

5. Koontz 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).
6. Koontz shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).
7. Koontz shall not operate more than 2 crushers at any given time and the combined maximum rated design capacity shall not exceed 300 ton per hour (TPH) (ARM 17.8.749).
8. Total combined crushing shall not exceed 2,628,000 tons during any rolling 12-month time period for any single crusher (ARM 17.8.749).
9. Koontz shall not operate more than 1 screen at any given time and the maximum rated design capacity shall not exceed 300 TPH (ARM 17.8.749).
10. Screening production shall not exceed 2,628,000 tons during any rolling 12-month time period (ARM 17.8.749).
11. Any one diesel engine or combination of engines shall not exceed 730 horsepower (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Koontz at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

B. Testing Requirements

1. Within 60 days after achieving maximum production, but no later than 180 days after initial start-up, an Environmental Protection Agency (EPA) Method 9 opacity test and/or other methods and procedures as specified in 40 CFR 60.675 must be performed on all NSPS affected equipment to demonstrate compliance with the emission limitations contained in Section II.A.1 and II.A.2 (ARM 17.8.340 and 40 CFR 60, General Provisions and Subpart OOO)
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this crushing plant is moved to another location, an Intent to Transfer form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.765).

2. Koontz 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 not be 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 for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). Koontz shall submit the information annually to the Department by March 1 of each year, and may be submitted with the annual emission inventory (ARM 17.8.505).

3. Koontz shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, 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 emission unit. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).
4. Koontz shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained by Koontz as a permanent business record for at least 5 years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant site for inspection by the Department (ARM 17.8.749).
5. Koontz shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained by Koontz 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).
6. Koontz shall document, by month, the crushing production from the facility. By the 25th day of each month, Koontz shall total the crushing production of the facility during the previous 12 months to verify compliance with the limitation in Section II.A.7 and II.A.8. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.749).
7. Koontz shall document, by month, the screening production from the facility. By the 25th day of each month, Koontz shall total the screening production of the facility during the previous 12 months to verify compliance with the limitation in Section II.A.9. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.749).

SECTION III. General Conditions

- A. Inspection – Koontz 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 (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 Koontz fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Koontz of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for 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 as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. The Department's decision on the application is not final until 15 days have elapsed and there is no request for a hearing under this section.
- 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 Department personnel at the location of the permitted 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 Koontz may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must be begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Koontz shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department approved permitting program.

Permit Analysis
Koontz Construction, Inc
Permit #3098-01

I. Introduction/Process Description

Koontz Construction, Inc (Koontz) may operate at various locations throughout Montana. This permit applies while operating at any location in Montana, except within those areas that have a Department of Environmental Quality (Department)-approved permitting program.

A. Permitted Equipment

Equipment used at this facility includes all equipment listed in the Permit Application #3098-01, including, but not limited to:

1. Diesel Engine(s) (not to exceed 730 Horsepower (Hp));
2. Crusher(s) (combined capacity up to 300 tons per hour (TPH));
3. Screen(s) (up to 300 TPH);
4. Miscellaneous conveyors; and
5. Associated equipment.

B. Source Description

The crushing plant will be used to crush and sort sand and gravel materials for sale and use in construction operations. For a typical operational setup, the raw materials will initially be sent through the dozer trap. From there, the material will be conveyed to a vibrating grizzly where oversized material will be removed. From the vibrating grizzly, the material will be conveyed to the crusher. Next, the materials will be conveyed either to the stockpiles for use in construction operations or back to the grizzly and through the system for further processing.

C. Permit History

Permit #3098-00 was an administrative action that reflected the fact that Yellowstone County reverted its permitting authority back to the state of Montana. The facility has not changed, but the Yellowstone County permit was reissued as a state permit. Permit #3098-00 replaced the Yellowstone County air quality permit held by Koontz.

D. Current Permit Action

This permit is a modification to Permit #3098-00 that replaces the 1951 Symons-Nordberg Cone crusher and Cat 3406B diesel generator with similar crushing and screening equipment. This modification also generalizes the requirement of the permit to allow for greater operating flexibility.

