

maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.752).

5. Missing Link 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. Emission of airborne particulate matter from any source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308 and 17.8.752).
6. Missing Link 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 17.8.752).
7. Missing Link shall not operate more than three crushers at any given time and the maximum combined rated design capacity of the crushers shall not exceed 705 tons per hour (TPH) (ARM 17.8.749).
8. Crusher production from the facility shall be limited to 5,499,000 tons during any rolling 12-month time period (ARM 17.8.749).
9. Missing Link shall not operate more than two screens at any given time and the maximum combined rated design capacity of the screens shall not exceed 800 TPH (ARM 17.8.749).
10. Total combined screen production from the facility shall be limited to 6,240,000 during any rolling 12-month period (ARM 17.8.749).
11. Missing Link shall not operate more than two diesel generators at any given time and the maximum rated combined capacity shall not exceed 850 kilowatts (kW) and shall not exceed 4500 hours during any rolling 12-month time period (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Missing Link, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons/year during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
13. Missing Link shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR Part 60, Subpart OOO, for the crushing/screening plant (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

B. Emissions 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 be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If the crushing/screening plant is moved to another location, a notice of 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 17.8.734).
2. Missing Link 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 Missing Link 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).
3. Missing Link 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 most recent emission inventory report and sources identified in Section I.A of 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 units as required by the Department (ARM 17.8.505).
4. Missing Link shall document, by month, the production of the crushing operations. By the 25th day of each month, Missing Link shall total the monthly production of the crushing plant during the previous 12 months to verify compliance with the production limitation in Section II.A.8. A written report of the compliance verification shall be submitted annually to the Department no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.749).
5. Missing Link shall document, by month, the production of the screening operations. By the 25th day of each month, Missing Link shall total the monthly production of the screening plant during the previous 12 months to verify compliance with the production limitation in Section II.A.10. A written report of the compliance verification shall be submitted annually to the Department no later than March 15 and may be submitted along with the annual emission inventory (ARM 17.8.749).
6. Missing Link shall document, by month, the hours of operation of the diesel generator. By the 25th day of each month, Missing Link shall calculate the hours of operation from the diesel generator for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.11. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749)

7. Missing Link 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 start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745 (ARM 17.8.745).
8. Missing Link shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required in ARM 17.8.1204. The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted with the annual emission inventory information (ARM 17.8.1204 and ARM 17.8.1207).

Section III: General Conditions

- A. Inspection - Missing Link shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Missing Link fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving Missing Link of the responsibility for complying with any applicable federal, or Montana statute, rule or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401 *et seq.*, MCA.
- E. Appeals - Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection - As required by ARM 17.8.755 Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.

- G. Construction Commencement - Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked.
- H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay by the permittee of an annual operation fee by Missing Link may be grounds for revocation of this permit, as required by that Section and rules adopted thereunder by the Board.
- 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. Missing Link shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas that have a Department approved permitting program.

Permit Analysis
Missing Link Gravel, LLC
Permit Number 3830-00

I. Introduction/Process Description

A. Permitted Equipment

Missing Link Gravel, LLC (Missing Link) operates a portable crushing/screening facility consisting of five portable crushers (705 tons per hour (TPH) combined capacity), three screens (800 TPH combined capacity), two diesel generators (850 kW combined capacity), and associated equipment.

B. Source Description

Missing Link proposed the initial location to be Section 28, Township 29 North, Range 38 East in Valley County. For a typical operational setup, materials are loaded into a hopper that feeds a conveyor to a portable crushing unit. Material is crushed by the crusher and conveyed to the screen. Properly sized material is conveyed to a stockpile for use and oversized material is conveyed back through the crushing/screening operation and then to a stockpile for use.

II. Applicable Rules and Regulations

The following are partial quotations of some applicable rules and regulations, which 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 locations 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 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
2. 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.

