**STATE OF ALASKA**

**Dept. of Environmental Conservation**

**Division of Air Quality/ Air Permits Program**

**Minor General Permit 9 (MG9) Application**

**for**

**Rock Crushers**

|  |  |
| --- | --- |
| **For Department Use Only** | Permit No.:\_\_Click here to enter text.\_\_\_ |
| Reviewed by: \_Click here to enter text.\_\_\_\_\_\_ | Date Reviewed: \_\_Click here to enter text. |
| Complete  Incomplete  Does Not Qualify (specify):\_\_\_Click here to enter text. | |

This application is for a Title I Minor General Permit 9 (MG9) for a rock crusher with a rated capacity of at least 5 tons per hour, and emits less than 100 tons of a regulated pollutant[[1]](#footnote-1) per year (TPY).

Alaska law requires an owner or operator obtain a minor permit under 18 AAC 50.502(b)(3) before construction, operation, or relocation of a stationary source containing a rock crusher with a rated capacity of at least five tons per hour.

Alaska law allows the owner/operator to satisfy the need for a minor permit under 18 AAC 50.502(b) with a general minor permit issued under 18 AAC 50.560.

Note that a source with Potential to Emit (PTE) of a regulated air pollutant greater than 100 TPY needs a Title V operating permit. Regulated pollutant has the meaning given in 40 C.F.R. 71.2.

To determine the PTE of your stationary source, complete the worksheet in *Attachment 2: Determining Potential to Emit (PTE)*, or the *MG9 Potential to Emit Spreadsheet* on the Department’s general permit website.[[2]](#footnote-2)

To obtain an MG9 permit, you must ***complete this application in full*** and send it along with the appropriate application fee to:

**Alaska Department of Environmental Conservation**

**Air Permit Program**

**555 Cordova St.**

**Anchorage, AK 99501**

The administrative fee for this application is not listed with other Air Quality Control administrative fees in 18 AAC 50.400(d). Contact the Department’s Air Quality Division (907-465-5100) for the current fee, or check the MG3 and MG9 fee page available on the Department’s general permit website.2 *Note: Fees are subject to change.*

If this stationary source also uses a thermal soil remediation unit rated at greater than five tons per hour, to **remediate soils**, the owner must also apply for an air quality control minor permit for that activity. If the owner/operator would like to operate an **asphalt plant** and is applying for a **MG9** for rock crusher facilities, they will need a separate permit in addition to the MG9. They may apply for the Minor General Permit 3 (MG3) or General permit (GP3) for asphalt plants depending upon the size of the asphalt plant. Both applications are available on the Department’s general permits website.[[3]](#footnote-3)

***Application Completion and Review Process***

You will be notified within 60 days after receipt of the application if your application is complete and if you qualify for the MG9. After your application is determined complete, you will be sent an authorization to operate under the MG9.

By completing this application, the owner or operator acknowledges that the rock crusher facility operated under this permit is required to be operated with a fugitive dust control plan to control fugitive particulate (PM) emissions.

Please fill out the completion checklist below before submitting the application to the Department.

|  |
| --- |
| **Completion Checklist:** |
| Qualifying Criteria (Section 1) filled out completely  Stationary Source Identification (Section 3) filled out completely  Stationary Source Physical Address  Permittee name and contact information  Responsible Official name and contact information  Billing Contact name and contact information  Stationary Source Information (Section 4) filled out completely  Rock Crusher information  Diesel Engine(s) information  Equipment summary  Equipment list  Diesel Engine manufacturer certifications attached to application (if applicable)  Process Flow Diagram attached to application  All Equipment from Section 4 included  Observable emission point(s) marked  Operation and Maintenance Plan attached to application  Fugitive Dust Control Plan attached to application  Potential to Emit (PTE) table (Table A) filled out completely  Calculations attached (if applicable)  Assessable Emissions Estimates (Attachment 4) filled out completely  Certification statement signed by the Responsible Official |

**Every box in the checklist above must be checked, with necessary documents attached, for this application to be considered as complete** (unless that box description is followed by “if applicable”). If the application is not completely filled out with all necessary documents attached, the department will return the application for completion by the applicant. The application will only be approved if all qualifying criteria are met, and the application is complete.

# Section 1: Qualifying Criteria

1. **Exclusions**

Please fill out the table below. If you answered “**Yes**” to any of the questions, then you do not qualify for an MG9 Permit. Please contact ADEC.

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Criteria** |
|  |  | 1. Does the stationary source have a stationary source-specific requirement?   *Stationary source-specific requirements are restrictions on operations that usually allow the stationary source to avoid an applicable requirement. Examples include limits on hours of operation or fuel combustion. These limits are found in the current permit for your stationary source.* |
|  |  | 1. Does the rock crusher plant have emission points with mechanically induced airflow, such as a fan forcing emissions to a stack or control device? |
|  |  | 1. Is any equipment in your processing plant exhausted to a baghouse, cyclone, or wet scrubber? |
|  |  | 1. Does the stationary source conduct open burning? |
|  |  | 1. Does the stationary source contain a gas turbine? |
|  |  | 1. Does the stationary source contain an incinerator? |
|  |  | 1. Does the stationary source contain asbestos demolition or renovation? |
|  |  | 1. Does the stationary source contain servicing of refrigeration equipment containing Class I or Class II substances? |
|  |  | 1. Will this rock crusher operate at a Portland cement plant? |
|  |  | 1. Does the stationary source have the potential to emit more than 100 tons per year of a regulated air pollutant (i.e., is it subject to Title V requirements)? |
|  |  | 1. Will the rock crusher operate at the same location as a Title V permitted source?   *If you check “Yes”, contact ADEC for more information.* |

1. **Diesel Generator** **(check one)**

 This rock crusher facility will utilize a **stationary** diesel generator(s) to provide electrical power.

