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July 3, 2012

Mr. Darrell Silvan  
Spion-Kop Wind Farm Aggregate  
4498 Jackrabbit Lane  
Bozeman, MT 59715

Dear Mr. Silvan:

Montana Air Quality Permit #4746-00 is deemed final as of July 3, 2012, by the Department of Environmental Quality (Department). This permit is for a portable crushing and screening operation. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Charles Homer  
Manager, Air Permitting, Compliance and Registration  
Air Resources Management Bureau  
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Deanne Fischer, P.E.  
Environmental Engineer  
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CH:DF  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #4746-00

Spion-Kop Wind Farm Aggregate  
4498 Jackrabbit Lane  
Bozeman, MT 59715

July 3, 2012



## MONTANA AIR QUALITY PERMIT

Issued To: Spion-Kop Wind Farm Aggregate  
4498 Jackrabbit Lane  
Bozeman, MT 59715

MAQP: #4746-00  
Application Complete: 05/21/2012  
Preliminary Determination Issued: 05/30/2012  
Department's Decision Issued: 06/15/2012  
Permit Final: 07/03/2012  
AFS #:777-4746

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Spion-Kop Wind Farm Aggregate (Spion-Kop) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### SECTION I: Permitted Facilities

#### A. Permitted Equipment

Spion-Kop proposes to operate a portable crushing and screening operation. Spion-Kop's operation includes one diesel fueled crusher, one diesel fueled screening plant, one diesel fueled stacker conveyor, and associated equipment. A complete list of permitted equipment is contained in Section I.A of the permit analysis.

#### B. Plant Location

Spion-Kop will operate a portable crushing/screening operation, which will initially be located at Township 18N, Range 09E, Section 09, in Judith Basin County, Montana. However, MAQP #4746-00 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS) – affected crusher shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
  - For crushers that commence construction, modification, or reconstruction on or after April 22, 2008: 12% opacity
  - For crushers that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 15% opacity
2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):

- For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity
  - For equipment that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
  4. Water and spray bars shall be available on-site at all times and operated as necessary to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749 and ARM 17.8.752).
  5. Spion-Kop 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. Spion-Kop 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. Spion-Kop shall not operate more than one crusher at any given time and the maximum rated design capacity of the crusher shall not exceed 386 tons per hour (TPH). The maximum rated capacity of the diesel engine driving the crusher shall not exceed 438 brake horsepower (bhp) (ARM 17.8.749).
  8. Spion-Kop shall not operate more than one screen at any given time and the maximum rated design capacity of the screen shall not exceed 500 TPH. The maximum rated capacity of the diesel engine driving the screen shall not exceed 111 bhp (ARM 17.8.749).
  9. Spion-Kop shall not operate more than one stacker-conveyor at any given time and the maximum rated design capacity of the stacker-conveyor shall not exceed 300 TPH. The maximum rated capacity of the diesel engine driving the stacker-conveyor shall not exceed 78 bhp (ARM 17.8.749).
  10. If the permitted equipment is used in conjunction with any other equipment owned or operated by Spion-Kop, 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).
  11. Spion-Kop shall comply with all applicable standards and limitations, monitoring, reporting, recordkeeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
  12. Spion-Kop shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for*

*Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart III; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

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. Additional testing may be required by 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, 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/screening plant is moved to another location, an Intent to Transfer form must be sent to the Department and 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 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 17.8.749 and ARM 17.8.765).
2. Spion-Kop 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.
3. 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, and/or to verify compliance with permit limitations (ARM 17.8.505).
4. Spion-Kop shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include the addition of a new emissions unit, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to 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).
5. Spion-Kop 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 Spion-Kop 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).

D. Notification

Spion-Kop shall provide the Department with written notification of the actual start-up date of Spion-Kop's crushing/screening operation postmarked within 15 days after the actual start-up date (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Spion-Kop 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 (continuous emissions monitoring system (CEMS) or continuous emissions rate monitoring system 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 Spion-Kop fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Spion-Kop 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 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), Montana Code Annotated (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. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Spion-Kop may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (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. Spion-Kop 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 or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis  
Spion-Kop Wind Farm Aggregate  
MAQP #4746-00

I. Introduction/Process Description

Spion-Kop Wind Farm Aggregate (Spion-Kop) owns and operates a portable crushing/screening facility.

A. Permitted Equipment

Equipment used at the facility includes:

- One diesel engine (438 brake horsepower (bhp)) driven crusher (capacity up to 386 tons per hour (TPH)),
- One diesel engine (111 bhp) driven screening plant (capacity up to 500 TPH),
- One diesel engine (78 bhp) driven stacker conveyor (capacity up to 300 TPH), and,
- associated equipment.

