

AIR QUALITY PERMIT

Issued to: United Harvest, LLC
Pompeys Pillar Elevator
200 SW Market St., Suite 1780
Portland, OR 97201-5715

Permit: #3126-00
Complete Application Submitted: 7/26/00
Preliminary Determination Issued: 8/31/00
Department Decision Issued: 9/29/00
Final Permit Issued: 10/24/01
AFS#: 111-0031

An air quality permit, with conditions, is hereby granted to the United Harvest, LLC - Pompeys Pillar Elevator, hereinafter referred to as "United Harvest," pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.701, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

United Harvest's proposed rail loadout grain sub-terminal is located about 0.5 mile west of Exit 23 on U.S. Interstate Highway 94, adjacent to the south side of State Highway 312, and approximately 2.25 miles west-southwest of Pompeys Pillar, Montana. The legal description of the facility is the W ½ of the NW ¼ of Section 28, Township 3 North, Range 30 East, Yellowstone County, Montana.

B. Permitted Equipment

United Harvest is proposing to install and operate a rail loadout grain sub-terminal to receive, store, and ship grain for nearby farmers. The rail loadout grain sub-terminal will have a storage capacity of approximately 658,000 bushels. A complete list of the permitted equipment is included in the permit analysis.

SECTION II: Conditions and Limitations

A. Emission Control Requirements and Limitations

1. United Harvest shall operate and maintain the negative air fan and cyclone as specified in their application for an air quality permit and all supporting documentation (ARM 17.8.715).
2. United Harvest shall not cause or authorize emissions to be discharged into the outdoor atmosphere, that exhibit an opacity of 20% or greater (ARM 17.8.304).
3. Rail loadout grain sub-terminal production shall not exceed 8,000,000 bushels during any rolling 12-month time period (ARM 17.8.710).
4. United Harvest shall 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).
5. United Harvest shall treat all unpaved portions of the haul roads, access roads, and the general plant property with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.4 (ARM 17.8.710).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department of Environmental Quality (Department) may require testing (ARM 17.8.105).

C. Operational and Emission Inventory Reporting Requirements

1. United Harvest 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 equipment list 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 for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. United Harvest shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.705(1)(r) that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emissions unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.705(1)(r)(iv) (ARM 17.8.705).
3. United Harvest shall document, by month, the total production from the rail loadout grain sub-terminal. By the 25th of each month, United Harvest shall total the production from the rail loadout grain sub-terminal during the previous 12 months to verify compliance with the limitation in Section II.A.3. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.710).
4. All records compiled in accordance with this permit must be maintained by United Harvest 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 17.8.710).

D. Notification

United Harvest shall provide the Department with written notification of the following dates within the specified time periods (ARM 17.8.710):

1. Commencement of construction of the rail loadout grain sub-terminal within 30 days after commencement of construction;
2. Actual start-up date of the rail loadout grain sub-terminal within 15 days after the actual start-up; and
3. All compliance source tests, as required by the Montana Source Test Protocol and Procedures Manual.

SECTION III: General Conditions

- A. Inspection – United Harvest shall allow the Department's representatives access to the source at all times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if United Harvest fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving United Harvest 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 jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The Department's decision on the application is not final unless 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 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.
- H. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by United Harvest may be grounds for revocation of this permit, as required by that Section and rules adopted thereunder by the Board.

PERMIT ANALYSIS
United Harvest, LLC – Pompeys Pillar Elevator
Portland, OR
Permit #3126-00

I. Introduction/Process Description

A. Site Location and Description

United Harvest, LLC (United Harvest) is proposing to construct and operate a rail loadout grain sub-terminal, on a 97 acre parcel, to be located about 0.5 mile west of Exit 23 on U.S. Interstate Highway 94, adjacent to the south side of State Highway 312, and approximately 2.25 miles west-southwest of Pompeys Pillar, Montana. The legal description of the facility is the W ½ of the NW ¼ of Section 28, Township 3 North, Range 30 East, Yellowstone County, Montana.

The proposed rail loadout grain sub-terminal would be designed to receive grain from local farmers and country elevators and then store the grain until it is shipped to market. The storage capacity of the facility would be approximately 658,000 bushels.