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

3. 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.
4. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. (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 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate
5. ARM 17.8.223 Ambient Air Quality Standard for PM-10

Missing Link must comply 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 to an outdoor atmosphere from any source installed after Nov. 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, Missing Link 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 17.8.310 Particulate Matter, Industrial Process. This section requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
4. 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). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, indicates that NSPS requirements apply to crushing facilities with capacities greater than 150 tons/hour and was constructed after August 31, 1983. The Missing Link facility has a capacity in excess of 150 tons/hour and was constructed after August 31, 1983; therefore, NSPS requirements apply to the 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 Missing Link 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. Missing Link submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. This operation fee is based on the actual or estimated 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, as described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions which prorate the required fee amount.

E. ARM 17.8, Sub-Chapter 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. Missing Link has the potential to emit more than 15 tons per year of particulate matter, PM₁₀, and NO_x, therefore, a permit is required.
3. ARM 17.8.744 Montana Air Quality Permits -- General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.
4. ARM 17.8.745 Montana Air Quality Permits -- Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units -- Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Missing Link 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. Missing Link submitted an affidavit of publication of public notice for the May 3, 2006, issue of *The Glasgow Courier*, a newspaper of general circulation in the Town of Glasgow in Valley 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 Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Missing Link of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, et seq.
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of Missing Link, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for the changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. (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.

F. 17.8, Sub-Chapter 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 sub-chapter.
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 that it would emit, except as this subchapter would otherwise allow.

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

G. ARM 17.8, Sub-Chapter 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 a lesser quantity as the Department may establish by rule; or
 - c. Sources with the PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ non-attainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. 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 #3830-00 for Missing Link, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for all criteria pollutants.
 - b. The facility's PTE is less than 10 tons/year of 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 subject to current NSPS standards (40 CFR 60, Subpart A,

General Provisions, and Subpart 000, Non-Metallic Mineral Processing Plants).

- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts and the limits required by permit #3830-00, the Department determined that Missing Link 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, Missing Link will be required to obtain a Title V Operating Permit.

III. Emission Inventory

Source	Ton/Year					
	PM	PM ₁₀	NO _x	VOC	CO	SO _x
Crushers (up to 705 TPH)	3.32	1.49				
Screens (up to 800 TPH)	6.86	2.30				
Material Transfer	5.77	1.91				
Pile Forming	70.40	32.99				
Bulk Loading	4.29	1.44				
Diesel Generator(s) (up to 850 kW)	5.65	5.65	79.52	6.35	17.15	5.27
Haul Roads	12.61	3.58				
Total	121.50	49.36	79.52	6.35	17.15	5.27

- Limitations were placed on the equipment to keep the facility below the modeling threshold.

Crushers (up to 700 TPH)

Maximum Process Rate: 705 ton/hr
Hours of operation: 7800 hr/yr

PM Emissions:

Emission Factor: 0.0012 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.0012 lb/ton * 705 tons/hr = 0.85 lb/hr
Daily Calculations: 0.85 lb/hr * 21.4 hr/day = 18.19 lb/day
Annual Calculations: 0.85 lb/hr * 7800 hr/yr * 0.0005 ton/lb = 3.32 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.00054 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.00054 lb/ton * 705 tons/hr = 0.381 lb/hr
Daily Calculations: 0.381 lb/hr * 21.4 hr/day = 8.15 lb/day
Annual Calculations: 0.381 lb/hr * 7800 hr/yr * 0.0005 ton/lb = 1.49 ton/yr

Screens (up to 800 TPH)

Process Rate: 800 ton/hr
Hours of operation: 7800 hr/yr

PM Emissions:

Emission Factor: 0.0022 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations: 0.0022 lb/ton * 800 ton/hr = 1.76 lb/hr
Daily Calculations: 1.76 lb/hr * 21.4 hr/day = 37.66 lb/day
Annual Calculations: 1.76 lb/hr * 7800 hr/yr * 0.0005 ton/lb = 6.86 ton/yr

PM₁₀ Emissions:

Emission Factor: 0.00074 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)

Hourly Calculations:	0.00074 lb/ton * 800 ton/hr =	0.59 lb/hr
Daily Calculations:	0.59 lb/hr * 21.4 hr/day =	12.63 lb/day
Annual Calculations:	0.59 lb/hr * 7800 hr/yr * 0.0005 ton/lb =	2.30 ton/yr

Diesel Generator(s) (up to 850 kW)