MAQP #4746-00 was written in a de minimis friendly manner to allow operational flexibility so that alternate applicable equipment may be utilized provided the maximum capacities listed in Section II of the MAQP are not exceeded.

B. Source Description

The Spion-Kop facility will receive raw material that will be fed into the portable crusher. From the crusher, the material will be fed into the portable screen plant for processing. From the portable screen plant, the finished product will be fed onto the portable conveyor for stockpiling.

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 locations of complete copies of all applicable rules and regulations 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 tests, 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).



Spion-Kop 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 PM<sub>10</sub>
11. ARM 17.8.230 Fluoride in Forage

Spion-Kop 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, Spion-Kop 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 Processes. 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 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Spion-Kop is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
  - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
  - b. 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a crushing plant to be subject to this subpart, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Spion-Kop, the portable crushing, screening, and conveying equipment to be used under MAQP #4746-00 is subject to this subpart because it meets the definition of an affected facility and was constructed or modified after August 31, 1983.
  - c. 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines, and owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005, are subject to this subpart. Based on the information submitted by Spion-Kop, the CI ICE equipment to be used under MAQP #4746-00 may be subject to this subpart because they were manufactured after April 1, 2006, and may remain at the same location for more than 12 consecutive months.
7. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. The following subparts could potentially become applicable to the facility during the life of the permit: Spion-Kop is considered a NESHAP-affected facility under 40 CFR Part 63 and is subject to the requirements of the following subparts.
  - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAPs Subpart as listed below.
  - b. 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. A RICE

is considered stationary if it remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a single location on a permanent basis (at least 2 years) and operates 3 months or more each year. Based on the information submitted by Spion-Kop, the RICE equipment to be used under MAQP #4746-00 may be subject to this subpart because they operate at an area source of HAP emissions and the engines may remain at the same location for more than 12 consecutive months.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Spion-Kop 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.

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 modification to construct, modify, or use any asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year (TPY) of any pollutant. Spion-Kop has a PTE greater than 15 TPY of particulate matter (PM), oxides of nitrogen (NO<sub>x</sub>), 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, modification, or use of a source. Spion-Kop 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. Spion-Kop submitted an affidavit of publication of public notice for the May 9-15, 2012, issues of the *Great Falls Tribune*, a newspaper of general circulation in the Town of Great Falls in Cascade County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Spion-Kop of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an MAQP 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. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not a listed source and the facility's PTE is less than 250 TPY 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 TPY of any pollutant;
  - b. PTE > 10 TPY of any one hazardous air pollutant (HAP), PTE > 25 TPY of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
  - c. PTE > 70 TPY of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> 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 MAQP #4746-00 for Spion-Kop, the following conclusions were made:
  - a. The facility's PTE is less than 100 TPY for any pollutant.
  - b. The facility's PTE is less than 10 TPY for any one HAP and less than 25 TPY of all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is subject to current NSPS (40 CFR 60, Subparts A, OOO and potentially IIII).

- e. This facility is potentially subject to any current NESHAP standards (40 CFR 63, Subpart ZZZZ).
- f. This source is not a Title IV affected source
- g. This source is not a solid waste combustion unit.
- h. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Spion-Kop 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, Spion-Kop will be required to obtain a Title V Operating Permit.

### III. BACT Determination

A BACT determination is required for each new or modified source. Spion-Kop shall install on the new or modified source the maximum air pollution control capability which is technologically practicable and economically feasible, except that BACT shall be utilized.

#### Crushing/screening Particulate Emissions

Two types of emissions controls are readily available and used for dust suppression of fugitive emissions at the site, fugitive emissions for the surrounding area of operations, and for equipment emissions from the crushing/screening operation. These two control methods are water and/or chemical dust suppressant. Chemical dust suppressant could be used for dust suppression on the area surrounding the crushing operation and for emissions from the crushing 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. Individual circumstances may, however, necessitate the use of chemical dust suppressant to assist in controlling particulate emissions from the surrounding plant area.

In order to maintain compliance with the opacity requirements and reasonable precaution limitations, the Department determined that application of water and/or dust suppressant chemicals using spray bars constitutes BACT for the crushing/screening operation.

#### Diesel Engines

Due to the limited amount of emissions produced by the diesel engines and the lack of readily available cost effective add-on controls, add-on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance with no additional controls would constitute BACT for the diesel engines.

The control options required for the proposed crushing/screening facility and for the diesel engines driving the crushing, screening and conveying equipment are similar to other recently permitted similar sources.