*If you checked the box above, please answer the following questions. If you answer “****No****” to any of the* *following questions, then you do not qualify for an MG9 permit. Please contact ADEC.*

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Criteria** |
|  |  | a. Will the stationary diesel engine(s) have a combined rating of less than 2,280 bhp? |
|  |  | b. For diesel engine(s) larger than 500 kW (~650 hp), is the engine’s exhaust stack height higher than 12 feet, as measured from the ground and does it exhaust unrestricted vertically? |

 This rock crusher facility will utilize a diesel generator(s) to provide electrical power, but the diesel generator(s) meets the definition of a **nonroad engine**[[4]](#footnote-4) under 40 C.F.R. 1068.30 Nonroad Engine-(1)(iii) and will not remain at the same location for more than 12 months.

 This rock crusher facility will utilize a diesel engine(s) that are self-propelled (e.g., a diesel engine internal to a rock crusher or screen that is on tracks) and meets the definition of a **nonroad engine**[[5]](#footnote-5) under 40 C.F.R. 1068.30 Nonroad Engine-(1)(i).

 This rock crusher facility will utilize highline power and will not have a diesel generator.

1. **Location Criteria.**

Please answer the question below. If you answered “**No**” then you do not qualify for an MG9 permit. Please contact ADEC.

|  |  |  |
| --- | --- | --- |
| **Yes** | **No** | **Criteria** |
|  |  | 1. Will the stationary source follow the location considerations specified in Section 2? |

# Section 2: Location Considerations

When applying to operate a rock crusher facility, the applicant should consider the permit conditions relating to selecting an operating site for the rock crusher facility.

Permit Condition 1 states that the Permittee should give adequate consideration to siting issues when operating or changing the location of a crusher. Specifically, do not operate the rock crusher or diesel engine within **400 ft** of the nearest occupied structure off the work site. This setback distance was designed to protect the State ambient air quality standards and increments listed in 18 AAC 50.010 and 18 AAC 50.020.

The stationary source must comply with these terms when operating the rock crusher facility under this general permit.

# Section 3: Stationary Source Identification Information

|  |  |
| --- | --- |
| Stationary Source Name | Click here to enter text. |
| Physical Address[[6]](#footnote-6) | Click here to enter text. |
| City, State, Zip Code | Click here to enter text. |
| Latitude/Longitude, or UTM Coordinates | Click here to enter text. |

**SIC/NAICS Codes: check all that apply**

1442 (SIC)/212321 (NAICS) Construction Sand & Gravel

1446 (SIC)/212322 (NAICS) Industrial Sand

1611 (SIC)/237310 (NAICS) Highway & Street Construction

1629 (SIC)/236210 (NAICS) Heavy construction

1771 (SIC)/238110 (NAICS) Driveways & parking lots (concrete work)

Other (provide code & describe activity): Click here to enter text.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Stationary Source Contact Information** | | | | |
| **\*Permittee** - The entity applying for the permit. This can be either the owner or the operator. | | | | |
| Name | Click here to enter text. | Title | | Click here to enter text. |
| Mailing Address | Click here to enter text. | Phone Number | | Click here to enter text. |
| City, State, Zip | Click here to enter text. | Email Address | | Click here to enter text. |
| **\*Responsible Official**[[7]](#footnote-7) **-** The name of the individual responsible for the plant’s day- to-day operations. | | | | |
| Name | Click here to enter text. | Title | | Click here to enter text. |
| Mailing Address | Click here to enter text. | Phone Number | | Click here to enter text. |
| City, State, Zip | Click here to enter text. | Email Address | | Click here to enter text. |
| **\*Billing Contact** | | | | |
| Name | Click here to enter text. | Title | | Click here to enter text. |
| Mailing Address | Click here to enter text. | Phone Number | | Click here to enter text. |
| City, State, Zip | Click here to enter text. | Email Address | | Click here to enter text. |
| **Legal Owner** - The stationary source’s legal owner. The legal owner could be either a person or a company. | | | | |
| Name | Click here to enter text. | Title | | Click here to enter text. |
| Mailing Address | Click here to enter text. | Phone Number | | Click here to enter text. |
| City, State, Zip | Click here to enter text. | Email Address | | Click here to enter text. |
| **\*Point of Contact** – If different from Responsible Official. | | | | |
| Name | Click here to enter text. | Title | | Click here to enter text. |
| Mailing Address | Click here to enter text. | Phone Number | | Click here to enter text. |
| City, State, Zip | Click here to enter text. | Email Address | | Click here to enter text. |
| **Stationary Source’s Consultant** - If applicable, the name of the business or entity that prepared the application and/or prepares reports. | | | | |
| Name | Click here to enter text. | Title | | Click here to enter text. |
| Mailing Address | Click here to enter text. | Phone Number | | Click here to enter text. |
| City, State, Zip | Click here to enter text. | Email Address | | Click here to enter text. |
| **Designated Agent** - The regulations allow Permittees to designate an individual responsible for permit matters. The designated agent could be a person, a separate company, or a law firm. | | | | |
| Name | Click here to enter text. | Title | | Click here to enter text. |
| Mailing Address | Click here to enter text. | Phone Number | | Click here to enter text. |
| City, State, Zip | Click here to enter text. | Email Address (optional) | | Click here to enter text. |
| **Individuals from your organization authorized to incur fees** (please include consultants, if applicable) | | | | |
| Name | Click here to enter text. | Name | Click here to enter text. | |
| Name | Click here to enter text. | Name | Click here to enter text. | |

\*Required fields.