E. Additional Information (Changes to an existing permit)

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

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department 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, 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).

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

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility

9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀
11. ARM 17.8.230 Fluoride in Forage

Koontz must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Koontz 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 or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
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 section.
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 truck or trailer 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. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60. However, because Koontz requested the permit be written to provide operational flexibility, NSPS affected equipment may be added to the Permit according to the provisions of ARM 17.8.745.

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

- IV. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that Koontz 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. Koontz submitted the appropriate permit application fee for the current permit action.

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

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

- E. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any asphalt plant, crusher or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Koontz has the PTE more than 15 tons per year of particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns (PM₁₀) or less, oxides of nitrogen (NO_x), and carbon monoxide (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 do not require a permit under the Montana Air Quality Permit Program.
 5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. Koontz submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Koontz submitted an affidavit of publication of public notice for the February 25, 2004, issue of *The Livingston Enterprise*, a newspaper of general circulation in the Town of Livingston in Park 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 used. 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 Koontz 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 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
12. 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 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.
13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of Koontz, 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).
14. 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.
15. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) 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.

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

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 Modification--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 Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary 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 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 Applicability. (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 Air Quality Permit #3098-01 for Koontz, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not currently subject to any NSPS.
 - e. This facility is not subject to any current NESHAP standards.
 - f. This source is not a Title IV affected source or a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Koontz will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Koontz may be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or altered source. Koontz shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be used.

Koontz submitted a BACT analysis in Permit Application #3098-01, addressing some available methods of controlling PM₁₀ emissions from crushing and screening operations. The Department has reviewed these methods, as well as previous BACT determinations. The Department has reviewed the following control options in order to make the following BACT determinations.

BACT for crushing and screening operations is widely accepted to be water spray bars to control particulate emissions.

Other control measures such as enclosure and fabric filtration would be acceptable control options, however the enclosure of a portable facility would be technically and economically infeasible. Therefore, these options are not considered to be BACT.

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

A BACT determination for the diesel engine was conducted. BACT for diesel fired engines is commonly determined to be catalytic reduction to reduce the amount of NO_x emitted from the engine. Therefore catalytic reduction must be used on the diesel fired engines at the Koontz facility.

IV. Emission Inventory

Source

	<i>(Tons/Year)</i>					
	<i>PM</i>	<i>PM-10</i>	<i>NO_x</i>	<i>VOC</i>	<i>CO</i>	<i>SO_x</i>
Diesel Engine(s) –(up to 730 Hp)	7.04	7.04	99.14	7.90	21.36	6.56
Material Screening (up to 300 TPH)	20.70	9.86				
Material Crushing (up to 300 TPH)	3.29	1.58				
Material Transfer	28.58	13.80				
Tile Forming	27.59	13.14				
Bulk Loading	5.52	2.63				
Haul Roads	2.74	1.23				
Total	95.45	49.26	99.14	7.90	21.36	6.56

Diesel Engine(s) –(up to 730 Hp)

NO_x Emissions:

Emission Factor: 0.031 lb/hp-hr (AP-42, Table 3.3-1., 10/96)

Calculation: (730 hp)*(0.031 lb/hp-hr)*(ton/2000lb)*(8760 hr/yr)=**99.14**

SO_x Emissions

Emission Factor: 0.00205 lb/hp-hr (AP-42, Table 3.3-1., 10/96)

Calculation: (730 hp)*(0.00205lb/hp-hr)*(ton/2000lb)*(8760hr/yr)=**6.56**

CO Emissions

Emission Factor: 0.00668 lb/hp-hr (AP-42, Table 3.3-1., 10/96)

Calculation: (730 hp)*(0.00668lb/hp-hr)*(ton/2000lb)*(8760hr/yr)=**21.36**

VOC Emissions

Emission Factor: 0.00247 lb/hp-hr (AP-42, Table 3.3-2., 1/95)