IV. Emission Inventory

Emission Source	tons/year						
	PM	PM10	PM2.5	NOx	CO	VOC	SO2
Terex Crusher	2.03	0.91	0.17				
Terex Crusher Engine (438 bhp)	4.22	4.22	4.22	59.47	12.82	4.82	3.93
Chieftan Screen	4.82	1.62	0.11				
Chieftan Screen Engine - 111 bhp	1.07	1.07	1.07	15.07	3.25	1.22	1.00
Stacker Conveyor Transfer Points	0.37	0.12	0.03				
Stacker conveyor Engine - 78 bhp	0.75	0.75	0.75	10.59	2.28	0.86	0.70
Bulk Loading	0.01	0.01	0.03				
Pile Forming	2.15	1.02	0.15				
Haul Roads	5.68	1.57	0.16				
<b>Total Emissions</b>	<b>21.10</b>	<b>11.29</b>	<b>6.69</b>	<b>85.13</b>	<b>18.35</b>	<b>6.90</b>	<b>5.63</b>
<b>Operation</b>	<b>8,760 hr/yr</b>						

a. Inventory reflects maximum allowable emissions for all pollutants based on maximum production and year-round operation (8,760 hours).

- \*\* CO = carbon monoxide
- HAPs = hazardous air pollutants
- hp = horsepower
- lb = pound
- N/A = not applicable
- ND = no data available
- NO<sub>x</sub> = oxides of nitrogen
- PM = particulate matter
- PM<sub>10</sub> = particulate matter with an aerodynamic diameter of 10 microns or less
- PM<sub>2.5</sub> = particulate matter with an aerodynamic diameter of 2.5 microns or less
- SO<sub>x</sub> = oxides of sulfur
- ton/hr = tons per hour
- ton/yr = tons per year
- VOC = volatile organic compounds
- yr = year

**Terex Crusher**

Hours of operation 8,760 hrs/yr  
 Process Rate 386 ton/hr

**PM Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04, controlled) 0.0012 lb/ton  
 Calculation: (386 ton/hr) \* (8760 hrs/yr) \* (0.0012 lb/ton) \* (ton/2000 lb) = **2.03** ton/yr

**PM<sub>10</sub> Emissions:**

Emission Factor: (AP 42, Table 11.19.2-2, 8/04, controlled) 0.00054 lb/ton  
 Calculation: (386 ton/hr) \* (8760 hrs/yr) \* (0.00054 lb/ton) \* (ton/2000 lb) = **0.91** ton/yr

**PM<sub>2.5</sub> Emissions:**

Emission Factor: (AP 42, Table 11.19.2-2, 8/04, controlled) 0.0001 lb/ton  
 Calculation: (386 ton/hr) \* (8760 hrs/yr) \* (0.0001 lb/ton) \* (ton/2000 lb) = **0.17** ton/yr

**Terex 1300 Crusher Engine (438 bhp)**

Operational Capacity of Engine = 438 bhp  
 Hours of Operation = 8,760 hr/yr

**Total PM/PM<sub>10</sub>/PM<sub>2.5</sub> Emissions:**

Emission Factor (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)= 2.20E-03 lbs/hp-hr  
 Calculation: (438 bhp) \* (8,760 hr/yr) \* (0.0022 lbs/hp-hr) \* (ton/2000 lb) = **4.22** ton/yr  
 Calculation: (438 bhp) \* (8,760 hr/yr) \* (0.0022 lbs/hp-hr) = **8441.14** lbs/yr

**NOx Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	0.031	lbs/hp-hr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.031 lbs/hp-hr) * (ton/2000 lb) =	<b>59.47</b>	ton/yr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.031 lbs/hp-hr) =	<b>118943.28</b>	lbs/yr

**CO Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	6.68E-03	lbs/hp-hr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.00668 lbs/hp-hr) * (ton/2000 lb) =	<b>12.82</b>	ton/yr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.00668 lbs/hp-hr) =	<b>25630.36</b>	lbs/yr

**VOC Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)=	2.51E-03	lbs/hp-hr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) =	<b>4.82</b>	ton/yr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.0025141 lbs/hp-hr) =	<b>9646.30</b>	lbs/yr

**SO<sub>2</sub> Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	2.05E-03	lbs/hp-hr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.00205 lbs/hp-hr) * (ton/2000 lb) =	<b>3.93</b>	ton/yr
Calculation: (438 bhp) * (8,760 hr/yr) * (0.00205 lbs/hp-hr) =	<b>7865.60</b>	lbs/yr

**Chieftan 2100X 2 Deck Scen**

Hours of Operation	8,760	hrs/yr
Process Rate	500	ton/hr

**Total PM Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.0022	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.0022 lb/ton) * (ton/2000 lb) =	<b>4.82</b>	ton/yr

**Total PM<sub>10</sub> Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.00074	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00074 lb/ton) * (ton/2000 lb) =	<b>1.62</b>	ton/yr

