028	Particle size multiplier for PM and units of interest, lb/VMT (AP-42, Section 13.2.1.3, 10/02)
k = 0.016	Particle size multiplier for PM10 and units of interest, lb/VMT (AP-42, Section 13.2.1.3, 10/02)
sL = 0.5	Road surface silt loading, g/m2 (worst case default; AP-42, Section 13.2.1.3, 10/02)
W = 20	Average vehicle weight, tons (assumed)
E = 0.196	PM emission factor, lb/VMT (calculated)
E = 0.112	PM ₁₀ emission factor, lb/VMT (calculated)
E = 0.112	PM _{2.5} emission factor, lb/VMT (assumed equal to PM ₁₀)
n = 2	Number of trucks per hour (Company Information)
VMT = 0.44	Vehicle miles traveled (calculated from site plan, MAQP #3238-00)

PM Emissions

Emission Factor:	0.172 lb/hr	(calculated PM emission rate)	
Calculations:	0.172 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.75 ton/yr

PM₁₀ Emissions

Emission Factor:	0.098 lb/hr	(calculated PM ₁₀ emission rate)	
Calculations:	0.098 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.43 ton/yr

PM_{2.5} Emissions

Emission Factor:	0.098 lb/hr	(assumed equal to PM ₁₀)	
Calculations:	0.098 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.43 ton/yr

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 proposed increases in potential emissions of this action are less than 5 tons per year for PM₁₀ and PM_{2.5}. No increase in other pollutants is permitted in this action. In review of ambient air quality monitoring data, previous permit determinations, previous modeling, and the level of proposed increase of emissions in this action, the Department determined that only minor impacts to air quality would be expected.

VII. Taking or Damaging Implication Analysis

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

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

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

VIII. Environmental Assessment

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

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
1520 East Sixth Avenue
P.O. Box 200901
Helena, Montana 59620-0901
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: Malteurop North America Incorporated
415 US Highway 87
Great Falls, MT 59404

Montana Air Quality Permit (MAQP) Number: #3238-07

Preliminary Determination on Permit Issued: 8/14/2013

Department Decision Issued: 8/30/2013

Permit Final: 9/17/2013

1. *Legal Description of Site:* Malteurop North America (Malteurop) submitted an MAQP application to replace an existing baghouse with one of higher capacity, which is located approximately 2 miles north of the City of Great Falls, Montana, and approximately ½ mile west of Black Eagle Road. The legal description of the facility site is the NE ¼ of the SE ¼ of Section 30, Township 21 North, Range 4 East, in Cascade County, Montana.
2. *Description of Project:* The permit application is for the removal of a baghouse and addition of a new baghouse with higher dust handling capabilities. The process description for the facility is discussed in the permit analysis Section of the permit.
3. *Objectives of Project:* To increase control equipment capacity.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Malteurop demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in MAQP #3238-07.
6. *Regulatory Effects on Private Property Rights:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no action alternative” was discussed previously.

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

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:

The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

Minor impacts to terrestrial and aquatic life and habitats may result as the current permit action is allowing for an increase in particulate matter emissions. However, the allowed increase is very small and any impacts would be expected to be minor.

B. Water Quality, Quantity, and Distribution

There would be a minor increase in potential to emit of particulate associated with this permit action. As described in Section 7.F of this EA, the Department determined that any impacts from deposition of pollutants would be minor.

C. Geology and Soil Quality, Stability, and Moisture

No known impacts to the geology, soil quality, or stability and moisture would be expected as a result of the new baghouse installation as the project would take place within an existing footprint, and the emissions increase would be small. Impacts to geology, soil quality, stability, and moisture would be minor, if any at all.

D. Vegetation Cover, Quantity, and Quality

Because there is a minor increase in emissions associated with the permit action, small amounts of pollutant deposition would occur on the surrounding areas. Therefore, there could be impacts on local vegetative cover, quantity and quality; however, any impacts would be expected to be minor.

E. Aesthetics

The new baghouse would be replacing an existing baghouse at an existing operation. Impacts to aesthetics would be expected to be minor.

F. Air Quality

The air quality emission impacts from the project would be expected to be minor because MAQP #3238-07 would include conditions limiting the particulate and the visible emissions (opacity) from the new baghouse. With the controlled amount of emissions, any impacts from the deposition of pollutants would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project could have a minor impact on any unique endangered, fragile, or limited environmental resources. The Department, in an effort to identify any species of special concern associated with the site location, has recently contacted the Montana Natural Heritage Program (MNHP). Search results have concluded there are four species of concern in the area. Area, in this case, is defined by the township, range and section of the proposed site, with an additional one-mile buffer. The species of concern identified in the search include the following three vertebrate animals and one plant.

