DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING AND COMPLIANCE DIVISION
Air and Waste Management Bureau

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RTE.	ACT.	ACC.
EPA-D	CC	9/2
EPA-M	CC	"
EQC	CC	"
JEF	CC	"
JEF	FILE	9-3
TECH	ADM	ENF

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September 2, 1997

Steve Chambers
Montana Specialty Mills, LLC
300 3rd Street, NW
Great Falls, Montana 59403

Dear Mr. Chambers:

Air Quality Permit #2968-01 is deemed final as of August 28, 1997 by the Department of Environmental Quality. This permit is for a vegetable oil production plant. 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,

Charles Homer
Acting Supervisor, Air Quality Program

CH:tf

Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Air Quality Permit #2968-01

Montana Specialty Mills, LLC
300 3rd Street, Northwest
Great Falls, Montana 59403

August 28, 1997

AIR QUALITY PERMIT

Issued To: Montana Specialty Mills, LLC
300 3rd Street, NW
Great Falls, MT 59403

Permit #2968-01
Permit #2968-00 Issued: 12/16/96
Modification Request Received: 7/24/97
Department's Decision on
Modification Issued: 8/12/97
Permit Final: 8/28/97

An air quality permit is granted to Montana Specialty Mills, LLC (Specialty Mills), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA) as amended, and the Administrative Rules of Montana (ARM), 17.8.701, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Location: The Montana Specialty Mills LLC Grain Elevator and Vegetable Oil Plant (Specialty Mills) is located at 300 3rd Street, Northwest and B.N. tracks, in Great Falls, Montana. The legal location of this facility is Lot 6, Section 2, Township 20 N, Range 3 E, in Cascade County, Montana.

B. Description: This facility consists of two different processes. One is a grain elevator facility that stores raw material and finished product for the vegetable oil plant. The other is the actual vegetable oil processing plant which processes flax, rape seed, canola, and mustard seed and produces various types of vegetable oils.

C. Current Permitting Action: This permit action reflects the fact that Koch Agri Services has sold the facility to Montana Specialty Mills, LLC. Montana Specialty Mills requested, on July 24, 1997, that permit #2968-00 be modified to reflect the change in ownership. Permit **#2968-01** replaces permit #2968-00.

Section II: Limitations and Conditions

A. Emission Control Requirements

1. Specialty Mills shall operate and maintain the cyclone on the Hammermill as specified in permit application #2968-00 (ARM 17.8.710).

2. Specialty Mills shall operate and maintain the enclosed elevator legs on all grain elevator legs as specified in permit application #2968-00 (ARM 17.8.710).

3. Specialty Mills may not cause or authorize the use of any street, road, or parking area without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

B. Emission Limitations

1. Specialty Mills shall not cause or authorize to be discharged into the outdoor atmosphere from any source installed on or before November 23, 1968,

including but not limited to the 1946 Ajax Hammermill and the 1964 Burnham boiler, emissions that exhibit an opacity of 40% or greater averaged over six (6) consecutive minutes (ARM 17.8.304).

2. Specialty Mills shall not cause or authorize to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, emissions that exhibit an opacity of 20% or greater averaged over 6 minutes (ARM 17.8.304).

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

C. Emissions Testing Requirements

1. Within 180 days of permit issuance, an EPA Method 9 opacity test and/or methods and procedures must be performed on the following equipment to demonstrate compliance with the opacity limitations contained in Section II.B. (ARM 17.8.105):

   a. Ajax Hammermill cyclone stack;
   b. Two (2) Universal Bucket elevators;
   c. Three (3) Veri Flow Bucket Elevators; and
   d. All truck and railcar unloading and loadout areas.

2. All source tests must be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

3. The department may require further testing (ARM 17.8.105).

D. Reporting Requirements

1. All records compiled in accordance with this permit must be maintained by Specialty Mills as a permanent business record for at least five (5) years following the date of the measurement, and must be available at the plant site for inspection by the department. This information must be submitted to the department upon request (ARM 17.8.710)

2. Specialty Mills 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 identified in the most recent emission inventory report and sources identified in Section I of this permit.

   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 units as required by the department (ARM 17.8.505).