# Section 4: Stationary Source Information

In the tables below, fill out the operation information for the rock crushers and diesel engines that will operate with this stationary source.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Rock Crushers | | | | | | | | | | | |
| What is the combined rated capacity of your initial crushers in tons per hour (TPH)? | | | | | | | | | | TPH | | |
| *An initial crusher is any crusher that can receive material that has not been processed by another crusher first.* | | | | | | | | | | | |
| Make: | | | Model: | | | | Rated Capacity: | | | | TPH |
| Make: | | | Model: | | | | Rated Capacity: | | | | TPH |
| If you have additional crushers (secondary, tertiary), please list the rated capacities. | | | | | | | | | | | |
| TPH | | | | TPH | | TPH | | | | TPH | | |
| Is your facility portable?  Yes  No | | | | | | | | | | | |
| Was your facility constructed, reconstructed[[8]](#footnote-8) or modified after Aug 31, 1983? Yes  No | | | | | | | | | | | |
|  | | | | | | | | | | | |
| Diesel Engines – *complete all fields for each diesel engine.* | | | | | | | | | | | |
| ***Engine 1*** | Is this engine stationary or nonroad?  Stationary  Nonroad[[9]](#footnote-9) | | | | | | | | | | |
| Make:Click here to enter text. | | | | | Model:Click here to enter text. | | | | | | |
| Serial #: Click here to enter text. | | | | | Manufacture Date: Click here to enter text. | | | | | | |
| Portable?  Yes  No | | | | | Design Capacity: | | | hp, kW, MW | | | |
| Exhaust Stack Diameter: | | inches | | | Maximum fuel rate: | | | | gal/hr | | |
| ***Engine 2*** | Is this engine stationary or nonroad?  Stationary  Nonroad9 | | | | | | | | | | |
| Make: Click here to enter text. | | | | | Model: Click here to enter text. | | | | | | |
| Serial #: Click here to enter text. | | | | | Manufacture Date: Click here to enter text. | | | | | | |
| Portable?  Yes  No | | | | | Design Capacity: | | | hp, kW, MW | | | |
| Exhaust Stack Diameter: | | inches | | | Maximum fuel rate: | | | | gal/hr | | |
| ***Engine 3*** | Is this engine stationary or nonroad?  Stationary  Nonroad8 | | | | | | | | | | |
| Make: Click here to enter text. | | | | | Model: Click here to enter text. | | | | | | |
| Serial #: Click here to enter text. | | | | | Manufacture Date: Click here to enter text. | | | | | | |
| Portable?  Yes  No | | | | | Design Capacity: | | | hp, kW, MW | | | |
| Exhaust Stack Diameter: | | inches | | | Maximum fuel rate: | | | | gal/hr | | |

**Crusher Equipment List**

Please identify any of the following equipment that makes up your rock crushing operation by filling in any requested information. *If additional room is needed* *to complete the emission inventory of your rock crusher operation, please attach additional pages to the application.*

*Equipment Summary*

|  |  |
| --- | --- |
| **Equipment Type** | **Number of Units** |
| Initial Crushers |  |
| Secondary Crushers |  |
| Tertiary Crushers |  |
| Screens |  |
| Belt Conveyors |  |
| Stationary Fuel Storage Tanks |  |

*List of Equipment*

|  |  |  |
| --- | --- | --- |
| **Equipment ID** | **Equipment Description (Make/Model)** | **Manufacture Date** |
| Click here to enter text. | Click here to enter text. | Click here to enter text. |
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# Section 5: Stationary Diesel Engine Generator Certification

Please attach documents that certify that the stationary diesel engine generator will meet the grain loading standard for fuel burning equipment of 0.05 grains per dry standard cubic feet (gr/dscf).

There is some question whether engines less than 200 hp meet the particulate matter standard of 0.05 gr/dscf. For engines of this size please include information that the engine meets one of the EPA Nonroad Tier Certifications or provide vendor particulate emission estimates including exhaust flow estimates, source test of an identical unit or a schedule when a source test will be performed on that unit.

You do not need to attach a certification if a generator is a nonroad engine.[[10]](#footnote-10)

# Section 6: Process Flow Diagram

Please attach a process flow diagram to this application. Stationary source process diagrams show the typical stationary source process including emission points, and items from your Crusher Equipment List. Mark which emission points will be monitored. See example process flow diagram on the next page (excerpt from US Environmental Protection Agency Regulatory and Inspection Manual for Nonmetallic Mineral Processing Plants (Revised), November 1997).