Calculation: (730 hp)*(0.00247lb/hp-hr)*(ton/2000lb)*(8760hr/yr)=**7.90**

PM Emissions

Emission Factor: 0.0022 lb/hp-hr (AP-42, Table 3.3-2., 1/95)

Calculation: (730 hp)*(0.0022 lb/hp-hr)*(ton/2000lb)*(8760 hr/yr)=**7.04**

PM-10 Emissions

Emission Factor: 0.0022 lb/hp-hr (AP-42, Table 3.3-2., 1/95)

Calculation: (730 hp)*(0.0022 lb/hp-hr)*(ton/2000lb)*(8760 hr/yr)=**7.04**

Material Screening (up to 300 TPH)

Process Rate: 300 tons/hour

Hours of operation: 8760 hr/yr

PM Emissions

Emission Factor: 0.0315 lb/ton (AP-42, Table 11.19.2-2, 1/95)

Calculation: (300 ton/hr)*(0.0315lb/ton)*(8760 hr/yr)*(ton/2000 lb)=**20.70**

PM-10 Emissions

Emission Factor: 0.015 lb/ton (AP-42, Table 11.19.2-2, 1/95)

Calculation: (300 ton/hr)*(0.015lb/ton)*(8760 hr/yr)*(ton/2000 lb)=**9.86**

Material Crushing (up to 300 TPH)

Process Rate: 300 tons/hour

Hours of operation: 8760 hr/yr

PM Emissions

Emission Factor: 0.0050 lb/ton (AP-42, Table 11.19.2-2, 1/95)

Calculation: (300 ton/hr)*(0.0050lb/ton)*(8760 hr/yr)*(ton/2000 lb)=**3.29**

PM-10 Emissions

Emission Factor: 0.0024 lb/ton (AP-42, Table 11.19.2-2, 1/95)

Calculation: $(300 \text{ ton/hr}) * (0.0024 \text{ lb/ton}) * (8760 \text{ hr/yr}) * (\text{ton}/2000 \text{ lb}) = 1.58$

Material Transfer

Process Rate: 300 ton/hr

Number of Transfers: 15 transfers

Hours of Operation: 8760 hr/yr

PM Emissions

Emission Factor: 0.0029 lb/ton (AP-42, Table 11.19.2-2, 1/96)

Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hr/yr}) * (0.0029 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (15) = 28.58$

PM-10 Emissions

Emission Factor: 0.0014 lb/ton (AP-42, Table 11.19.2-2, 1/96)

Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hr/yr}) * (0.0014 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (15) = 13.80$

Pile Forming

Process Rate: 300 ton/hr

Number of Piles: 5

Hours of operation: 8760 hr/yr

PM Emissions

Emission Factor: 0.0084 lb/ton (AP-42, Table 8.23-1, 8/82)

Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hr/yr}) * (0.0084 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (5 \text{ pile}) = 27.59$

PM-10 Emissions

Emission Factor: 0.004 lb/ton (AP-42, Table 8.23-1, 8/82)

Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hr/yr}) * (0.004 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (5 \text{ pile}) = 13.14$

Bulk Loading

Process Rate: 300 ton/hr

Number of Loads: 1 load

Hours of operation: 8760 hr/yr

PM Emissions

Emission Factor: 0.0084 lb/ton (AP-42, Table 8.23-1, 8/82)

Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hr/yr}) * (0.0084 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ loads}) = 5.52$

PM-10 Emissions

Emission Factor: 0.004 lb/ton (AP-42, Table 8.23-1, 8/82)

Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hr/yr}) * (0.004 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ loads}) = 2.63$

Haul Roads

Vehicle Miles Traveled: 5 miles/day (estimated)

Control Efficiency: %50 for watering

VMT = vehicle miles traveled

PM Emissions

Emission Factor: 6 lb/VMT (AP-42, Table 8.23-1, 8/82)

Calculation: $(5 \text{ VMT/day}) * (6 \text{ lb/VMT}) * (0.50) * (\text{ton}/2000 \text{ lb}) * (365 \text{ day/yr}) = 2.74$