1. Bald Eagle (Sensitive)
2. Burrowing Owl (Sensitive)
3. Grasshopper Sparrow (Sensitive)
4. Little Indian Breadroot (Sensitive)

As the impacts to all other physical and biological considerations mentioned in Section 7 of this environmental assessment is considered minor, and as the project would take place at an existing and operating facility and would result in a very small increase in potential emissions, the impacts to these species of special concern would be expected to be minor.

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

The operation of the new baghouse at the facility would require additional energy for proper operation. No utilities upgrading is expected to be required for the project. As described in Section 7.F of this EA, pollutant emissions generated from the facility would have minimal impacts on air quality in the immediate and surrounding area. Demands and impacts to the environmental resource of water, air and energy would be expected to be minor.

I. Historical and Archaeological Sites

The project would be located within the existing building footprint. According to previous consultation with the Montana State Historic Preservation Office regarding this location, there is low likelihood of adverse disturbance to any known archaeological or historic site, given previous industrial disturbance within the area. Therefore, the operation would not have an effect on any known historic or archaeological site.

J. Cumulative and Secondary Impacts

The project may cause minor cumulative and secondary impacts to the physical and biological environment in the immediate area because of an associated increase in potential emissions of particulate matter. Little or minor impacts could occur on local vegetation, and some minor impact may be expected on air quality. Sensitive animals and plants are in the vicinity but again minor impacts are expected. Small amounts of additional energy could be consumed at the facility. The Department expects this facility to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #3238-07.

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

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

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

A. Social Structures and Mores

The project would not be expected to alter or disrupt any local lifestyles or communities (social structures or mores) in the area of operation as the permit action would apply to an existing source making minor modifications. Impacts to social structures and mores would be minor, if any at all.

B. Cultural Uniqueness and Diversity

The project would not be expected to impact the cultural uniqueness and diversity of the area because the source would be within the existing facility footprint. Impacts to cultural uniqueness and diversity would be expected to be minor, if any at all.

C. Local and State Tax Base and Tax Revenue

The project would be expected to have little, if any, effect on the local and state tax base and tax revenue because the facility overall production capacity remains unchanged. The project does add air quality control equipment. Any impacts to local and state tax base and revenue would be expected to be minor.

D. Agricultural or Industrial Production

The project would be located within an existing footprint. No increase in production capacity would be allowed as part of the permit action. A slight increase in allowable emissions would be permitted. Impacts to agricultural or industrial production would be expected to be minor, if any at all.

E. Human Health

MAQP #3238-07 would incorporate conditions with a goal that the project would be in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. Since these conditions would be incorporated, only minor impacts would be expected from the permitting of this project.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would not be expected to affect any access to wilderness activities because of the lack of wilderness areas in the proximity. MAQP #3238-07 would contain limits on opacity (visible emissions) and would limit allowable particulate matter emissions. Any impacts to recreational and wilderness activities would be expected to be minor.

G. Quantity and Distribution of Employment

The proposed project would not be expected to impact the quantity and distribution of employment in the area as the number of employees is not expected to change as a result of this project. Construction activity will be required to install the new baghouse. Any impacts to quantity and distribution of employment would be expected to be minor.

H. Distribution of Population

The proposed project would not be expected disrupt the normal population distribution in the area because the project will be located within the existing building footprint. Construction activity will be required to install the new baghouse. Any impacts to distribution of populations would be expected to be minor.

I. Demands of Government Services

The potential for a minor increase on traffic on existing roadways in the area while the project is being installed exists. In addition, government services may be required for acquiring the appropriate permits from government agencies. Demands for government services would be expected to be minor.

J. Industrial and Commercial Activity

The project would potentially create a minor increase in the industrial activity associated with installation work. Additionally, an increase in the amount of particulates captured by the dust control system would occur. The Department would expect any impacts to industrial and commercial activity to be minor.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project. The state and national ambient air quality standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

The proposed project is expected to have little or very minor cumulative and secondary impacts to the social and economic environment in the immediate area because the facility is already existing. During the construction phase of the upgrade, some increase in industrial activity and demand for government services may occur but once the project is complete, demand should return to normal.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: All potential effects resulting from construction and operation of the project are minor; therefore, an EIS is not required. In addition, the source would be applying the Best Available Control Technology and the analysis indicates compliance with all applicable air quality rules and regulations.

Other groups or agencies contacted or which may have overlapping jurisdiction: Department of Environmental Quality - Permitting and Compliance Division (Air Resources Management Bureau), Montana Natural Heritage Program; and State Historic Preservation Office (Montana Historical Society).

Individuals or groups contributing to this EA: Department of Environmental Quality (Air Resources Management Bureau), Montana Natural Heritage Program, and State Historic Preservation Office (Montana Historical Society).

EA Prepared By: Shawn Juers
July 23, 2013