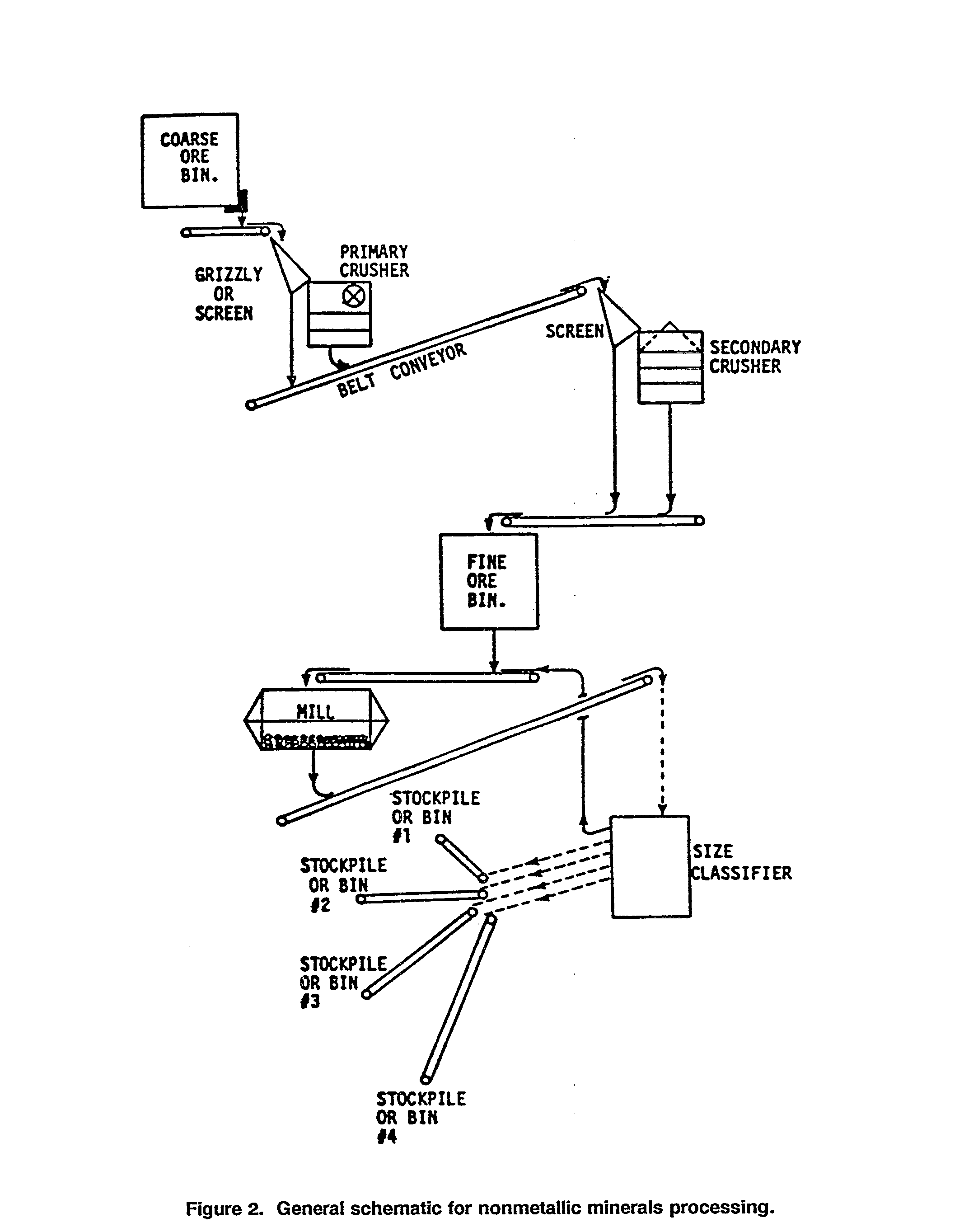


Diagram obtained from EPA Inspection Manual for Nonmetallic Mineral Processing

# Section 7: Operation and Maintenance Plan

The Department requires stationary source operators to develop an Operation and Maintenance (O&M) plan. This plan describes how the stationary source complies with emission standards listed in 18 AAC 50.055 (smoke and PM emissions) on a continuous basis.

The plan must be submitted to the Department as part of this application, and it must be kept on site for operator referral. The O&M Plan is a written document updated on a regular basis and whenever the stationary source has a change in operations.

The following lists some considerations to incorporate into the stationary source specific O&M plan. This list is by no means comprehensive. The operators have the burden to show compliance with the emission limits. Good operations and maintenance of equipment is a crucial element in complying with emission standards.

Items to include in the O&M Plan:

1. A blank copy of operator's inspection and maintenance forms, if applicable.
2. A list of vendor contacts and suppliers for the air pollution control equipment, list the spare parts required on site by manufacturer.
3. A summary of the maintenance tracking system used at this stationary source. This does not mean a complex computer system. It could be a simple as index cards that show when parts were replaced to track problems.
4. List automated indicators/alarms that may aid the operator in determining malfunctions and correcting the problem.
5. Reference to the manufacturer’s operating and maintenance manual that describes when preventative maintenance should occur and how to operate the equipment.

Your written O&M plan may consist of nothing more than a checklist for the daily, weekly, monthly, and seasonal checks and records. If you already have and use an inspection checklist for air pollution sources at your rock crusher facility, you may include that with your O&M plan.

# Section 8: Fugitive Dust Control Plan

Attach a fugitive dust control plan that addresses each fugitive dust source and how the facility owner or operator plans to take reasonable precautions to prevent fugitive dust.

The Fugitive Dust Control Plan (Plan) has the purpose to control the fugitive dust emissions from asphalt plant and crusher related activities. The Plan is required for all Minor General Permit holders in order to ensure that reasonable precautions to prevent fugitive dust are taken.