**Total PM<sub>2.5</sub> Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.00005	lb/ton
Calculation: (500 ton/hr) * (8760 hrs/yr) * (0.00005 lb/ton) * (ton/2000 lb) =	<b>0.11</b>	ton/yr

**Chieftan Scen Engine - 111 bhp**

Operational Capacity of Engine =	111.0	hp
Hours of Operation =	8,760	hr/yr

**Total PM/PM<sub>10</sub>/PM<sub>2.5</sub> Emissions:**

Emission Factor (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	2.20E-03	lbs/hp-hr
Calculation: (111 hp) * (8,760 hr/yr) * (0.0022 lbs/hp-hr) * (ton/2000 lb) =	<b>1.07</b>	ton/yr
Calculation: (111 hp) * (8,760 hr/yr) * (0.0022 lbs/hp-hr) =	<b>2139.19</b>	lbs/yr

**NOx Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	0.031	lbs/hp-hr
Calculation: (111 hp) * (8,760 hr/yr) * (0.031 lbs/hp-hr) * (ton/2000 lb) =	<b>15.07</b>	ton/yr
Calculation: (111 hp) * (8,760 hr/yr) * (0.031 lbs/hp-hr) =	<b>30143.16</b>	lbs/yr



**CO Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	6.68E-03	lbs/hp-hr
Calculation: (111 hp) * (8,760 hr/yr) * (0.00668 lbs/hp-hr) * (ton/2000 lb) =	<b>3.25</b>	ton/yr
Calculation: (111 hp) * (8,760 hr/yr) * (0.00668 lbs/hp-hr) =	<b>6495.36</b>	lbs/yr

**VOC Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)=	2.51E-03	lbs/hp-hr
Calculation: (111 hp) * (8,760 hr/yr) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) =	<b>1.22</b>	ton/yr
Calculation: (111 hp) * (8,760 hr/yr) * (0.0025141 lbs/hp-hr) =	<b>2444.61</b>	lbs/yr

**SO<sub>2</sub> Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	2.05E-03	lbs/hp-hr
Calculation: (111 hp) * (8,760 hr/yr) * (0.00205 lbs/hp-hr) * (ton/2000 lb) =	<b>1.00</b>	ton/yr
Calculation: (111 hp) * (8,760 hr/yr) * (0.00205 lbs/hp-hr) =	<b>1993.34</b>	lbs/yr

**Stacker Conveyor Transfer Points (controlled) - (SCC 3-05-020-06)**

Process Rate	300	ton/hr
Hours of Operation	8,760	hrs/yr
Number of Transfers	2	transfer

**Total PM Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	0.00014	lb/ton
Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00014 lb/ton) * (ton/2000 lb) * (2 transfer) =	<b>0.37</b>	ton/yr

**Total PM<sub>10</sub> Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	4.60E-05	lb/ton
Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000046 lb/ton) * (ton/2000 lb) * (2 transfer) =	<b>0.12</b>	ton/yr

**Total PM<sub>2.5</sub> Emissions:**

Emission Factor (AP 42, Table 11.19.2-2, 8/04)	1.30E-05	lb/ton
Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.000013 lb/ton) * (ton/2000 lb) * (2 transfer) =	<b>0.03</b>	ton/yr

**Stacker conveyor Engine - 78 bhp**

Operational Capacity of Engine =	78.0	bhp
Hours of Operation =	8,760	hr/yr

**Total PM/PM<sub>10</sub>/PM<sub>2.5</sub> Emissions:**

Emission Factor (All PM < 1 mm, AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	2.20E-03	lbs/hp-hr
Calculation: (78 hp) * (8,760 hours) * (0.0022 lbs/hp-hr) * (ton/2000 lb) =	<b>0.75</b>	ton/yr
Calculation: (78 hp) * (8,760 hours) * (0.0022 lbs/hp-hr) =	<b>1503.22</b>	lbs/yr

**NO<sub>x</sub> Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	0.031	lbs/hp-hr
Calculation: (78 hp) * (8,760 hours) * (0.031 lbs/hp-hr) * (ton/2000 lb) =	<b>10.59</b>	ton/yr
Calculation: (78 hp) * (8,760 hours) * (0.031 lbs/hp-hr) =	<b>21181.68</b>	lbs/yr

**CO Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	6.68E-03	lbs/hp-hr
Calculation: (78 hp) * (8,760 hours) * (0.00668 lbs/hp-hr) * (ton/2000 lb) =	<b>2.28</b>	ton/yr
Calculation: (78 hp) * (8,760 hours) * (0.00668 lbs/hp-hr) =	<b>4564.31</b>	lbs/yr