Locally grown grains would be trucked in by hopper truck. Each truck would be weighed on a platform scale and a probe would take a sample of the inbound grain for quality assurance measures. The trucks would be routed to the receiving building where both truck hoppers could be simultaneously discharged into an elongated receiving pit. Particulate matter emissions from the unloading operation would be collected by a negative air system and routed to a cyclone for control. Enclosed drag conveyors and a bucket elevator, rated at 20,000 bushels per hour, would route the grain into concrete storage silos, or to a bulk weigher located over the railroad track. An enclosed drag conveyor would be used to transport grain from below the storage silos. Both the reclaim conveyor and the shipping leg would be sized to handle 50,000 bushels per hour. The bulk loadout scale would be sized to allow a 110-car unit train to be loaded in a 12-hour shift.

The facility would be owned by United Grain Corporation of Portland, Oregon. United Harvest, LLC is a 50-50 joint venture of United Grain Corporation and Cenex Harvest States Cooperatives. United Harvest would manage the construction phase of the project. Upon completion, the facility would be leased by United Grain Corporation to United Harvest, LLC for operation. United Harvest, LLC would utilize the Cenex Harvest States local office in Lewistown, and its personnel, to operate the facility.

B. Permitted Equipment

Equipment used at this facility includes all equipment listed in Permit Application #3126-00 including, but not limited to:

1. Truck Receiving Pit
2. Rail Reclaim Hopper Pit
3. Receiving Drag Conveyor - 20,000 bph
4. Receiving Leg - 20,000 bph
5. Distribution Top Binfill Drag Conveyor - 20,000 bph
6. Bottom Reclaim Drag Conveyor - 50,000 bph
7. Loadout Shipping Leg - 50,000 bph
8. Loadout Bulkweigher - 50,000 bph
9. Four Silo Bins with Vents - 164,500 bushel capacity, 42 feet diameter and 150 feet tall, each
10. Auto Grain Sample & Collection System
11. Rail Loadout Spout - 50,000 bph
12. Negative Air/Cyclone Dust Control System.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (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, Sub-Chapter 1, General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This section 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 emissions 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 permitting action, that no testing is required.
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.

United Harvest shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly, by telephone, whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction 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. (2) 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, Sub-Chapter 2, Ambient Air Quality, including, but not limited to:

1. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter, and
2. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀.

United Harvest must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Sub-Chapter 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 an 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. 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. Under this rule, United Harvest 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 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Subpart DD, Standards of Performance for Grain Elevators, indicates that grain terminal elevators that have a storage capacity of more than 2.5 million U.S. bushels are subject to the requirements of this subpart. United Harvest does not have a permanent storage capacity of 2.5 million bushels or more; therefore, NSPS Subpart DD does not apply to this facility.

D. ARM 17.8, Sub-Chapter 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. United Harvest has submitted the appropriate permit application fee.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; and 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 which pro-rate the required fee amount.

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

1. ARM 17.8.701 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. This air quality preconstruction permit contains requirements and conditions applicable to both construction and subsequent use of the permitted equipment.
3. 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 any air contaminant sources which have the potential to emit more than 25 tons per year of any pollutant. United Harvest has the potential to emit greater than 25 tons per year of PM and PM₁₀; therefore, a permit is required.
4. ARM 17.8.707 Waivers. ARM 17.8.706 requires the permit application to be submitted 180 days prior to construction. The Department hereby waives this time limit.

5. ARM 17.8.710 Condition of Issuance of Permit. This rule requires that United Harvest 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. United Harvest has demonstrated compliance with applicable rules and standards as required for permit issuance.
 6. ARM 17.8.715 Emission Control Requirements. United Harvest is required to install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that a Best Available Control Technology (BACT) shall be used. A BACT analysis was conducted for sources of particulate matter at this facility. The BACT analysis can be found in Section IV.
 7. 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.
 8. ARM 17.8.717 Compliance with Other Statutes and Rules. This rule states that nothing in the permit shall be construed as relieving United Harvest of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.101, *et seq.*
 9. ARM 17.8.720 Public Review of Permit Applications. 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. United Harvest has submitted proof of compliance with the public notice requirement.
 10. 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 1 year after the permit is issued.
 11. 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 those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.
 12. ARM 17.8.734 Transfer of Permit. This rule states 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, Sub-Chapter 8, Prevention of Significant Deterioration of Air Quality, including, but not limited to:

ARM 17.8.801 Definitions. This facility is not defined as 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 of any pollutant.