A sample plan can be found in *Attachment 5: Sample Fugitive Dust Control Plan*. This plan may be filled out and used for any Minor General Permitted source. You are not required to use the sample form, but similar information contained in the sample form should be included in your plan. If you already have a plan developed or you wish to develop your own plan, the following items should be addressed:

* Points capable of producing fugitive emissions;
* Control of fugitive dust sources, such as:
  + Water application;
  + Dust suppressants;
  + Wind barriers;
  + Hoods, covers, or enclosures;
  + Cleanup of loose materials;
  + Minimizing drop distances and lowering loader buckets before dumping;
  + Fans;
  + Dust collectors;
* Methods to prevent vehicle trackout or carryout, such as:
  + Grizzlies or grates;
  + Gravel pads;
  + Paved surfaces;
  + Wheel washers;
  + Truck washing.

# Section 9: Potential to Emit

Provide the Rock Crusher and Diesel Engine PTE for PM-10 in TPY in Table A. If your diesel engine(s) qualify as nonroad engine(s)[[11]](#footnote-11), do not count their PTE in “PTE (Assessable)” or in “PTE (Permit Applicability).” The former refers to the stationary sources PTE as it relates to paying emissions to the Department, while the latter refers to the PTE that is used for verifying that the stationary source does not exceed 100 tons per year for an individual criteria pollutant, which would exclude the facility from operating under the MG9 permit.

See *Attachment 2*: *Determining Potential to Emit (PTE)* for instructions on how to determine PTE for your facility, or the *MG9 Potential to Emit Spreadsheet* on the Department’s general permit website.[[12]](#footnote-12) If the PTE tables in *Attachment 2: Determining Potential to Emit (PTE)* or the *MG9 Potential to Emit Spreadsheet* from the Department’s general permit website12 are not used for completing Table A, please include your PTE calculations with this application.

**Table A: PTE in Tons Per Year**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Pollutant | Rock Crusher Facility | Diesel Generator(s) | PTE (Permit Applicability) | PTE  (Assessable) |
| NOx | N/A | Click here to enter text. | Click here to enter text. |  |
| CO | N/A | Click here to enter text. | Click here to enter text. |  |
| SO2 | N/A | Click here to enter text. | Click here to enter text. |  |
| PM-10 | Click here to enter text. | Click here to enter text. | Click here to enter text. |  |
| VOC | N/A | Click here to enter text. | Click here to enter text. |  |

# Section 10: Emission Fees

Applicants must include an estimate for the emissions from the stationary source with their application. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit, for each period from July 1 through the following June 30 . The quantity for which fees will be assessed is the lesser of the stationary source’s PTE (Assessable) measured in TPY from Section 9: Potential to Emit; or the stationary source’s projected annual rate of emissions in TPY, based upon actual annual emissions for the most recent calendar year, or another 12-month period approved in writing by the Department. The use of potential emissions will result in larger fees as they are based on 3,650 hours of operation per year.

Complete and submit the form in *Attachment 4: Emission Fee Estimate* to the Department to report your emission estimates for the current state fiscal year.

Use *Attachment 3: Calculating Assessable Emissions* as a guide and worksheet for completing the emissions fee estimate, or the *MG9 Assessable Emissions Estimate spreadsheet* on the Department’s general permit website. The emissions estimate may be made based on the previous year's operations or the expected operations for the coming year. Emission fees are billed in advance by the department before July 1st of the current year.

In order to estimate emission fees, you must have the following information available:

1. Tons of rock crushed/processed in the previous year, or hours of rock crusher production, or expected tons of rock crush to be processed.

2. Hours, or expected hours, of operation of the diesel engine(s).

The actual hours of operation (if not known) may be estimated by dividing the tons of rock crush produced by the rated capacity of the rock crusher facility. If the rock crusher facility is operated at less than the maximum rate of production, use that rate in place of the rated capacity.

Once assessable emissions have been calculated, use *Attachment 4: Emission Fee Estimate* to total the estimated emissions from the Rock Crusher Facility and the stationary diesel generator(s)[[13]](#footnote-13) for each pollutant. Enter the total amount of emissions for each criteria pollutant in the Assessable Emissions column.

The current emission fee rate may be found in 18 AAC 50.410 and on the Department’s general permit webpage[[14]](#footnote-14) under the fee section for MG3 and MG9 permits.

# Section 11: Certification

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Signature of Responsible Official*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Printed Name*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Title*

# Attachment 1: Definitions

***Assessable Emission*** *means:*

*[18 AAC 50.990(13)]*

“Assessable emission” has the meaning given in AS 46.14.250(h)(1);

*[AS 46.14.250(h)(1)]*

“Assessable emission” means the quantity of each air pollutant for which emission fees are assessed and is the lesser of

1. The stationary source’s potential to emit, in tons per year, each air pollutant; or
2. The projected annual rate of emissions, in tons per year, of each air pollutant by the stationary source based upon previous actual annual emissions if the permittee can demonstrate to the department its previous actual annual rate of emissions through monitoring, modeling, calculations, or other method acceptable to the department.

***Potential to Emit (PTE)*** *means:*

*[18 AAC 50.990(80)]*

“Potential to emit” has the meaning given in AS 46.14.990;

*[AS 46.14.990(22)]*

“Potential to emit” has the meaning given in 40 C.F.R. 51.166(b);

*[40 C.F.R. 51.166(b)(4)]*

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

***Responsible official*** *means:*

*[18 AAC 50.990(93)]*

1. For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or a duly authorized representative of that person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under AS 46.14 or this chapter, and
   1. The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million in second quarter 1980 dollars; or
   2. The delegation of authority to the representative is approved in advance by the department;
2. For a partnership or sole proprietorship, a general partner or the proprietor, respectively; and
3. For a public agency, a principal executive officer or ranking elected official; for the purposes of this chapter, a principal executive officer of a federal agency includes the chief executive officer with responsibility for the overall operations of a principal geographic unit in this state;

***Nonroad engine*** means:

“Nonroad engine” has the meaning given in 40 CFR 1068.30. As of the issuance date of this permit, the Department is in the process of adopting this definition into 18 AAC 50.990(63).