Section III: General Conditions

A. Inspection - The recipient shall allow the department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if the recipient fails to appeal as indicated below.

C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving the permittee of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.701, *et seq.* (ARM 17.8.717).

D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.

E. Appeals - Any person or persons who are jointly or severally adversely affected by the department's decision may request, within fifteen (15) days after the department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The department's decision on the application is not final unless fifteen (15) days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the department's decision until the conclusion of the hearing and issuance of a final decision by the Board.

F. Permit Inspection - As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by department personnel at the location of the permitted source.

G. Construction Commencement - Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.

H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, the continuing validity of this permit is conditional upon the payment by the permittee of an annual operation fee as required by that Section and rules adopted thereunder by the Board of Environmental Review.

Permit Analysis
Montana Specialty Mills, LLC.
Vegetable Oil Plant and Grain Elevator
Permit #2968-01

I. Introduction/Process Description

A. Permit History

On November 6, 1996, Koch Agri Services submitted a complete permit application to operate their Montana Vegetable Oil Processing Plant and Grain Elevator located at 300 3rd St NW in Great Falls, Montana. The legal description of the location is Lot 6, Section 2, Township 20 N, Range 3 E, in Cascade County.

B. Current Permitting Action

The current permitting action reflects the fact that Montana Specialty Mills, LLC recently purchased the Montana Vegetable Oil Plant and Grain Elevator from Koch Agri Services. Permit #2968-01 reflects the change in ownership, and replaces permit #2968-00.

C. Additional Information

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

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana and are available upon request from the department. Upon request, the department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8.101 *et seq.* (Subchapter 1), General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this chapter unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the department. The department has determined for the current permit action that initial testing is necessary.

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.*, MCA.

   Specialty Mills shall comply with all 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. The department must be notified promptly by phone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8.201 , *et seq.* (Subchapter 2), Ambient Air Quality, including but not limited to:

1. The following ambient air quality standards or requirements may apply, including but not limited to:

   ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
   ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide.
   ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide.
   ARM 17.8.213 Ambient Air Quality Standards for Ozone.
   ARM 17.8.220 Ambient Air Quality Standards for Settled Particulate Matter.
   ARM 17.8.223 Ambient Standards for PM-10.

   Specialty Mills must comply with the applicable ambient air quality standards. See Section V, Existing Air Quality and Impacts.

C. ARM 17.8.308, *et seq.* (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 six consecutive minutes.

This rule also requires that no person may cause or authorize emissions to be discharged into the atmosphere from any source installed before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. This rule requires an opacity limitation of 20% for all fugitive emission sources, unless superseded by more stringent New Source Performance Standards, and that no person shall authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control airborne particulate matter are taken.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires a limitation of particulate emissions caused by the combustion of fuel which is to be discharged from any stack or chimney into the atmosphere in excess of the hourly rate outlined in this rule.

4. ARM 17.8.322 Sulfur Oxide Emissions-Sulfur in Fuel. Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. The natural gas burned in the boiler contains approximately 0.2 grains/100 scf sulfur compounds (AP-42, Supplement F, pp. 1.4-5, footnote d); therefore this unit will be in compliance with this rule.

5. ARM 17.8.340 Standards of Performance for New Stationary Sources The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60. 40 CFR 60, Subpart DD - Standards of Performance for Grain Elevators applies to all affected facilities constructed, modified, or reconstructed after August 3, 1978, that have the capacity to store 1 million bushels of grain. This facility does not have the ability to store greater than 1 million bushels of grain. Therefore, 40 CFR Part 60, Subpart DD does not apply to this facility.

D. ARM 17.8.501, *et seq.* (Subchapter 5), Air Quality Permit Application, Operation and Open Burning Fees, including but not limited to:

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

The annual assessment and collection of the air quality operation fee, as 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 which prorate the required fee amount.

E. ARM 17.8.701, *et seq.* (Subchapter 7), Permit, Construction and Operation of Air Contaminant Sources, including but not limited to:

1. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. An air quality preconstruction permit shall contain requirements and conditions applicable to both construction and subsequent use.

2. ARM 17.8.705 When Permit Required-Exclusions. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter, or use an air contaminant source which has the potential to emit more than 25 tons per year of any pollutant. Specialty Mills has the potential to emit more than 25 tons per year of particulate matter; therefore, a permit is required.