Generator Size =	up to 850 kW
1kW =	1.341 hp
800 kW * 1.341 =	1140 hp

Hours of operation: 4500 hr/yr

PM Emissions

Emission Factor:	0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	1140 hp * 0.0022 lb/hp-hr =	2.51 lb/hr
Daily Calculations:	1140 hp * 0.0022 lb/hp-hr * 12 hr/day =	30.12 lb/day
Annual Calculation:	1140 hp * 0.0022 * 4500hr/yr * 0.0005 lb/ton =	5.65 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.0022 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	1140 hp * 0.0022 lb/hp-hr =	2.51 lb/hr
Daily Calculations:	1140 hp * 0.0022 lb/hp-hr * 12 hr/day =	30.12 lb/day
Annual Calculation:	1140 hp * 0.0022 * 4500hr/yr * 0.0005 lb/ton =	5.65 ton/yr

NOx Emissions:

Emission Factor:	0.031 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	1140 hp * 0.031 lb/hp-hr =	35.34 lb/hr
Daily Calculations:	1140 hp * 0.031 lb/hp-hr * 12 hr/day =	429.08 lb/day
Annual Calculation:	1140 hp * 0.031 * 4500hr/yr * 0.0005 lb/ton =	79.52 ton/yr

VOC Emissions:

Emission Factor:	0.00247 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	1140 hp * 0.00247 lb/hp-hr =	2.82 lb/hr
Daily Calculations:	1140 hp * 0.00247 lb/hp-hr * 12 hr/day =	33.84 lb/day
Annual Calculation:	1140 hp * 0.00247 * 4500hr/yr * 0.0005 lb/ton =	6.35 ton/yr

CO Emissions:

Emission Factor:	0.00668 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	1140 hp * 0.00668 lb/hp-hr =	7.62 lb/hr
Daily Calculations:	1140 hp * 0.00668 lb/hp-hr * 12 hr/day =	91.38 lb/day
Annual Calculation:	1140 hp * 0.00668 * 4500hr/yr * 0.0005 lb/ton =	17.15 ton/yr

SOx Emissions:

Emission Factor:	0.00205 lb/hp-hr (AP-42, Table 3.3-1, 10/96)	
Hourly Calculations:	1140 hp * 0.00205 lb/hp-hr =	2.34 lb/hr
Daily Calculations:	1140 hp * 0.00205 lb/hp-hr * 12 hr/day =	28.04 lb/day
Annual Calculation:	1140 hp * 0.00205 * 4500hr/yr * 0.0005 lb/ton =	5.27 ton/yr

Material Transfer

Process Rate:	705 ton/hr
Number of Transfers	15 transfers
Hours of operation:	7800 hr/yr

PM Emissions:

Emission Factor:	0.00014 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)	
Hourly Calculations:	0.00014 lb/ton * 705 ton/hr * 15 transfers=	1.48 lb/hr
Daily Calculations:	1.48 lb/hr * 21.4 hr/day =	31.67 lb/day
Annual Calculations:	1.48 lb/hr * 7800 hr/yr * 0.0005 ton/lb =	5.77 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.00054 lb/ton (controlled) (AP-42, Table 11.19.2-2, 8/04)	
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Hourly Calculations:	$0.00054 \text{ lb/ton} * 705 \text{ tons/hr} * 15 \text{ transfers} =$	0.49 lb/hr
Daily Calculations:	$0.49 \text{ lb/hr} * 21.4 \text{ hr/day} =$	10.49 lb/day
Annual Calculations:	$0.49 \text{ lb/hr} * 7800 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	1.91 ton/yr

Pile Forming

Process Rate:	705 ton/hr
Number of Piles	8 piles
Hours of operation:	7800 hr/yr

PM Emissions:

Emission Factor:	0.0032 lb/ton (controlled)	(AP-42, Section 13.2.4, 1/95)
Hourly Calculations:	$0.0032 \text{ lb/ton} * 705 \text{ ton/hr} * 8 \text{ piles} =$	18.05 lb/hr
Daily Calculations:	$18.05 \text{ lb/hr} * 21.4 \text{ hr/day} =$	386.23 lb/day
Annual Calculations:	$18.05 \text{ lb/hr} * 7800 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	70.40 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.0015 lb/ton	(AP-42, Section 13.2.4, 1/95)
Hourly Calculations:	$0.0015 \text{ lb/ton} * 705 \text{ ton/hr} * 8 \text{ piles} =$	8.46 lb/hr
Daily Calculations:	$8.46 \text{ lb/hr} * 21.4 \text{ hr/day} =$	181.04 lb/day
Annual Calculations:	$8.46 \text{ lb/hr} * 7800 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	32.99 ton/yr

Bulk Loading

Process Rate:	500 ton/hr
Number of Loads	4 load
Hours of operation:	7800 hr/yr

PM Emissions:

Emission Factor:	0.0022 lb/ton	(AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations:	$0.0022 \text{ lb/ton} * 500 \text{ ton/hr} =$	1.1 lb/hr
Daily Calculations:	$1.10 \text{ lb/hr} * 21.4 \text{ hr/day} =$	23.54 lb/day
Annual Calculations:	$1.10 \text{ lb/hr} * 7800 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	4.29 ton/yr

PM₁₀ Emissions:

Emission Factor:	0.00074 lb/ton	(AP-42, Table 11.19.2-2, 8/04)
Hourly Calculations:	$0.00074 \text{ lb/ton} * 500 \text{ ton/hr} =$	0.37 lb/hr
Daily Calculations:	$0.37 \text{ lb/hr} * 21.4 \text{ hr/day} =$	7.92 lb/day
Annual Calculations:	$0.37 \text{ lb/hr} * 7800 \text{ hr/yr} * 0.0005 \text{ ton/lb} =$	1.44 ton/yr

Haul Roads

Vehicle miles traveled:	5 VMT/day	{Estimated}
Assumption:	Rated Load Capacity < 50 tons	
Hours of Operation:	7800 hr/yr	
	21.4 hr/day	

TSP Emissions:

Emission Factor:	13.90 lb/VMT (controlled)	(AP-42 Section 13.2.2, 12/03)
Calculations:	$5.0 \text{ VMT/day} * 13.90 \text{ lb/VMT} =$	69.50 lb/day
	$69.50 \text{ lb/day} * 363 \text{ day/yr} * 0.0005 \text{ ton/lb} =$	12.61 ton/yr

PM-10 Emissions:

Emission Factor:	3.95 lb/VMT (controlled)	(AP-42 Section 13.2.2, 12/03)
Calculations:	$5 \text{ VMT/day} * 3.95 \text{ lb/VMT} =$	19.75 lb/day
	$19.75 \text{ lb/day} * 363 \text{ day/yr} * 0.0005 \text{ ton/lb} =$	3.58 ton/yr

IV. BACT Determination

A BACT determination is required for any new or altered source. Missing Link shall install on the new or altered source the maximum air pollution control capability that is technologically practicable and economically feasible, except that BACT shall be used.

Two types of emissions controls are readily available and used for dust suppression of fugitive emissions at the site and the surrounding area of operations, and for equipment emissions from the crushing/screening operation. These two control methods are water and chemical dust suppressant. Chemical dust suppressant could be used on the area surrounding the crushing/screening operation and for emissions from the crushing/screening operation. However, because water is more readily available, is more cost effective, is equally effective as chemical dust suppressant, and is more environmentally friendly, water has been identified as the most appropriate method of pollution control of particulate emissions for the general plant area. In addition, water suppression has been required of recently permitted similar sources. Missing Link may, however, use chemical dust suppressant to assist in controlling particulate emissions from the surrounding plant area.

Missing Link shall not cause or authorize to be discharged into the atmosphere from any NSPS-affected crusher, any visible emissions that exhibit an opacity of 15% or greater averaged over six consecutive minutes. Also, Missing Link shall not cause or authorize to be discharged into the atmosphere from any affected screen, conveyor transfers, or other NSPS-affected equipment, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes. Further, Missing Link shall not cause or authorize to be discharged into the atmosphere from any non-NSPS affected equipment, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

Missing Link must also take reasonable precautions to limit the fugitive emissions of airborne particulate matter from haul roads, access roads, parking areas, and the general area of operation.