III. Emission Inventory

Estimates of potential emissions from the Rail Loadout Grain Sub-terminal at Pompeys Pillar.

Air Pollutants (ton/year)						
Source	PM	PM ₁₀	NO _x	VOC	CO	SO ₂
Grain Receiving	8.6	2.8				
Internal Handling	7.3	4.1				
Grain Shipping	10.3	3.5				
Total Potential Emissions	26.2	10.4	na	na	na	na

na = not applicable

Maximum Annual Throughput = 8,000,000 bushel/year

Product Density = 59.73 lb/bushel

Process Rate = 59.73 lb/bushel * 8.0 x 10⁶ bushel/yr * 1 ton/2000 lb = 238,920 ton/year

Grain Receiving

PM Emissions

Emission Factor = 0.18 lb/ton {AP-42, Table 9.9.1-1, 5/98, Straight Truck}

Control Efficiency = 60 % {Negative Air / Cyclone}

Calculations: 238,920 ton/yr * 0.18 lb/ton * (1 - 0.60) * 1 ton / 2,000 lb = 8.6 ton/year

PM₁₀ Emissions

Emission Factor = 0.059 lb/ton {AP-42, Table 9.9.1-1, 5/98, Straight Truck}

Control Efficiency = 60 % {Negative Air / Cyclone}

Calculations: 238,920 ton/yr * 0.059 lb/ton * (1 - 0.60) * 1 ton / 2,000 lb = 2.8 ton/year

Internal Handling

PM Emissions

Emission Factor = 0.061 lb/ton {AP-42, Table 9.9.1-1, 5/98}

Control Efficiency = 0 %

Calculations: 238,920 ton/yr * 0.061 lb/ton * 1 ton / 2,000 lb = 7.3 ton/year

PM₁₀ Emissions

Emission Factor = 0.034 lb/ton {AP-42, Table 9.9.1-1, 5/98}

Control Efficiency = 0 %

Calculations: 238,920 ton/yr * 0.034 lb/ton * 1 ton / 2,000 lb = 4.1 ton/year

Grain Shipping

PM Emissions

Emission Factor = 0.086 lb/ton {AP-42, Table 9.9.1-1, 5/98, Truck}

Control Efficiency = 0 %

Calculations: 238,920 ton/yr * 0.086 lb/ton * 1 ton / 2,000 lb = 10.3 ton/year

PM₁₀ Emissions

Emission Factor = 0.029 lb/ton {AP-42, Table 9.9.1-1, 5/98, Truck}

Control Efficiency = 0 %

Calculations: 238,920 ton/yr * 0.029 lb/ton * 1 ton / 2,000 lb = 3.5 ton/year

IV. Best Available Control Technology Analysis

A BACT analysis is required for any new or altered source. United Harvest shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be used. The following are the options the Department has reviewed to make a BACT determination for the proposed facility.

A. Electrostatic Precipitator (ESP)

An ESP charges particles and then forces them out of the air-stream by passing them through a charged field. ESP's are very efficient at removing small particles, with removal efficiencies commonly ranging from 90 to 99%.

While ESP's can achieve high removal efficiencies, the installation and operation costs of the ESP are considerably higher than similar control technologies. For this reason, an ESP does not constitute BACT in this case.

B. Baghouse

Fabric filters are used to collect dust. The air stream passes through the fabric filter and the dust is collected by the filter cake that forms on the bags. Baghouses are also very efficient at removing small particles, with removal efficiencies commonly ranging from 95 to 99%.

Baghouses can achieve high removal efficiencies while the installation and operation costs of a baghouse are less than an ESP. However, the costs associated with a baghouse are still considerably higher than similar control technologies. For this reason, a baghouse does not constitute BACT in this case.

C. Cyclone

A cyclone acts as an inertial separator, which is very effective at separating the larger, coarser material from a gas stream. A cyclone has a lower collection efficiency for smaller diameter particles. Typical collection efficiencies of a cyclone range from 50 to 90%, depending on the particle size.