3. ARM 17.8.710 Conditions for Issuance of Permit. This rule requires that the source demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to assure compliance with all applicable rules and standards. The source has demonstrated compliance with applicable rules and standards as required for permit issuance.

4. ARM 17.8.715 Emission Control Requirements. Specialty Mills is required to install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible. A Best Available Control Technology (BACT) review was conducted for the hammermill and the fugitive sources contained in permit #2968-00. The BACT Review was conducted for the original permit, and since this permit Modification does not represent an increase in emissions, or a new or altered source, no BACT Review was conducted for permit #2968-01.

5. ARM 17.8.716 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.

6. ARM 17.8.717 Compliance with Other Statutes and Rules. This rule requires the permit holder to comply with all other applicable federal and Montana statutes, rules and standards.

7. ARM 17.8.731 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 altered 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.

8. ARM 17.8.733 Modification of Permit An air quality permit may be modified for changes in any applicable rules and standards adopted by the board or changed conditions of operation at a source or stack which do not result in an increase in emissions because of the changed conditions of operation. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

F. ARM 17.8.801, *et seq.* (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 Modification--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819-17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the Federal Clean Air Act that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source, because it is not a listed source and does not have the potential to emit more than 250 tons per year or more of any air pollutant.

III. Emissions Inventory - Specialty Mills Plant

				tons/yr				
Source	TSP	PM-10	NOX	VOC	CO	SOX		HAP (Phosphine)
Hammermill	4.2910	1.0560						
Boiler (50 hp)	0.0036	0.0036	0.0438	0.0035	0.0092	0.0003		
Boiler (100 hp)	0.0082	0.0082	0.1095	0.0088	0.0230	0.0007		
Grain Elevator	123.010	29.830						
Grain Fumigation								0.0011
Haul Roads	1.6980	0.7641						
Total	129.011	31.662	0.1533	0.0123	0.0322	0.0010		0.0011

1946 Hammermill

Maximum Process Rate: 10181 tons/year
Hours of operation: 8760 hr/year

Mill Receiving:
Number of Receiving Bins 5 Bins

TSP Emissions:
Emission Factor: 0.117 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.117 lb/ton * 10181 tons/year * 5 bins = 5955.89 lbs/year
5955.89 lbs/year * 0.0005 tons/lb = 2.98 tons/year

PM-10 Emissions:
Emission Factor: 0.029 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.029 lb/ton * 10181 tons/year * 5 bins = 1476.10 lbs/year
1476.10 lbs/year * 0.0005 tons/lb = 0.738 tons/year

Mill Handling:

TSP Emissions:

Emission Factor:	0.644	lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency:	40.0%	(Cyclone)
Calculations:	0.644 lb/ton * 10181 tons/year = 6556.56 lbs/year	
	6556.56 lbs/year * 0.0005 tons/lb * 0.4 = 1.31 tons/year	

PM-10 Emissions:

Emission Factor:	0.156 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency:	40.0% (Cyclone)
Calculations:	0.156 lb/ton * 10181 tons/year = 1588.24 lbs/year
	1588.24 lbs/year * 0.0005 tons/lb * 0.4 = 0.32 tons/year

Mill Shipping: The mill does not ship any material. All product is bagged for transport. The emissions from the bagging are included in the Mill Handling emissions.

	TSP	PM-10
Mill Receiving	2.98	0.738
Mill Handling	1.3113	0.3176
Mill Shipping	0	0
Total	4.291	1.056

1964 York Shipley Boiler (50 hp)

Maximum Fuel Combustion:	0.11	MMBtu/hour
Maximum Fuel Consumption:	0.0001	MMscf/hr
Hours of Operation:	8760	hr/yr

TSP Emissions:

Emission Factor:	7.5	lbs/MMscf	(AP-42, Table 1.4-1, 9/91)
Control Efficiency:	0%		
Calculations:	7.5 lbs/MMscf * 0.0001 MMscf/hr = 0.0008 lbs/hr		
	0.0008 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0036 tons/year		

PM-10 Emissions:

All Particulate Matter emissions can be assumed to be less than 10 microns in diameter (AP-42 Table 1.4-1, 9/91).