PM-10 Emissions

Emission Factor: 2.7 lb/VMT (AP-42, Table 8.23-1, 8/82)

Calculation: $(5 \text{ VMT/day}) * (2.7 \text{ lb/VMT}) * (0.50) * (\text{ton}/2000 \text{ lb}) * (365 \text{ day/yr}) = 1.23$

V. Existing Air Quality

Permit #3098-01 is issued for the operation of a portable crushing plant to be located in various locations throughout Montana. Permit #3098-01 covers the operation at any location within the state of Montana, excluding those counties that have a state-approved permitting program, Indian

lands or PM₁₀ nonattainment areas. In the view of the Department, the amount of controlled emissions generated by this project will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minimal.

VI. Air Quality Impacts

Koontz applied for an air quality permit to operate a portable crushing plant at various locations throughout Montana. Permit #3098-01 will cover the Koontz crushing plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas considered tribal lands. Based on the information provided, the amount of controlled emissions generated by this facility will not exceed any ambient air quality standard. In addition, this source is portable and any air quality impacts will be minimal.

VII. Taking or Damaging Implication Analysis

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

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
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Koontz Construction, Inc.
1007 Eagle Court
Livingston, Montana 59047

Air Quality Permit number: #3098-01

Preliminary Determination Issued: 3/29/04

Department Decision Issued: 3/14/04

Permit Final: 4/30/04

1. Legal Description of Site: This permit is for the operation of a portable crushing and screening plant to be located in various locations throughout the state of Montana. The initial site of this crushing plant is located in Section 13, Township 5 South, Range 8 East, approximately 1 mile north of Pray, MT.
2. Description of Project: The crushing plant will be used to crush and sort sand and gravel materials for sale and use in construction operations. For a typical operational setup, the raw materials will initially be sent through the dozer trap. From there, the material will be conveyed to a vibrating grizzly where oversized material will be removed. From the vibrating grizzly, the material will be conveyed to the crusher. Next, the materials will be conveyed either to the stockpile for use in construction operations or back to the dozer trap and through the system for further processing.
3. Objectives of Project: The current permitting action (Permit #3098-01) is a modification to existing Permit #3098-00 that replaces the 1951 Symons-Nordberg Cone crusher and Cat 3406B diesel generator with similar crushing and screening equipment, this modification also generalizes the requirement of the permit to allow for greater operating flexibility.
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 Koontz has 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 list of enforceable conditions, including a BACT analysis, would be included in Permit #3098-01.
6. Regulatory Effects on Private Property: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

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	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites			X			Yes
J	Cumulative and Secondary Impacts			X			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

Terrestrials and aquatic life would use the areas where the crushing plant would operate. While deposition of particles would occur, as explained in Section 7.F of this EA, due to the relatively small size and temporary nature of the operation, dispersion of the pollutants, and conditions placed in Permit #3098-01, any impacts would be minor. Therefore, the crushing plant operation would present only minor impacts to the terrestrial life and aquatic life in any given area of operation. The Yellowstone River is the nearest surface water, which is located approximately 1 mile west of the initial site. Due to the minor amounts of emissions expected from this facility the impact to terrestrials and aquatic life and habits would be minor.

B. Water Quality, Quantity and Distribution

Although there would be an increase in air emissions in the area where the crushing plant would operate, there would be little, if any, impacts on water quality, quantity, and distribution because of the relatively small size and temporary nature of the operation. While deposition from air emissions would occur, the Department determined that any impacts from deposition would be minor. As described in Section 7.F of this EA, due to the small amount of emissions, dispersion of the pollutants, and conditions placed in Permit #3098-01, the impacts on water quality from the air emissions from the screening plant would be minor. Small amounts of water would be required to control particulate emissions from the operation. Any accidental spills or leaks from equipment would be required to be handled according to the appropriate environmental regulations. Overall, the crushing plant operations would result in only minor impacts to water quality, quantity, and distribution.