The negative air fan and cyclone proposed by United Harvest are considered to be high efficiency controls. These controls provide high control efficiencies without the added cost of a baghouse or an ESP. Therefore, the Department has determined that the operation and maintenance of a negative air fan and cyclone constitute BACT for this facility.

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

V. Existing Air Quality and Impacts

The area surrounding the proposed facility is predominantly agricultural and rural in nature. The emissions from the proposed facility would be seasonal in nature, and there is generally good dispersion in the area. Therefore, in the view of the Department, the amount of controlled emissions from this facility will not cause an exceedance of any ambient air quality standard.

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, required by the Montana Environmental Policy Act, was completed for this permitting action. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air and Waste Management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: United Harvest, LLC
Pompeys Pillar Elevator
200 SW Market Street, Suite 1780
Portland, OR 97201-5715

Air Quality Permit Number: #3126-00
Preliminary Determination Issued: 8/31/00
Department Decision Issued: 9/29/00
Final Permit Issued: 10/24/01

1. Legal Description of Site: The rail loadout grain sub-terminal is proposed to be located about 0.5 miles west of Exit 23 on U.S. Interstate Highway 94, adjacent to the south side of State Highway 312, and approximately 2.25 miles west-southwest of Pompeys Pillar, Montana. The legal description of the facility is the W ½ of the NW ¼ of Section 28, Township 3 North, Range 30 East, Yellowstone County, Montana.
2. Description of Project: The Department proposes to issue an air quality preconstruction permit to United Harvest for the construction and operation of a rail loadout grain sub-terminal. The facility would consist of two portions: silos for storing grain and the grain receiving/loadout structure. There would be 4 concrete silos, each approximately 42 feet in diameter and 150 feet tall with individual storage capacity of 164,500 bushels. The grain receiving and loadout structures would occupy an area adjacent to the silos, with a footprint of approximately 76 feet by 64 feet and a receiving building height of about 30 feet. The grain silos and the grain receiving/loadout structure would occupy approximately 3 acres of the 97-acre parcel. The Burlington Northern/Santa Fe railroad would construct a loop rail track on a small portion of the 97-acre parcel.

Locally grown grains would be trucked in by hopper truck. Each truck would be weighed on a platform scale and a probe would take a sample of the inbound grain for quality assurance measures. The trucks would be routed to the receiving building where both truck hoppers could be simultaneously discharged into an elongated receiving pit. Particulate matter emissions from the unloading operation would be collected by a negative air system and routed to a cyclone for control. Enclosed drag conveyors and a bucket elevator, rated at 20,000 bushels per hour, would route the grain into concrete storage silos, or to a bulk weigher located over the railroad track. An enclosed drag conveyor would be used to transport the grain from the storage silos. Both the reclaim conveyor and the shipping leg would be sized to handle 50,000 bushels per hour. The bulk loadout scale would be sized to allow a 110-car unit train to be loaded in a 12-hour shift.

The facility would be owned by United Grain Corporation of Portland, Oregon. United Harvest, LLC is a 50-50 joint venture of United Grain Corporation and Cenex Harvest States Cooperatives. United Harvest would manage the construction phase of the project. Upon completion, the facility would be leased by United Grain Corporation to United Harvest, LLC for operation. United Harvest, LLC would utilize the Cenex Harvest States local office in Lewistown, and its personnel, to operate the facility.

3. Objectives of Project: The proposed facility would receive, store, and ship grain for the area farmers. The proposed facility would provide area producers and local country grain elevators with a regional site for high speed loading of locally produced whole grains. The high-speed rail loading should result in more favorable shipping rates from the local railroad.

4. Alternatives Considered:

- A. In addition to the proposed action, the Department also considered the "no action" alternative. The "no action" alternative would deny the issuance of the air quality preconstruction permit to the proposed facility. Under the "no action" alternative the proposed facility would not be built and the effects discussed in this EA would not occur.
- B. In addition to the proposed action and the "no action" alternative, the Department reviewed information from the applicant relating to criteria used to select the proposed site. The applicant has indicated that there are no other sites that met their criteria, as follows:
- Access to areas with sufficient grain production – predominately in Yellowstone and Big Horn counties, but possibly areas further east.
 - Engineering feasibility – a relatively flat, 100-acre site to accommodate a loop track for trains.
 - Adjacent to Burlington Northern Santa Fe railroad main line – business plan predicated on ability to earn BNSF efficiency incentives. This meant being east of Jones Junction (east of Huntley) where the BNSF line intersects Montana Rail Link.
 - Land without zoning or land-use restrictions – a site where construction of this type of facility would be allowed.
 - Access to suitable roads, highways or freeways.
 - Rural location.
 - Land outside a flood plain.
 - Property availability – landowners willing to sell.