**VOC Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, TOC, Exhaust & Crankcase, 10/96)=	2.51E-03	lbs/hp-hr
Calculation: (78 hp) * (8,760 hours) * (0.0025141 lbs/hp-hr) * (ton/2000 lb) =	<b>0.86</b>	ton/yr
Calculation: (78 hp) * (8,760 hours) * (0.0025141 lbs/hp-hr) =	<b>1717.83</b>	lbs/yr

**SO<sub>2</sub> Emissions:**

Emission Factor (AP-42, Sec. 3.3, Table 3.3-1, 10/96)=	2.05E-03	lbs/hp-hr
Calculation: (78 hp) * (8,760 hours) * (0.00205 lbs/hp-hr) * (ton/2000 lb) =	<b>0.70</b>	ton/yr
Calculation: (78 hp) * (8,760 hours) * (0.00205 lbs/hp-hr) =	<b>1400.72</b>	lbs/yr

**Bulk Loading**

Process Rate	386	ton/hr
Hours of Operation	8,760	hrs/yr
Number of Loads	1	load

**PM Emissions: Assuming PM= PM10 = PM2.5**

Emission Factor (AP 42, Sec. 11.19.2-2, 8/2004)	1.60E-05	lb/ton
Control Efficiency	50	%
Calculation: (386 ton/hr) * (8760 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) =	<b>0.03</b>	ton/yr
(386 ton/hr)*(8760 hrs/yr)*(0.00002 lb/ton)*(ton/2000 lb)*(1 load)*(1 - 0/100) =	<b>0.01</b>	ton/yr

**PM<sub>10</sub> Emissions:**

Emission Factor	1.60E-05	lb/ton
Control Efficiency	50	%
Calculation: (386 ton/hr) * (8760 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) =	<b>0.03</b>	ton/yr
(386 ton/hr)*(8760 hrs/yr)*(0.00002 lb/ton)*(ton/2000 lb)*(1 load)* (1 - 50/100) =	<b>0.01</b>	ton/yr

**PM<sub>2.5</sub> Emissions:**

Emission Factor = k (0.0032) * (U/5) <sup>1.3</sup> * (M / 2) <sup>-1.4</sup> = 0.00002 lb/ton	1.60E-05	lb/ton
Control Efficiency	50	%
Calculation: (386 ton/hr) * (8760 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) =	<b>0.03</b>	ton/yr
(386 ton/hr)*(8760 hrs/yr) * (0.00002 lb/ton) * (ton/2000 lb) * (1 load) * (1 - 50/100) =	<b>0.01</b>	ton/yr

**Pile Forming**

Process Rate	300	ton/hr
Hours of Operation	8,760	hrs/yr
Number of Piles	3	piles
(AP 42, Sec. 13.2.4.3, 11/06)		

**PM Emissions:**

Emission Factor = k (0.0032) * (U/5) <sup>1.3</sup> * (M / 2) <sup>-1.4</sup> = 0.00169 lb/ton	0.00327	lb/ton
Where: k = particle size multiplier (Value for PM < 30 microns)	0.74	
U = mean wind speed(Average from values provided in AP 42)	8.15	mph
M = material moisture content (Average from values provided in AP 42)	2.5	%
Control Efficiency	50	%
Calculation: (300 ton/hr) * (8760 hrs/yr) * (0.00327 lb/ton) * (ton/2000 lb) * (1 pile) =	4.30	ton/yr
(300 ton/hr) * (8760 hrs/yr) * (0.00327 lb/ton) * (ton/2000 lb) * (1 pile) * (1-50/100)=	<b>2.15</b>	ton/yr

**PM<sub>10</sub> Emissions:**

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00080$ lb/ton	0.00155	lb/ton
Where: k = particle size multiplier	0.35	
U = mean wind speed	8.15	mph
M = material moisture content	2.5	%
Control Efficiency	50	%
Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00080 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) =$	2.03	ton/yr
$(300 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00155 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) * (1-50/100) =$	<b>1.02</b>	<b>ton/yr</b>

**PM<sub>2.5</sub> Emissions:**

Emission Factor = $k (0.0032) * (U/5)^{1.3} * (M / 2)^{-1.4} = 0.00012$ lb/ton	0.00023	lb/ton
Where: k = particle size multiplier	0.053	
U = mean wind speed	8.15	mph
M = material moisture content	2.5	%
Control Efficiency	50	%
Calculation: $(300 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00023 \text{ lb/ton}) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) =$	0.31	ton/yr
$(300 \text{ ton/hr}) * (8760 \text{ hrs/yr}) * (0.00023) * (\text{ton}/2000 \text{ lb}) * (1 \text{ pile}) * (1-50/100) =$	<b>0.15</b>	<b>ton/yr</b>