Missing Link is required to have water spray bars and water available on site (at all times) and to apply the water, as necessary, to maintain compliance with the opacity and reasonable precaution limitations. Missing Link may also use chemical dust suppression, in order to maintain compliance with emission limitations in Section I.A of Permit #3830-00. The Department determined that using water spray bars, water, and chemical dust suppressant to maintain compliance with the opacity requirements and reasonable precaution limitations constitutes BACT for the crushing/screening operation.

V. Existing Air Quality and Impacts

Permit #3830-00 is issued for the operation of a portable crushing/screening facility to operate at various locations throughout Montana. This facility would be allowed to operate at any area designated as attainment or unclassified for all National Ambient Air Quality Standards (NAAQS); excluding those counties that have a Department-approved permitting program, those areas considered tribal lands, or those areas in or within 10 km of certain PM₁₀ nonattainment areas. A Missoula County air quality permit would be required for locations within Missoula County, Montana.

VI. Air Quality Impacts

This permit is for a portable crushing/screening facility to be located at various locations around Montana. This permit contains operational conditions and limitations that will protect air quality for any given site and the surrounding area. Also, this facility is a portable source that will operate on an intermittent and temporary basis, so any effects to air quality will be minor and short-lived. Further, the Department believes that the amount of controlled emissions generated by this project will not exceed any ambient air quality standard established for Montana's attainment or unclassified ambient air quality areas.

VII. 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.

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
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Helena, Montana 59620-0901
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FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: Missing Link Gravel, LLC
170 Hwy 246
Glasgow, MT 59230

Permit Number: 3830-00

Preliminary Determination Issued: June 20, 2006

Department Decision Issued: July 6, 2006

Permit Final: July 22, 2006

1. *Legal Description of Site:* Missing Link submitted an application to operate a portable crushing/screening plant that would be initially located near Glasgow, Montana in Section 28, Township 29 North, Range 39 East, in Valley County. However, permit #3830-00 would apply while operating at any location in Montana, except within those areas having a Department-approved permitting program, those areas considered to be tribal lands, or those areas in or within 10 km of certain PM₁₀ nonattainment areas. An addendum to this air quality permit would be required if Missing Link intends to locate in or within 10 km of certain PM₁₀ nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County, Montana.*
2. *Description of Project:* The permit applicant proposes the construction and operation of a portable crushing and screening facility consisting of five portable crushers (705 tons per hour (TPH) combined capacity), three portable screens (800 TPH combined capacity), two diesel-fired generators (850 kilowatts (kW) combined capacity), and associated equipment.
3. *Objectives of Project:* The object of the project would be to produce material to be used for various construction projects. The issuance of Permit #3830-00 would allow Missing Link to operate the permitted equipment at various locations throughout Montana.
4. *Additional Project Site Information:* In many cases, this crushing and screening operation may move to a general site location or open cut pit, which has been previously permitted through the Industrial and Energy Minerals Bureau (IEMB). If this were the case, additional information for the site would be found in the Mined Land Reclamation Permit for that specific site.
5. *Alternatives Considered:* In addition to the proposed action, the Department 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 Missing Link demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

6. *A Listing of Mitigation, Stipulations, and Other Controls:* A listing of the enforceable permit conditions and a Permit Analysis, including a BACT analysis, would be contained in Permit #3830-00.
7. *Regulatory Effects on Private Property Rights:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would not unduly restrict private property rights.
8. *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 Resource				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 would use the same area as the crushing and screening operation. The crushing and screening operation would be considered a minor source of emissions, by industrial standards, with intermittent and seasonal operations. Therefore, only minor effects on terrestrial life would be expected as a result of equipment operations or from pollutant deposition.

Impacts on aquatic life could result from storm water runoff and pollutant deposition, but such impacts would be minor as the facility would be a minor source of emissions (with seasonal and intermittent operations) and only minor amounts of water would be used for pollution control. Since only a minor amount of air emissions would be generated, only minor deposition would occur. Therefore, only minor and temporary effects to aquatic life and habitat would be expected from the proposed crushing/screening operation.