The Department did not receive any comments that contained a specific site that met these criteria. In addition, the Department reviewed the proposed site and determined that the operation at the proposed location can comply with all applicable air quality regulations. Therefore, given the demonstration of compliance with all air quality regulations at the proposed site, the Department does not have the authority to require the applicant to select an alternative site for the proposed operation.

5. A listing of mitigation, stipulations, and other controls: A list of enforceable conditions, including a BACT analysis, would be included in Permit #3126-00.
6. Regulatory effects on private property: The Department has considered alternatives to the conditions that would be imposed in this permit as part of the permit development. The Department has determined that 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.

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

There would be effects on the terrestrial life and habitats in the immediate area of the proposed grain sub-terminal. However, because the area proposed for the grain sub-terminal is relatively small, consisting of about 3 acres on a 97-acre parcel, the proposed facility would only result in minor effects on the terrestrial life or habitats. There would be minor effects on the terrestrial life and habitats in a portion of the remaining area from the construction of the railroad loop track. This effect would be minor because the affected acreage is relatively small as well. The area around the site was formerly farmed for livestock grazing and hay crops. It would be expected to support the same terrestrial life as it did before the project. There would be no effects on the aquatic life and habitats in the area.

B. Water Quality, Quantity, and Distribution

The proposed facility would utilize a well for drinking water. There would be a septic system and drainfield for wastewater and human sewage. There are no wetlands at the site. An irrigation canal crosses the project site and continues on through the property associated with the Pompeys Pillar National Historic Landmark. The proposed facility would not affect the water in the area.

C. Geology and Soil Quality, Stability, and Moisture

There would be an effect on the soils in the immediate area of the proposed rail loadout grain sub-terminal because there would be new construction of footings, foundations, roads, railroad tracks, etc. Onsite there is about 1 foot of topsoil followed by a 5- to 6-foot layer of clay. The clay layer is underlain by sand and gravel to a depth of about 28 feet, and then claystone bedrock. Excavation at the proposed site would be to a depth of 10 to 20 feet in an area approximately 80 by 80 feet square. The overall area for the proposed grain sub-terminal would cover about 3 acres on a 97-acre parcel. There would be minor effects on the soils in a portion of the remaining area from the construction of the railroad loop track. This effect would be minor because the affected acreage is relatively small, as well. Overall, the effects on geology and soil quality, stability, and moisture would be minor because the amount of disturbed acreage would be small.

D. Vegetation Cover, Quantity, and Quality

There would be effects on vegetation cover, quantity, and quality in the immediate area of the rail loadout grain sub-terminal because there would be new construction of footings, foundations, roads, railroad tracks, etc. The site was formerly farmed for livestock grazing and hay crops and some common weeds and grasses were present. However, the effects on vegetation cover, quantity, and quality would be minor because construction of the proposed grain sub-terminal and the railroad loop track would occur on a small amount of ground, and upon completion of the project the unused adjacent land could return to small-scale farm use.

E. Aesthetics

There would be effects on the aesthetics of the area from the construction of the proposed grain sub-terminal, as well as from the visible emissions from the proposed facility. The small community of Pompeys Pillar is predominantly rural and agricultural in nature, and it is located about 2.25 miles east-northeast of the proposed facility. The closest residence is located about $\frac{3}{4}$ of a mile to the west. The Pompeys Pillar historic site is located about $\frac{3}{4}$ of a mile north of the proposed facility.

The noise level from the facility's exhaust fan is estimated to be 97 decibels at 5 feet. As a point of reference, the noise level from a residential lawn mower is approximately 100 decibels. However, the noise level is expected to be minimized by positioning the fan discharge vertically, rather than horizontally, and by the location of the proposed grain elevator being a distance of $\frac{3}{4}$ of a mile from Pompeys Pillar. Another factor that would reduce the noise effects is the wind. During the majority of the year, the Yellowstone River Valley funnels the winds along a northeast-southwest axis. Thus, the sound from the proposed facility would be carried away from Pompeys Pillar.