**Haul Roads**

Vehicle Miles Traveled (Estimated)	5	VMT/day
VMT per Hour	0.21	VMT/hr
Hours of Operation	8,760	hrs/yr
(AP 42, Table 13.2.2-2, 11/06)	365	days/yr

**PM Emissions:**

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 12.46$ lb/VMT	12.46	lb/VMT
Where: k = constant (Value for PM10)	4.9	lbs/VMT
s = surface silt content (sand/gravel processing, material storage area)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM30/TSP)	0.7	
b = constant (Value for PM30/TSP)	0.45	
Control Efficiency	50	%
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) =$	11.37	tons/yr
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (12.46 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) =$	<b>5.68</b>	<b>tons/yr</b>

**PM<sub>10</sub> Emissions:**

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 3.43$ lb/VMT	3.43	lb/VMT
Where: k = constant (Value for PM10)	1.5	lbs/VMT
s = surface silt content (sand/gravel processing, material storage area)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM30/TSP)	0.9	
b = constant (Value for PM30/TSP)	0.45	
Control Efficiency	50	%
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) =$	3.13	tons/yr
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (3.43 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) =$	<b>1.57</b>	<b>tons/yr</b>

**PM<sub>2.5</sub> Emissions: (AP 42, Ch. 13.2.2, 11/06)**

Emission Factor = $k * (s / 12)^a * (W / 3)^b = 0.34$ lb/VMT	0.34	lb/VMT
Where: k = constant (Value for PM10)	0.15	lbs/VMT
s = surface silt content (sand/gravel processing, material storage area)	7.1	%
W = mean vehicle weight (1994 average loaded/unloaded or a 40 ton truck)	54	tons
a = constant (Value for PM30/TSP)	0.9	
b = constant (Value for PM30/TSP)	0.45	
Control Efficiency	50	%
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (0.34 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) =$	0.31	tons/yr
Calculation: $(8760 \text{ hrs/yr}) * (0.21 \text{ VMT/hr}) * (0.34 \text{ lb/VMT}) * (\text{ton}/2000 \text{ lb}) * (1-50/100) =$	<b>0.16</b>	<b>tons/yr</b>

V. Existing Air Quality

This permit is for a portable facility to originally be located in Section 9, Township 18N, Range 9E in Judith Basin County, Montana. Judith Basin County, and those areas for which this facility is permitted to operate has been designated unclassified/attainment with all ambient air quality standards and there are no major air pollution sources in the surrounding area.

VI. Air Quality Impacts

This permit contains conditions and limitations that would protect air quality for the site and surrounding area. Furthermore, this facility is a portable source that would operate on an intermittent and temporary basis, so any effects to air quality will be minor and of limited duration.

VII. Ambient Air Impact Analysis

Based on the information provided and the conditions established in MAQP #4746-00, the Department determined that the impact from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

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

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

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

IX. 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, MT 59620**  
**(406) 444-3490**

**FINAL ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* Spion-Kop Wind Farm Aggregate

*Montana Air Quality Permit number:* 4746-00

*Preliminary Determination Issued:* May 30, 2012

*Department Decision Issued:* June 15, 2012

*Permit Final:* July 3, 2012

1. *Legal Description of Site:* Spion-Kop Wind Farm Aggregate (Spion-Kop) submitted an application to operate a portable crushing/screening plant to initially be located at Township18N, Range 09E, Section 09, in Judith Basin County, Montana. MAQP #4746-00 would apply while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. A *Missoula County* air quality permit would be required for locations within Missoula County, Montana. An addendum would be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.
2. *Description of Project:* The Department received an application from Spion-Kop for the operation of a portable crushing/screening facility. The Spion-Kop portable crushing/screening facility would consist of one crusher, one screening plant, one stacker conveyor, and associated equipment. The crusher, screen, and conveyor are each driven by a diesel fueled engine.
3. *Objectives of Project:* The objective of this project would be to produce revenue for Spion-Kop through the sale and use of gravel. The issuance of the permit would allow Spion-Kop to operate the permitted equipment at various locations throughout Montana, including the initial site location.
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 Spion-Kop 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 MAQP #4746-00.
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

This permitting action would be expected to have minor effects on terrestrial and aquatic life and habitats, as it would disturb approximately two acres of agricultural land. There is a possibility that terrestrials would use the same area as the project. Species of concern in the area include the Bobolink which is listed as sensitive by the United States (U.S.) Bureau of Land Management and potentially at risk during breeding season by the Montana State Species Ranking System. The air emissions would likely have only minor effects on terrestrial and aquatic life because facility emissions would be well dispersed in the area of the operations (see Section 7.F of this EA) and would have intermittent and seasonal operations. Therefore, only minor and temporary effects to terrestrial and aquatic life and habitat would be expected from the proposed project.