B. Water Quality, Quantity, and Distribution

Water would be used for dust suppression on the surrounding roadways and areas of operation and for pollution control for equipment operations. However, water use would only cause a minor impact to the water quality, quantity, and distribution in the area, since only small amounts of water would be required to control air pollutant emissions and the deposition of air pollutants (as described in Section 8.F of this EA).

C. Geology and Soil Quality, Stability, and Moisture

Because the facility would be a minor source of emissions by industrial standards and would typically operate in areas previously designated and used for aggregate crushing, impacts from the emissions from the crushing facility would be minor.

The crushing and screening operation would have only minor impacts on soils in any proposed site location (due to the construction and use of the crushing facility) because the facility is relatively small in size, would use only relatively small amounts of water for pollution control, and would only have seasonal and intermittent operations. Therefore, any affects upon geology and soil quality, stability, and moisture at any proposed operational site would be minor.

D. Vegetation Cover, Quantity, and Quality

Because the facility would be a minor source of emissions by industrial standards and would typically operate in areas previously designated and used for aggregate crushing, impacts from the emissions from the crushing and screening facility would be minor.

As described in Section 8.F of this EA, the amount of air emissions from this facility would be minor. As a result, the corresponding deposition of the air pollutants on the surrounding vegetation would also be minor. Also, because the water usage is minimal, as described in Section 8.B, and the associated soil disturbance is minimal, as described in Section 8.C, corresponding vegetative impacts would be minor.

E. Aesthetics

The crushing and screening operation would be visible and would create additional noise while operating in these areas. However, Permit #3830-00 would include conditions to control emissions, including visible emissions, from the plant. Also, because the crushing and screening operation is portable and would operate on an intermittent and seasonal basis, would typically locate within an open-cut pit, any visual and noise impacts would be minor and short-lived.

F. Air Quality

The air quality impacts from the crushing and screening operations would be minor because the facility is relatively small. Permit #3830-00 would include conditions limiting the opacity from the plant, as well as requiring water spray bars and other means to control air pollution. Further, Permit #3830-00 would limit total emissions from the crushing and screening operation and any additional Missing Link equipment operated at the site to 250 tons/year or less, excluding fugitive emissions.

This facility would be used on a temporary and intermittent basis, thereby further reducing potential air quality impacts from the facility. Additionally, the small and intermittent amounts of deposition generated from the crushing/screening operation would be minimal because the pollutants emitted would be well controlled, widely dispersed (from such factors as wind speed and wind direction) and would have minimal deposition on the surrounding area. Therefore, air quality impacts would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department, in an effort to assess any potential impacts to unique, endangered, fragile, or limited environmental resources in the initial proposed area of operation, contacted the Montana Natural Heritage Program (MNHP). Search results concluded there are no such environmental resources found within the defined area. The defined area, in this case, is defined by the township and range of the proposed site, with an additional one-mile buffer. Based on the small size and temporary nature of equipment operations and the minimal disturbance to the environment (water, air, and soils) from the proposed project, the Department determined no impacts to unique endangered, fragile, or limited environmental resources would occur.

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

Due to the size of the facility, the crushing and screening operation would require only small quantities of water, air, and energy for proper operation. Small quantities of water would be used for dust suppression and would control particulate emissions being generated at the site. Energy requirements would also be small because the energy demands of the crushing and screening operation would be relatively small and the facility would not be used continuously. The facility would have limited production, and would have seasonal and intermittent use. In addition, impacts to air resources would be minor because the source is small by industrial standards, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed. Therefore, any impacts to water, air, and energy resources in any given area would be minor.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites located near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there are a few previously recorded sites within the designated search locales. The absence of more cultural properties in the area does not mean that they do not exist but rather may reflect the lack of previous cultural resource inventory in the area, as records indicated only a few. The Department determined that the chance of the project impacting any historical and archaeological sites in the area would be minor due to the relatively small size of the project and that the crushing and screening operation would typically take place within an open-cut pit that has been permitted through the Opencut Program of the Department.