Additionally, there are other features affecting the aesthetics at Pompeys Pillar. In the local area there is an interstate highway, a local highway, the main line of a major railroad, an aircraft warning strobe light on top of a high metal tower, and some unpainted, aluminum grain bins. All of these features are located at approximately the same distance from Pompeys Pillar as the proposed facility would be. However, United Harvest could minimize aesthetic effects by taking measures to lessen the visibility of the proposed facility. Potential measures could include painting the facility a non-reflective color, or employing screening techniques, such as landscape berms or vegetation. Also, the aesthetic effects would be minimized because the visible emissions would be limited by air quality Permit #3126-00 to less than 20% opacity. Additionally, the noise effects would be reduced by employing screening techniques, such as landscape berms or vegetation. The aesthetic effects from the proposed facility would be moderate since grain elevators are not out of character in rural, agricultural areas.

F. Air Quality

There would be temporal effects on the air quality of the area due to emissions of particulate matter from the proposed facility and motor vehicle traffic. Based on information submitted in the application, the proposed facility is projected to operate 5 days per week (occasionally on Saturdays) with hours of operation from about 7 AM to 5 PM (may vary seasonally). The effects would probably be most pronounced during and after the harvest season, in late summer and fall. Air quality Permit #3126-00 would contain conditions limiting opacity, requiring the use of a negative air system and cyclone to control dust from grain receiving, and a throughput limit of 8 million bushels of grain during any rolling 12-month period. These conditions would limit the amount of air emissions from the proposed facility.

Motor vehicle traffic could also affect the local air quality. Based on information submitted with the application, there is the potential for approximately 5,600 truckloads of grain to be processed by the proposed facility in any rolling 12-month period. Also, there is the potential for another 1,600 vehicle trips to the proposed facility by employees and service vendors. The number of motor vehicle trips related to the proposed facility is relatively minor when compared to the 200,000 visitors that the Bureau of Land Management is projecting annually for Pompeys Pillar, if the proposed interpretative center is built. Air quality Permit #3126-00 would contain conditions requiring reasonable precautions be taken to control emissions of airborne particulate matter, including the use of water and/or chemical dust suppressant as necessary, from roads and parking areas. Therefore, compliance with all permit requirements would result in a minor effect on air quality.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department contacted the Montana Natural Heritage Program (MNHP) in an effort to identify any species of special concern associated with the proposed site location. Search results have concluded there are three such environmental resources in the area. Area, in this case, is defined by the township and range of the proposed site, with an additional 1-mile buffer. The species of special concern include the Bald Eagle, the Great Blue Heron, and the Spiny Softshell. While these resources are found within the defined area, the MNHP search did not indicate any species of

special concern located directly on the proposed site. During the public comment period, a comment was sent to the Department stating that a pair of Peregrine Falcons had been observed near Pompeys Pillars during the spring of 2000 and that nesting was suspected but not proven. The MNHP search results did not include a listing for Peregrine Falcons.

It is very unlikely that the Spiny Softshell would be affected by the proposed project since its habitat is restricted to within about 55 yards of a large river and the proposed project site is about 1 mile from the Yellowstone River. There are potential nesting sites for Bald Eagles and Great Blue Herons within approximately 1 mile of the proposed site. However, most of the activities for the proposed facility would not occur during the very sensitive Bald Eagle nesting period of February 1 – May 1 (ref. Montana Bald Eagle Management Plan). The busiest time of year for the proposed facility would occur during and just after the harvest season, approximately August through December. Therefore, it is not expected that the proposed facility would affect any potential population of Eagles in the area. For similar reasons, it is not expected that the proposed facility would affect any potential population of Great Blue Herons and Peregrine Falcons in the area. United Harvest would be responsible for compliance with any applicable rules and regulations, including the Bald Eagle Protection Act, the Migratory Bird Treaty Act, and the Endangered Species Act. Therefore, the Department has determined that the proposed facility would have moderate effects on certain sensitive, unique, endangered, or threatened species.

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

The proposed grain sub-terminal would place minor demands on the energy resources in the area, but it is expected that the local utility company would have no difficulty in supplying the electricity needed. The very minor demands on water resources would be met by a local groundwater well.