B. Water Quality, Quantity and Distribution

Water would be required for dust suppression on the mineral processing equipment and surrounding facility area, including haul roads. This water use would be expected to only cause minor, if any, impacts to water resources because the facility would be considered small and only a small volume of water would be required to be used. In addition a storm water pollution plan would be developed for the site. The closest surface water is Byrne Creek located ½ mile east of the proposed site. Furthermore, the facility would emit air pollutants, and corresponding deposition of pollutants would occur, as described in Section 7.F. of this EA. The Department determined that, due to dispersion characteristics of pollutants, and conditions that would be placed in MAQP #4746-00, any impacts from deposition of pollutants on water quality, quantity, and distribution are expected to be minor.

C. Geology and Soil Quality, Stability and Moisture

The proposed site is an existing wheat farmland with approximately 12-inches of topsoil over fractured/weathered granite bedrock. Only minor impacts from deposition of air pollutants on soils would likely result (as described in Section 7.F of this EA) and only minor amounts of water would be used for pollution control, and only as necessary, in controlling particulate emissions. Thus, only minimal water runoff would likely occur. Since only minor amounts of pollution would be expected and corresponding emissions would be widely dispersed before settling upon surrounding soils and vegetation (as described in Section 7.D of this EA), impacts would be minor. Therefore, any effects upon geology and soil quality, stability, and moisture from air pollutant emissions from equipment operations would likely be minor and short-lived.

D. Vegetation Cover, Quantity, and Quality

Deposition of pollutants may affect vegetation cover, quantity, and quality in the surrounding area. During operations, the facility would likely be a relatively minor source of emissions and the pollutants would be widely dispersed (as described in Section 7.F of this EA). MAQP #4746-00 would contain limitations and conditions to control the allowable amount of those emissions; therefore, deposition on vegetation from the proposed project would expect to be minor. Also, due to limited water usage (as described in Section 7.B of this EA) and minimal associated soil disturbance from the application of water and water runoff (as described in Section 7.C of this EA), corresponding vegetative impacts would likely be minor.

E. Aesthetics

The crushing/screening facility would be visible and would create noise (approximately 93 decibels (dba) according to the application) while operating at the proposed site. However, activity would occur within an open wheat farmland property which would be located approximately 775 feet from the closest residence. Further, MAQP #4749-00 would include conditions to control emissions, including visible emissions, from the plant. The facility would operate on an intermittent and seasonal basis, and would be a small industrial source. Therefore, any visual aesthetic impacts would be short-lived and are expected to be minor.

F. Air Quality

Air quality impacts from the proposed project would likely be minor because the facility would be relatively small and operate on an intermittent and temporary basis. MAQP #4746-00 includes conditions limiting the facility's opacity; require water and water spray bars be available on site and used to ensure compliance with opacity standards; and limit the facility's crushing production.

Further, the Department determined that this facility would be a minor source of emissions as defined under the Title V Operating Permit Program because the source's potential to emit is below the major source threshold. Pollutant deposition from the facility would expect to be minimal because the pollutants emitted are widely dispersed (from factors such as wind speed and wind direction) and exhibit minimal deposition on the surrounding area. Therefore, air quality impacts from operating the crushing facility in this area would be expected to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to assess any potential impacts to any unique endangered, fragile, or limited environmental resources in the initial proposed area of operation (Township 18N, Range 09E, Section 09, Judith Basin County, Montana) the Department contacted the Natural Resource Information System – Montana Natural Heritage Program. Search results concluded there is



one species of concern within the area. The search area, in this case, is defined by the section, township, and range of the proposed site, with an additional one (1) mile buffer. The known species of concern is limited to a single vertebrate animal; the Bobolink. The Bobolink has a state species status of S3B. S3 signifies that the species is potentially at risk because of limited and/or declining numbers, range and/or habitat, even though it may be abundant in some areas. B signifies that the species is at risk during breeding season, but common in the winter.

The source would have only seasonal and intermittent operations in the area. Therefore, the Department determined that any effects upon this species would likely be minor and short-lived.

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

Due to the relatively small size of the project, only small demands on environmental resources would likely be required for proper operation. Only small quantities of water are required for dust suppression of particulate emissions being generated at the site. In addition, impacts to air resources would be expected to be minor because the source would be considered a minor industrial source of emissions, with intermittent and seasonal operations, and because air pollutants generated by the facility would be widely dispersed as described in Section 7.F of this EA. Energy requirements would also be small, as the diesel engines would use small amounts of fuel. Overall, any impacts to water, air, and energy resources would likely be minor.