J. Cumulative and Secondary Impacts

The crushing and screening operation would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would generate emissions of PM, PM₁₀, NO_x, CO, SO_x, and VOC. Noise would also be generated from the site. Emissions and noise would cause minimal disturbance because the equipment is small and the facility would be expected to operate in areas designated and used for such operations. Additionally, this facility, in combination with the other emissions from equipment operations at the operational site, would not be permitted to exceed 250 tons per year of non-fugitive emissions. Overall, any cumulative or secondary impacts to the physical and biological aspects of the human environment would be minor.

9. *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 Department has prepared the following comments.

A. Social Structures and Mores

The crushing and screening operation would cause minor impacts to the social structures and mores in the area because the source is a minor source (by industrial standards) and would only have intermittent operations. Further, the facility would be a minor source of air pollution and would be required to operate according to the conditions that would be placed in Permit #3830-00. Thus, minor impacts on native or traditional communities and minor impacts upon social structures would result from the proposed project’s operations.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of these areas would expect minor impacts by the proposed crushing and screening operation. The facility would be considered a portable/temporary source with seasonal and intermittent operations. Therefore, predominant use of the surrounding areas would not change as a result of this project.

C. Local and State Tax Base and Tax Revenue

The crushing and screening operation 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 (minor source) and would be used on a seasonal and intermittent basis. The facility would require the use of only a few employees. Thus, only minor, if any, impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would 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 and screening operation would have only a minor impact on local industrial production since the facility is a minor source of emissions (by industrial standards) and would typically locate in an existing open-cut pit. There could be minor effects on agricultural land but, 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 8.D of this EA).

E. Human Health

Permit #3830-00 would incorporate conditions to ensure that the crushing facility would operate 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 8.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other conditions that would be established in Permit #3830-00, though the facilities air emissions would be quite small without the use of pollution controls. Therefore, only minor impacts would be expected upon human health from the proposed crushing/screening facility.

F. Access to and Quality of Recreational and Wilderness Activities

The crushing plant would typically operate within the confines of an existing open-cut pit. Therefore, only minor impacts upon the access to and quality of recreational and wilderness activities would result. Additionally, noise from the facility would be minor because the facility would typically operate within the confines of an existing open-cut pit. Also, the facility would operate on a seasonal and intermittent basis and would be relatively small by industrial standards. Therefore, any changes in the quality of recreational and wilderness activities created by operating the equipment at a given site would be expected to be minor and intermittent.

G. Quantity and Distribution of Employment

The portable crushing and screening operation is small and would require a few employees to operate with an increase of only 2-3 employees expected. The crushing and screening operation is a small, portable source, with seasonal and intermittent operations and would be expected to have minor affects upon the quantity and distribution of employment in any given area of operation. Therefore, minor impacts upon the quantity and distribution of employment in these areas would be expected.

H. Distribution of Population

The portable crushing and screening operation is small and would only require a few employees to operate. Also, no individuals would be expected to permanently relocate to a given area of operation as a result of operating the crushing facility, which would have only intermittent and seasonal operations. Therefore, the crushing facility would not disrupt the normal population distribution in a given area of operation.

I. Demands of Government Services

Minor increases would be seen in traffic on existing roadways in a given area while the crushing and screening operation is in progress. In addition, government services would be required for acquiring the appropriate permits from government agencies and determining compliance with the permits. Demands for government services would be minor.

J. Industrial and Commercial Activity

The crushing and screening operation would represent only a minor increase in the industrial activity in any given area because the source would be a minor source (relatively small in size by industrial standards) and would be portable and temporary in nature.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans and goals that would affect Missing Link. The facility would be allowed, by permit, to operate in areas designated by EPA as attainment or unclassified. 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 and screening operation would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate areas of operation because the source is a portable and temporary source. Minor increases in traffic would have minor effects on local traffic in the immediate areas, thus, having a direct effect on the social environment. Because the source is relatively small and temporary, only minor economic impacts to the local economy would be expected from operating the facility. Thus, only minor and temporary cumulative effects would result to the local economy.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: All potential effects resulting from construction and operation of the proposed facility are minor; therefore, an EIS is not required.

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

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

EA prepared by: Julie Merkel

Date: 6/9/06