There would be effects on the air resource in the area of the proposed facility. Air quality Permit #3126-00 would contain conditions:

- Limiting opacity.
- Requiring the use of a negative air system and cyclone to control dust from grain receiving.
- Limiting the amount of grain that can be processed in any rolling 12-month period from the facility.
- Requiring reasonable precautions be taken to control emissions of airborne particulate matter, including the use of water and/or chemical dust suppressant as necessary, from road and parking areas.

Therefore, compliance with all permit requirements would result in minor effects on environmental resources.

I. Historical and Archaeological Sites

The Department contacted the Historic Preservation Office of the Montana Historical Society (SHPO) in an effort to identify any known historical, cultural, or archaeological sites located on or near the proposed site. The SHPO search revealed several sites of historical, cultural, or archaeological significance found within Section 28, Township 3 North, Range 30 East in Yellowstone County, MT. These sites include the following: two historic railroad stage routes (site #24YL0277 and site #24YL0694), a historic railroad bridge (site #24YL0695), a historic railroad building/structure (site #24YL1379), a historic homestead/farmstead (site #24YL1335), a historic irrigation system (site #24YL0285), and a national historic landmark (Pompeys Pillar). None of these historical sites are located on the site proposed for the grain sub-terminal. However, the proposed location for the grain sub-terminal is within about $\frac{3}{4}$ of a mile of the Pompeys Pillar National Historic Landmark. Therefore, the Department has determined that the proposed project would have a moderate effect on historical and archaeological sites.

SHPO commented that "... based on the presence of significant cultural properties in the area that there is a strong potential for this undertaking to impact cultural properties. Therefore we would recommend that a cultural resource inventory be conducted in order to determine any primary or visual impacts that this undertaking may have on cultural resources in the area."

J. Cumulative and Secondary Impacts

Overall, the proposed facility would result in moderate cumulative and secondary impacts because of the potential effects on species of special concern and historic sites. However, the amount of air emissions from the proposed facility would be well regulated, and seasonal in nature. Air pollution from the facility would be controlled by Department-determined BACT and conditions in Permit #3126-00. The Department expects that this facility would operate in compliance with all applicable rules and regulations as outlined in Permit #3126-00.

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

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

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

A. Social Structures and Mores

The local community is predominantly rural and agricultural in nature. The proposed facility is an agricultural operation and is consistent with the social structures and mores of the local area. There would be no effects on native or traditional lifestyles or communities from the proposed facility.

B. Cultural Uniqueness and Diversity

The local area and community are predominantly rural and agricultural in nature. The proposed facility would effect the cultural uniqueness of the area. The proposed facility would be located within ¾ of a mile of the Pompeys Pillar National Historic Landmark. The Department has determined that the proposed project would have moderate effects on cultural uniqueness because of the additional human activity in the area. The proposed facility is an agricultural operation and the culture of the local area is predominantly agricultural in nature. Thus, the Department has determined that the proposed project would have no effects on cultural diversity.

In addition, the Department received comments from SHPO about the effects on cultural uniqueness and diversity. SHPO commented that "...based on the presence of significant cultural properties in the area that there is a strong potential for this undertaking to impact cultural properties. Therefore we would recommend that a cultural resource inventory be conducted in order to determine any primary or visual impacts that this undertaking may have on cultural resources in the area."

C. Local and State Tax Base and Tax Revenue

The proposed facility would have a minor effect on the local and state tax base and tax revenue. The proposed facility would serve a need and generate local revenue in the process.

D. Agricultural or Industrial Production

The proposed facility would have a minor effect on agricultural production in the area. Farmers in the area would have a local facility to receive, store, and ship their products.

E. Human Health

There could be minor, temporal effects on human health from particulate matter emissions from the proposed grain sub-terminal. Air emissions from the proposed facility are expected to vary by the time of day and year. The proposed facility is not expected to operate 24 hours per day, 365 days per year, even though the worst-case potential emissions are calculated on that basis in the emissions inventory. Air quality Permit #3126-00 would contain conditions:

- Limiting opacity.
- Requiring the use of a negative air system and cyclone to control dust from grain receiving.
- Limiting the amount of grain that can be processed in any rolling 12-month period from the facility.
- Requiring reasonable precautions be taken to control emissions of airborne particulate matter, including the use of water and/or chemical dust suppressant as necessary, from road and parking areas.