NOx Emissions:

Emission Factor:	100	lbs/MMscf	(AP-42, Table 1.4-2, 9/91)
Control Efficiency:	0%		
Calculations:	100.0 lbs/MMscf * 0.0001 MMscf/hr = 0.01 lbs/hr		
	0.01 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0438 tons/year		

VOC Emissions:

Emission Factor:	8	lbs/MMscf	(AP-42, Table 1.4-3, 9/91)
Control Efficiency:	0%		
Calculations:	8.0 lbs/MMscf * 0.0001 MMscf/hr = 0.0008 lbs/hr		
	0.0008 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0035 tons/year		

CO Emissions:

Emission Factor:	21	lbs/MMscf	(AP-42, Table 1.4-2, 9/91)
Control Efficiency:	0%		
Calculations:	21.0 lbs/MMscf * 0.0001 MMscf/hr = 0.0021 lbs/hr		
	0.0021 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0092 tons/year		

SOx Emissions:

Emission Factor:	0.6	lbs/MMscf	(AP-42, Table 1.4-2, 9/91)
Control Efficiency:	0%		
Calculations:	0.6 lbs/MMscf * 0.0001 MMscf/hr = 0.0001 lbs/hr		
	0.0001 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0003 tons/year		

1990 Burnham Boiler (100 hp)

Maximum Fuel Combustion: 0.25 MMBtu/hour
Maximum Fuel Consumption: 0.00025 MMscf/hr
Hours of Operation: 8760 hr/yr

TSP Emissions:

Emission Factor: 7.5 lbs/MMscf (AP-42, Table 1.4-1, 9/91)
Control Efficiency: 0%
Calculations: 7.5 lbs/MMscf * 0.00025 MMscf/hr = 0.0019 lbs/hr
0.0019 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0082 tons/year

PM-10 Emissions:

All Particulate Matter emissions can be assumed to be less than 10 microns in diameter (AP-42 Table 1.4-1, 9/91).

NOx Emissions:

Emission Factor: 100 lbs/MMscf (AP-42, Table 1.4-2, 9/91)
Control Efficiency: 0%
Calculations: 100.0 lbs/MMscf * 0.00025 MMscf/hr = 0.025 lbs/hr
0.025 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.1095 tons/year

VOC Emissions:

Emission Factor: 8 lbs/MMscf (AP-42, Table 1.4-3, 9/91)
Control Efficiency: 0%
Calculations: 8.0 lbs/MMscf * 0.00025 MMscf/hr = 0.002 lbs/hr
0.002 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0088 tons/year

CO Emissions:

Emission Factor: 21 lbs/MMscf (AP-42, Table 1.4-2, 9/91)
Control Efficiency: 0%
Calculations: 21.0 lbs/MMscf * 0.00025 MMscf/hr = 0.0053 lbs/hr
0.0053 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.023 tons/year

SOx Emissions:

Emission Factor: 0.6 lbs/MMscf (AP-42, Table 1.4-2, 9/91)
Control Efficiency: 0%
Calculations: 0.6 lbs/MMscf * 0.00025 MMscf/hr = 0.0002 lbs/hr
0.0002 lbs/hr * 8760 hrs/year * 0.0005 tons/lb = 0.0007 tons/year

Grain Elevators (4)

Maximum Process Rate: 26060 tons/year
Hours of operation: 8760 hr/year

Grain Receiving
Number of Receiving Bins: 5 Bins

TSP Emissions:

Emission Factor: 0.12 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.12 lb/ton * 26060 tons/year * 5 bins = 15636.00 lbs/year
15636.00 lbs/year * 0.0005 tons/lb = 7.82 tons/year

PM-10 Emissions:

Emission Factor: 0.03 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.03 lb/ton * 26060 tons/year * 5 bins = 3909.00 lbs/year
3909.00 lbs/year * 0.0005 tons/lb = 1.95 tons/year

Grain Shipping
Number of Loadouts: 2 Loadouts

TSP Emissions:

Emission Factor: 0.02 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.02 lb/ton * 26060 tons/year * 2 loadouts = 1042.40 lbs/year
1042.40 lbs/year * 0.0005 tons/lb = 0.52 tons/year