C. Geology and Soil Quality, Stability and Moisture

There would be minor impacts to the geology and soil quality, stability, and moisture near the plant's operational area due to facility construction, increased vehicle traffic, minimal use of water to control dust, and deposition of pollutants from crushing operations. Due to the relatively small size and temporary nature of the operation, dispersion of the pollutants, and conditions placed in Permit #3098-01, any impacts would be minor.

D. Vegetation Cover, Quantity, and Quality

There would be minor impacts on the vegetative cover, quantity, and quality because small amounts of vegetation would likely be disturbed by the crushing operation. In addition, pollutant deposition would occur on the surrounding vegetation. However, as explained in Section 7.F of this EA, the Department determined that, due to the relatively small size and temporary nature of the operation, dispersion of pollutants, and conditions placed in Permit #3098-01, any impacts from deposition would be minor. Also, because the amount of water used would be minimal and any soil disturbance would be minor (as described in Section 7.C of this EA) corresponding vegetative impacts would also be minor.

E. Aesthetics

The screening operations would be visible and would create additional noise in the area of operation. Permit #3098-01 would include conditions to control emissions, including visible emissions, from the crushing plant. Pollution control techniques would be used to control particulate emissions from the plant. Since the plant operations are relatively small and temporary, any aesthetic impact to a given area would be minor.

F. Air Quality

Air quality impacts from the crushing plant operations would be minor because the operation would be relatively small. Deposition of particles would occur as a result of operating the crushing plant. However, the Department determined that any air quality impacts from the deposition of particles would be minor due to the relatively minor amount of pollutants emitted, the dispersion characteristics of the atmosphere (wind speed, wind direction, etc.), and conditions placed in Permit #3098-01. Permit #3098-01 would include conditions limiting the opacity from plant operations. In addition, Permit #3098-01 would include conditions requiring reasonable precautions be taken to control emissions from haul roads, access roads, parking lots, and the general work area. Further, Permit #3098-01 would also limit total emissions from the crushing plant and any additional Koontz equipment operated at the same site to 250 tons per year or less. Also, the Department determined that the crushing plant would be a minor source of emissions as defined under the Title V Operating Permit Program because the facility's potential emissions would be below 100 tons/year for any regulated pollutant generated.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department determined the effects to unique endangered, fragile or limited environmental resources, as a result of this current permitting action would be minor because this action is only for the replacing of existing equipment and would not be adding any additional equipment or processes to this operation.

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

The crushing plant operations would require only small quantities of water, air, and energy for proper operation due to the relatively small size of the facility. Koontz has designed this crusher to operate by hydraulics; this eliminated the use of electricity for running the process. In addition, as described in Section 7.F. of this EA, air emissions generated from the facility would have minor impacts on air quality in the immediate and surrounding area. A relatively small amount of energy would be required to operate the facility. Due to the small size and temporary operation of the crushing plant, the demand on energy to operate the facility would be minor. Overall, the demands on the environmental resources of water, air, and energy would be minor.

I. Historical and Archaeological Sites

The Department has determined that the impacts to historical and archaeological sites around the facility, as a result of this current permitting action, would be minor because the current permitting action is for the continued operation of a portable crushing operation. Since this is an existing operation the impacts to historical and archaeological sites would be minor.

J. Cumulative and Secondary Impacts

The crushing plant would cause minor effects to the physical and biological aspects of the human environment because the facility would generate relatively small amounts of particulate matter and PM₁₀. Noise impacts would be minor due to the relatively small size of the operation. Impacts from noise would be seasonal, and because the crushing plant is permitted as a portable source, would have the potential to move to other locations. Limitations established in Permit #3098-01 would minimize air pollution.

In addition, there is potential for other operations to locate at the same sites. However, any operations would have to apply for and receive the appropriate permits from the Department prior to operation. These permits would address the environmental impacts associated with the operations at the proposed site. Koontz would be limited by Permit #3098-01 to total emissions of 250 tons per year or less from non-fugitive emissions sources at any given site.