These conditions are designed to be protective of human health. Therefore, compliance with all permit requirements would result in a minor effect on human health.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed grain sub-terminal would have no effect on the access to and quality of wilderness activities because there are no wilderness areas near the proposed facility. The proposed facility would have no effect on the access to local recreational sites. The Pompeys Pillar historic site is located about ¾ mile north of the project site, in an area that is predominantly agricultural in nature. In the Department's opinion, a grain elevator is not out of place in an agricultural area located along a major transportation corridor. However, the Department believes that the proposed facility would have minor effects on the quality of recreational activities at the Pompeys Pillar National Historic Landmark. There would be effects on the aesthetics of the area from the presence of the facility, as well as from the visible emissions from the facility. United Harvest could minimize aesthetic effects by taking measures to lessen the visibility of the proposed facility. Potential measures could include painting the facility a non-reflective color, or employing screening techniques, such as landscape berms or vegetation. Also, the aesthetic effects would be minimized because the visible emissions would be limited by permit to less than 20% opacity. The noise level from the facility exhaust fan is estimated to be 97 decibels at 5 feet, but this level would be much less once the sound reaches Pompeys Pillar. However, the noise effects could be reduced by employing screening techniques, such as landscape berms or vegetation. Overall, the effects from the proposed facility on the access to and quality of recreational and wilderness activities in the area would be minor.

G. Quantity and Distribution of Employment

There would be a minor effect on employment in the area. There would be approximately 22-26 people employed during the construction phase. After the construction phase, the proposed facility would employ approximately 4 individuals.

H. Distribution of Population

The facility would not affect the normal population distribution in the area.

I. Demands of Government Services

Demands on government services from this facility would be minor. Increases may be seen in grain truck traffic on existing roads in the area while the facility is operating. The acquisition of the appropriate permits by the facility would also require minor services from the government.

J. Industrial and Commercial Activity

Construction and operation of the proposed facility would not result in an increase in the industrial activity in the area. Construction of the proposed facility would result in temporary minor increases in the commercial activity in the area.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals. However, the state air quality requirements would protect the local site and the surrounding environment from impacts resulting from the operation of the proposed grain sub-terminal.

L. Cumulative and Secondary Impacts

The Department is aware of the proposed BLM interpretative center. There would be effects from the interpretative center proposed by the BLM, if the center is built. The BLM is conducting an environmental assessment on the potential impacts from the proposed interpretative center. The Department does not believe that the combined effects from the grain sub-terminal and the interpretative center would be major (i.e., significant). The amount of air emissions from the proposed grain sub-terminal would be well regulated and seasonal in nature. The proposed facility would result in moderate effects on the cultural uniqueness of the area because the proposed facility would be located within $\frac{3}{4}$ of a mile of the Pompeys Pillar National Historic Landmark. The effects on human health would be minor because air emissions from the proposed facility would be controlled by Department-determined BACT and conditions in Permit #3126-00. Overall, the cumulative and secondary impacts from this project would result in minor effects to the immediate area.

Recommendation: No EIS is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current action involves issuance of an air quality pre-construction permit for a rail loadout grain sub-terminal. Air quality Permit #3126-00 includes conditions and limitations to ensure the facility would operate in compliance with all applicable air quality rules and regulations. The Department recognizes the importance of Pompeys Pillar as a cultural and historic resource. However, the potential effects on the resource are not significant. Therefore, an EIS is not required and an EA is the appropriate level of analysis because there are no significant or unknown effects associated with this action.

Other groups or agencies contacted or that may have overlapping jurisdiction: Montana Department of Natural Resources, Montana Natural Heritage Program (MNHP), Historic Preservation Office of the Montana Historical Society (SHPO), U.S. Bureau of Land Management (BLM), Montana Department of Fish, Wildlife and Parks, U.S. Fish and Wildlife Service.

Individuals or groups contributing to this EA: Montana Department of Environmental Quality, Air and Waste Management Bureau, MNHP, and SHPO.

EA prepared by: Robert K. Jeffrey

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Attachments -

SHPO EA supplement: December 11, 2000

BER EA supplement: September 12, 2001