*[40 CFR 1068.30]*

(1) Except as discussed in paragraph (2) of this definition, a nonroad engine is an internal combustion engine that meets any of the following criteria:

(i) It is (or will be) used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers).

(ii) It is (or will be) used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers).

(iii) By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

(2) An internal combustion engine is not a nonroad engine if it meets any of the following criteria:

(i) The engine is used to propel a motor vehicle, an aircraft, or equipment used solely for competition.

(ii) The engine is regulated under [40 CFR part 60](https://www.ecfr.gov/current/title-40/part-60), (or otherwise regulated by a federal New Source Performance Standard promulgated under section 111 of the Clean Air Act ([42 U.S.C. 7411](https://www.govinfo.gov/link/uscode/42/7411))). Note that this criterion does not apply for engines meeting any of the criteria of paragraph (1) of this definition that are voluntarily certified under [40 CFR part 60](https://www.ecfr.gov/current/title-40/part-60).

(iii) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. For any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced, include the time period of both engines in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. See [§ 1068.31](https://www.ecfr.gov/current/title-40/section-1068.31) for provisions that apply if the engine is removed from the location.

# Attachment 2: Determining Potential to Emit (PTE)

Use the following tables to determine PTE for your facility, or calculate PTE using approved emission factors (EFs) and equations to complete Table A in Section 9: Potential to Emit of this application. Alternatively, you may attach the MG9 Potential to Emit spreadsheet from the Department’s general permit webpage[[15]](#footnote-15) to this application. The tables below provide approved EFs and emissions equation based on EPA AP-42, 5th edition.

How to use the Emissions Calculation Tables:

Rock Crusher

1. You will need the following information to proceed:
   1. The rated capacity (RC) of your initial crusher in tons per hour (TPH);
   2. Number of conveyor transfer points in your operation (this number changes with equipment configuration, so use maximum);
   3. If you operation has tertiary crushing;[[16]](#footnote-16) and
   4. If your operation has fines screening.[[17]](#footnote-17)
2. Round the RC value of your crusher to the nearest value listed in the tables (increments of 25).
3. Based on RC, find the emissions calculation in each table that applies to your operation and record in the table at the end of this attachment.
4. Record the PM-10 potential emissions in Section 9, TableA, Rock Crusher Facility column.

Diesel Engines

1. You will need the following information to proceed:
   1. Rated capacity in horsepower (hp) of each diesel engine; and
   2. If your engines are classified as stationary or nonroad.
2. Determine the PTE of each diesel engine separately.
3. Round each RC to the nearest value found in the tables (increments of 25 or 50 hp).
4. Use the table that fits the engine you are calculating PTE for. One table is for engines with RC of more than 600 hp, the other is for smaller engines.
5. Record the emissions value in the table at the end of this attachment for each pollutant for each engine based on RC value.
6. Add up the potential emissions for all engines and record in Section 9, TableA, Diesel Engines column.

PTE (Permit Applicability and Assessable)

1. For PTE (Assessable), total all PTE values for PM-10 emissions associated with rock crushing (Table’s A through F), and the stationary diesel engine PTE values for each pollutant. Diesel engines that qualify as Nonroad engines[[18]](#footnote-18) **should no**t have their PTE included in this total.
2. For PTE (Permit Applicability), total all PTE values for PM-10 emissions associated with rock crushing except for aggregate handling and storage piles (Table’s A through D, and F), and the stationary diesel engine PTE values for each pollutant. Diesel engines that qualify as Nonroad engines **should no**t have their PTE included in this total.
3. Record the two types of PTE in Section 9, Table A, in the appropriate column.

**NOTE:** You can calculate PTE without using the tables in this attachment or the *MG9 Potential to Emit* spreadsheet on the Department’s general permit website.[[19]](#footnote-19) If you do your own calculations, please attach them to this application for Department review. You can use the general calculation instructions in *Attachment 3: Calculating Assessable Emissions*, using 3,650 operating hours, as a reference for completing your own calculations.

# *MG9 Attachment 2:* *Potential To Emit (PTE) Calculation Tables*

Emissions from Rock Crushers are for Particulate Matter (PM) only, fuel burning equipment must be counted separately for all criteria pollutants.