PM-10 Emissions:

Emission Factor: 0.01 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.01 lb/ton * 26060 tons/year * 2 loadouts = 521.20 lbs/year
521.20 lbs/year * 0.0005 tons/lb = 0.2606 tons/year

Internal Operations

TSP Emissions:

Emission Factor: 1.99 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 1.99 lb/ton * 26060 tons/year * 4 elevators = 207437.60 lbs/year
207437.60 lbs/year * 0.0005 tons/lb = 103.72 tons/year

PM-10 Emissions:

Emission Factor: 0.48 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.48 lb/ton * 26060 tons/year * 4 elevators = 50035.20 lbs/year
50035.20 lbs/year * 0.0005 tons/lb = 25.0176 tons/year

Bin Loading

TSP Emissions:

Emission Factor: 0.04 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.04 lb/ton * 26060 tons/year * 4 bins = 4169.60 lbs/year
4169.60 lbs/year * 0.0005 tons/lb = 2.0848 tons/year

PM-10 Emissions:

Emission Factor: 0.01 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.01 lb/ton * 26060 tons/year * 4 bins = 1042.40 lbs/year
1042.40 lbs/year * 0.0005 tons/lb = 0.5212 tons/year

Column Drying

TSP Emissions:

Emission Factor: 0.17 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.17 lb/ton * 26060 tons/year * 4 columns = 17720.80 lbs/year
17720.80 lbs/year * 0.0005 tons/lb = 8.86 tons/year

PM-10 Emissions:

Emission Factor: 0.04 lb/ton (AP-42, Table 9.9.1-2, 11/95)
Control Efficiency: 0.0%
Calculations: 0.04 lb/ton * 26060 tons/year * 4 columns = 4169.60 lbs/year
4169.60 lbs/year * 0.0005 tons/lb = 2.085 tons/year

	TSP	PM-10
Grain Receiving	7.82	1.95
Grain Shipping	0.52	0.2606
Internal Operations	103.72	25.0176
Bin Loading	2.09	0.5212
Column Drying	8.86	2.085
Total	123.01	29.83

Grain Fumigation (Phosphine is the fumigant used)

Standard Fumigation Quantity is 250 pellets per 1000 bushels - 0.1 lb phosphine/250 pellets (Montana Department of Agriculture Summary Report of all pesticide Applications for 1995).

HAP Emissions

Number of Bushels Fumigated:	22466.4 Bushels
Emission Factor:	0.0001 lb phosphine/bushel
Calculations:	0.0001 lb/bushel * 22466.40 bushels/year = 2.247 lbs/year
	2.247 lb/year * 0.0005 tons/lb = 0.0011 tons/year

Haul Roads

Vehicle miles traveled:	566 VMT
Control Efficiency:	50% (Watering)

TSP Emission Factor based on AP-42, Section 11.2.1

TSP Emissions:

TSP Emission Factor (Rated Load Capacity <50 tons):6 lb/VMT

6.0 lb/VMT * 566.0 VMT/year = 3396.0 lb/year

3396.0 lb/year * 0.0005 tons/lb = 1.698 tons/year

PM-10 Emission Factor based on AP-42, Section 11.2.1

PM10 Emissions:

PM10 Emission Factor (Rated Load Capacity <50 tons):2.7 lb/VMT

2.7 lb/VMT * 566.0 VMT/year = 1528.20 lbs/year

1528.20 lbs/year * 0.0005 tons/lb = 0.7641 tons/year

IV BACT Analysis

A Best Available Control Technology (BACT) determination is required for any new or altered source. Since this permit Modification represents a change in ownership, and there is no increase in emissions, a BACT review is not required.

V. Existing Air Quality and Impacts

In the view of the department, the amount of controlled emissions from this facility will cause minimal air quality impacts. There are no significant emissions of toxic air pollutants from this source. Therefore, the department does not believe that this source will cause or contribute to a violation of any ambient standards.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

VII. Environmental Assessment

An environmental assessment is required for each new or altered source that represents an increase in potential emissions. This permit Modification reflects a change in ownership, and represents no increase in potential emissions. Therefore, no EA is required.

Analysis prepared by: Jeff Bellino
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