#### I. Historical and Archaeological Sites

The Department contacted the Montana Historical Society - State Historical Preservation Office (SHPO) in an effort to identify any historical and/or archaeological sites that may be present in the proposed initial location of the facility. Search results concluded that there are no previously recorded historical or archaeological resources of concern within the area surrounding proposed for initial operations. According to correspondence from the Montana State Historic Preservation Office, there would be a low likelihood that cultural properties will be impacted. Therefore, no impacts upon historical or archaeological sites would be expected as a result of operating the proposed crushing/screening plant.

#### J. Cumulative and Secondary Impacts

The operation of the crushing facility would likely cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment because the facility would be limited in the amount of emissions allowed to be released to the atmosphere. Emissions and noise generated from the equipment would likely result in only minor impacts to the area of operations because the operation of the crushing facility would be seasonal and temporary. The proposed project would be short-term in nature, and likely have minor cumulative effects upon resources within the area. These resources include water, terrestrial and aquatic life, soils, and vegetation. Overall, cumulative and secondary impacts to the physical and biological aspects of the human environment would likely be minor.

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 operation of the crushing facility would be expected to cause no disruption to the social structures and mores in the area because the source would be a minor industrial source of emissions and would only have temporary and intermittent operations. Further, the facility would be required to operate according to the conditions that would be placed in MAQP #4746-00, which would limit the effects to social structures and mores.

**B. Cultural Uniqueness and Diversity**

The cultural uniqueness and diversity of this area would not likely be impacted by the operation of the proposed crushing facility because the facility is a portable source, with seasonal and intermittent operations. Therefore, there would not be any impacts expected to the cultural uniqueness and diversity of the proposed project site.

**C. Local and State Tax Base and Tax Revenue**

The operation of the crushing facility would likely have little, if any, impact on the local and state tax base and tax revenue because the facility would be a minor industrial source of emissions and would have seasonal and intermittent operations. The facility would require the approximately five employees. Thus, only minor impacts to the local and state tax base and revenue would be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would expect to be minor because the source would be portable and the money generated for taxes would be widespread.

D. Agricultural or Industrial Production

The initial location of the crushing facility would be an agricultural field. Because minimal deposition of air pollutants would occur on the surrounding land (as described in Section 7.F of this EA), only minor and temporary effects on the surrounding vegetation (i.e. agricultural production) would occur. The operation of the crushing facility would have only a minor impact on local industrial production since the facility would be a minor source of air emissions. In addition, 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.

E. Human Health

MAQP #4746-00 would incorporate conditions to ensure that the crushing/screening 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 7.F. of this EA, the air emissions from this facility would be minimized by the use of water spray and other operational limits that would be required by MAQP #4746-00. Also, the facility would be operating on a temporary basis and pollutants would disperse from the ventilation of emissions at this site (see Section 7.F of this EA). Therefore, only minor impacts would be expected on human health from the proposed project.

F. Access to and Quality of Recreational and Wilderness Activities

Based on information received from Spion-Kop, no recreational activities or wilderness areas are near the proposed project site would likely be affected. Therefore, no impacts to the access to and quality of recreational and wilderness activities would be expected.

G. Quantity and Distribution of Employment

The portable crushing/screening operation would only require a limited work force to operate (5 employees) and would have seasonal and intermittent operations. No individuals would be expected to permanently relocate to this area of operation as a result of operating the crushing/screening facility. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

H. Distribution of Population

The portable crushing/screening operation would be a portable industrial facility that would only require a limited number of employees (five employees). No individuals would be expected to permanently relocate to this area as a result of operating the crushing/screening facility. Therefore, the crushing/screening facility would not likely impact the normal population distribution in the initial area of operation or any future operating site.

I. Demands for Government Services

Minor increases may be seen in traffic on existing roadways in the area while the crushing/screening facility is being operated. In addition, government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. However, demands for government services would be expected to be minor.

J. Industrial and Commercial Activity

The operation of the crushing facility would represent only a minor increase in the industrial activity in the proposed area of operation because the source would be a relatively small industrial source that would be portable and temporary in nature.

K. Locally Adopted Environmental Plans and Goals

Spion-Kop would be allowed, by MAQP #4746-00, to operate in areas designated by Environmental Protection Agency as attainment or unclassified for ambient air quality. MAQP #4746-00 contains operational restrictions for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards, as a locally adopted environmental plan or goal for operating at this proposed site. Because the proposed crushing/screening facility would be a portable source and would likely have intermittent and seasonal operations, any impacts from the project would be expected to be minor and short-lived.

L. Cumulative and Secondary Impacts

The operation of the facility would cause only minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area of operation because the source would be a portable and temporary source. Minor increases in traffic would have 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 the facility. Thus, only minor and temporary cumulative effects would be expected to the local economy.

*Recommendation:* No Environmental Impact Statement (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 construction and operation of a portable crushing/screening facility. MAQP #4746-00 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, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

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