Constants:

1. 2,000(lbs/ton)

Assumptions:

1. 3,650 hours of operation per year
2. E = (EF x (Hours of operation per year x RC)) / lbs per ton

Abbreviations:

|  |  |
| --- | --- |
| TPY | tons per year |
| TPH | tons per hour |
| EF | emission factor (AP-42) |
| RC | rated capacity (crushing) |
| lbs | Pounds |
| E | emissions |
| ULSD | Ultra-low sulfur diesel |
| NoC | number of conveyers |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A:** Tertiary Crushing[[20]](#footnote-20); EF: | | | | 0.0024 | | (lbs/ton crushed stone) | | | | | | | | | | | | | | | | | |
| RC(TPH) | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| PM(TPY) | 0.4 | 0.5 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.8 | 1.9 | 2.0 | 2.1 | 2.2 | 2.4 | 2.6 | 2.8 | 3.1 | 3.3 | 3.5 |

\*For all rated capacities, round up to the nearest tabled value.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **B:** Fines Crushing[[21]](#footnote-21); EF: | | | | 0.015 | | (lbs/ton crushed stone) | | | | | | | | | | | | | | | | | |
| RC(TPH) | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| PM(TPY) | 2.7 | 3.4 | 4.1 | 4.8 | 5.5 | 6.2 | 6.8 | 7.5 | 8.2 | 8.9 | 9.6 | 10.3 | 11.0 | 11.6 | 12.3 | 13.0 | 13.7 | 15.1 | 16.4 | 17.8 | 19.2 | 20.5 | 21.9 |

\*For all rated capacities, round up to the nearest tabled value.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **C:** Screening; EF: | | | | 0.0087 | | | (lbs/ton crushed stone) | | | | | | | | | | | | | | | | | | |
| RC(TPH) | 100 | 125 | 150 | | 175 | 200 | | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| PM(TPY) | 1.6 | 2.0 | 2.4 | | 2.8 | 3.2 | | 3.6 | 4.0 | 4.4 | 4.8 | 5.2 | 5.6 | 6.0 | 6.4 | 6.7 | 7.1 | 7.5 | 7.9 | 8.7 | 9.5 | 10.3 | 11.1 | 11.9 | 12.7 |

\*For all rated capacities, round up to the nearest tabled value.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **D:** Fines Screening[[22]](#footnote-22); EF: | | | | 0.072 | | (lbs/ton crushed stone) | | | | | | | | | | | | | | | | | |
| RC(TPH) | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| PM(TPY) | 13.1 | 16.4 | 19.7 | 23.0 | 26.3 | 29.6 | 32.9 | 36.1 | 39.4 | 42.7 | 46.0 | 49.3 | 52.6 | 55.8 | 59.1 | 62.4 | 65.7 | 72.3 | 78.8 | 85.4 | 92.0 | 98.6 | 105.1 |

\*For all rated capacities, round up to the nearest tabled value.

Aggregate handling emissions are considered fugitive, include in Assessable PTE but not in Permit Applicability PTE.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **E:** Handling & Storage; EF: | | | | 0.05 | | (lbs/ton crushed stone) | | | | | | | | | | | | | | | | | |
| RC(TPH) | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| PM(TPY) | 9.1 | 11.4 | 13.7 | 16.0 | 18.3 | 20.5 | 22.8 | 25.1 | 27.4 | 29.7 | 31.9 | 34.2 | 36.5 | 38.8 | 41.1 | 43.3 | 45.6 | 50.2 | 54.8 | 59.3 | 63.9 | 68.4 | 73.0 |

\*For all rated capacities, round up to the nearest tabled value.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **F:** Conveyer Transfer Point PM(TPY); EF | | | | | | | 0.0011 | | (lbs/ton crushed stone) x *K* or "Conveyer Constant" (Number of Conveyers)\*\* | | | | | | | | | | | | | | |
| RC(TPH) | | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| NoC | 1 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.8 | 1.9 | 2.0 | 2.1 | 2.3 | 2.6 | 2.8 | 3.1 | 3.3 | 3.5 | 3.8 |
| 2 | 0.7 | 0.9 | 1.1 | 1.3 | 1.5 | 1.7 | 1.8 | 2.0 | 2.2 | 2.4 | 2.6 | 2.8 | 3.0 | 3.1 | 3.3 | 3.7 | 4.1 | 4.4 | 4.8 | 5.2 | 5.5 | 5.9 |
| 3 | 1.0 | 1.3 | 1.5 | 1.8 | 2.0 | 2.3 | 2.5 | 2.8 | 3.0 | 3.3 | 3.5 | 3.8 | 4.0 | 4.3 | 4.5 | 5.0 | 5.5 | 6.0 | 6.6 | 7.1 | 7.6 | 8.1 |
| 4 | 1.3 | 1.6 | 1.9 | 2.2 | 2.6 | 2.9 | 3.2 | 3.5 | 3.8 | 4.2 | 4.5 | 4.8 | 5.1 | 5.4 | 5.7 | 6.4 | 7.0 | 7.7 | 8.3 | 8.9 | 9.6 | 10.2 |
| 5 | 1.5 | 1.9 | 2.3 | 2.7 | 3.1 | 3.5 | 3.9 | 4.3 | 4.6 | 5.0 | 5.4 | 5.8 | 6.2 | 6.6 | 7.0 | 7.7 | 8.5 | 9.3 | 10.1 | 10.8 | 11.6 | 12.4 |
| 6 | 1.8 | 2.3 | 2.7 | 3.2 | 3.6 | 4.1 | 4.5 | 5.0 | 5.4 | 5.9 | 6.4 | 6.8 | 7.3 | 7.7 | 8.2 | 9.1 | 10.0 | 10.9 | 11.8 | 12.7 | 13.6 | 14.5 |
| 7 | 2.1 | 2.6 | 3.1 | 3.6 | 4.2 | 4.7 | 5.2 | 5.7 | 6.3 | 6.8 | 7.3 | 7.8 | 8.3 | 8.9 | 9.4 | 10.4 | 11.5 | 12.5 | 13.6 | 14.6 | 15.6 | 16.7 |
| 8 | 2.4 | 2.9 | 3.5 | 4.1 | 4.7 | 5.3 | 5.9 | 6.5 | 7.1 | 7.7 | 8.2 | 8.8 | 9.4 | 10.0 | 10.6 | 11.8 | 12.9 | 14.1 | 15.3 | 16.5 | 17.7 | 18.8 |
| 9 | 2.6 | 3.3 | 3.9 | 4.6 | 5.2 | 5.9 | 6.6 | 7.2 | 7.9 | 8.5 | 9.2 | 9.8 | 10.5 | 11.1 | 11.8 | 13.1 | 14.4 | 15.7 | 17.0 | 18.4 | 19.7 | 21.0 |
| 10 | 2.9 | 3.6 | 4.3 | 5.1 | 5.8 | 6.5 | 7.2 | 8.0 | 8.7 | 9.4 | 10.1 | 10.8 | 11.6 | 12.3 | 13.0 | 14.5 | 15.9 | 17.4 | 18.8 | 20.2 | 21.7 | 23.1 |
| 11 | 3.2 | 4.0 | 4.7 | 5.5 | 6.3 | 7.1 | 7.9 | 8.7 | 9.5 | 10.3 | 11.1 | 11.9 | 12.6 | 13.4 | 14.2 | 15.8 | 17.4 | 19.0 | 20.5 | 22.1 | 23.7 | 25.3 |
| 12 | 3.4 | 4.3 | 5.1 | 6.0 | 6.9 | 7.7 | 8.6 | 9.4 | 10.3 | 11.1 | 12.0 | 12.9 | 13.7 | 14.6 | 15.4 | 17.2 | 18.9 | 20.6 | 22.3 | 24.0 | 25.7 | 27.4 |
| 13 | 3.7 | 4.6 | 5.5 | 6.5 | 7.4 | 8.3 | 9.2 | 10.2 | 11.1 | 12.0 | 12.9 | 13.9 | 14.8 | 15.7 | 16.6 | 18.5 | 20.3 | 22.2 | 24.0 | 25.9 | 27.7 | 29.6 |
| 14 | 4.0 | 5.0 | 6.0 | 6.9 | 7.9 | 8.9 | 9.9 | 10.9 | 11.9 | 12.9 | 13.9 | 14.9 | 15.9 | 16.9 | 17.9 | 19.8 | 21.8 | 23.8 | 25.8 | 27.8 | 29.8 | 31.8 |