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	Unknown	Comments Included
A	Social Structures and Mores				X		Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities			X			Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals			X			Yes
L	Cumulative and Secondary Impacts			X			Yes

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

A. Social Structures and Mores

The crushing plant would cause no disruption to the social structures and mores in the area because the source would be a minor source of emissions, would be consistent with the on-going mining activity in the area, and would only have temporary and intermittent operations. The facility would be required to operate according to the conditions that would be placed in Permit #3098-01, which would limit the effects to the social structure and mores, regardless of location.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of the area would not be impacted by the crushing plant operations because the site has been previously used for industrial purposes and is separated from the general population. Also, the predominant use of the surrounding area would not change as a result of the proposed operations.

C. Local and State Tax Base and Tax Revenue

The crushing plant operations would have little, if any, impact on the local and state tax base and tax revenue because the facility would be a relatively small industrial source and would operate seasonally and intermittently. The facility would require only a few employees. Therefore, only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impact to local tax base and revenue is expected to be minor because the source would also be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The crushing plant operations would have only a minor impact on local industrial production since the facility would have a limited production. There would be minor effects on agricultural land because the facility would be operating in an area that has surrounding land that is used for agricultural production and animal grazing. The site has previously been used for industrial activity. Also, the facility operations would be small and temporary in nature and would be permitted with operational conditions and limitations that would minimize impacts upon surrounding vegetation, as described in Section 7.D of this EA. Additionally, air quality impacts from operating this equipment would only be minor, as described in Section 7.F of this EA. Further, air pollution controls would be used on equipment operations and production limits would be established to protect the surrounding environment.

E. Human Health

Permit #3098-01 would incorporate conditions to ensure that the crushing plant would be operated in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As described in Section 7.F. of this EA, the air emissions from this facility would be minimized by the use of emissions control requirements that would be established in Permit #3098-01. Also, the facility would be operating on a temporary and intermittent basis. Therefore, only minor impacts would be expected upon human health from the crushing plant.

F. Access to and Quality of Recreational and Wilderness Activities

Minor impacts on the quality of recreational and wilderness activities would result from equipment operations and pollutant deposition, but no changes in the type of existing opportunities for recreational and wilderness activities in the area would be expected from the operation of the crushing plant. Minor effects on the quality of recreational activities might be created by noise from equipment operations. Any changes in the quality of recreational and wilderness activities from noise, created by operating the equipment at the site, would be expected to be minor and intermittent.

G. Quantity and Distribution of Employment

The crushing plant operations would be portable and facility operations would have no effects on the quantity and distribution of employment in the area because no additional employees would be needed for the operation.

H. Distribution of Population

The crushing plant operations would be small and would only require a few employees. No individuals would be expected to permanently relocate to the area as a result of operating the facility. Therefore, the facility would not disrupt the normal population distribution in the initial area or any future area of operation.

I. Demands for Government Services

Minor increases would be seen in traffic on existing roadways in the area while the operations are in progress. In addition, government services would be required for acquiring the appropriate permits from government agencies and for government personnel to verify compliance with the existing permits. Demands for government services would be minor.

J. Industrial and Commercial Activity

The crushing plant operation would represent only a minor increase in the industrial activity in the area because the source would be relatively small and would be portable and temporary in nature. No additional industrial or commercial activity would be expected as a result of the proposed operations.

K. Locally Adopted Environmental Plans and Goals

Koontz would be allowed, by permit, to operate in areas designated by EPA as attainment or unclassified. The permitted production limits and opacity limits would be protective of air quality while the facility is operating. Because the facility would be a small and portable source and would have intermittent and seasonal operations, any effects from the facility would be minor and short-lived.

L. Cumulative and Secondary Impacts

The crushing plant operations would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area because the source is a portable, temporary source. Minor increases in traffic would result in minor effects on local traffic in the immediate area. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from operating this facility.

Recommendation: No EIS is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the replacement of existing equipment and continued operation of a gravel crushing and screening operation. Permit #3098-01 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau and Industrial and Energy Minerals Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Brian Hohn
Date: March 26, 2004