\*For all rated capacities, round up to the nearest tabled value.

\*\**K* = (1.3407 x NoC) + .9451; values for *K* are based on a logical determination for maximum potential drop points based on a NoC.

If your operation does not fit into any of these tables, please consult the Department for assistance with your application.

ULSD Stationary IC Engine > 600hp, Uncontrolled

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | RC(hp) | | | | | | | | | | | | | | | | | | |
| EF(lbs/hp-hr) | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 |
| 0.0055 **CO**  0.024 **NOx**  0.0007 **PM-10**  0.000705 **VOC** | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 | 9.5 | 10.0 | 10.5 | 11.0 | 10.5 | 11.0 | 11.5 | 12.0 | 12.5 | 13.0 | 13.6 | 14.1 |
| 26.3 | 28.5 | 30.7 | 32.9 | 35.0 | 37.2 | 39.4 | 41.6 | 43.8 | 46.0 | 48.2 | 46.0 | 48.2 | 50.4 | 52.6 | 54.8 | 56.9 | 59.1 | 61.3 |
| 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 | 1.2 | 1.3 | 1.3 | 1.4 | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.7 | 1.7 | 1.8 |
| 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.6 | 1.7 | 1.7 | 1.8 |
| *SO2 with ULSD .0015% sulfur content limit by weight* | | | | | | | | | | | | | | | | | | | |
| 1.2135E-05 **SO2** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

*\*For all rated capacities, round up to the nearest tabled value.*

ULSD Stationary IC Engine ≤ 600hp

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | RC(hp) | | | | | | | | | | | | | | | | | | |
| EF(lbs/hp-hr) | 50 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 550 |
| 0.00668 **CO**  0.031 **NOx**  0.0022 **PM-10**  0.0000247 **VOC** | 0.6 | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 3.0 | 3.4 | 3.7 | 4.0 | 4.3 | 4.6 | 4.9 | 5.2 | 5.5 | 5.8 | 6.1 | 6.7 |
| 2.8 | 5.7 | 7.1 | 8.5 | 9.9 | 11.3 | 12.7 | 14.1 | 15.6 | 17.0 | 18.4 | 19.8 | 21.2 | 22.6 | 24.0 | 25.5 | 26.9 | 28.3 | 31.1 |
| 0.2 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | 2.2 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| *SO2 with ULSD .0015% sulfur content limit by weight* | | | | | | | | | | | | | | | | | | | |
| 1.2135E-05 **SO2** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

*\*For all rated capacities, round up to the nearest tabled value.*

If your engine does not fit into either of these tables, or does not use ULSD, please consult the Department for assistance with your application.

Use tabled values for each IC engine, not total generating capacity. Do not include PTE from engines that meet the definition of nonroad engine.[[23]](#footnote-23)

PTE for the MG9 assumes 3,650 hours per year of operation. For emission fees and assessable emissions estimates, see Section 10: Emission Fees and *Attachment 3: Calculating Assessable Emissions.*

**PTE: Rock Crushing Plant Emissions Total (TPY)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pollutant | Rock Crushing | | | | | | IC Engines  (Stationary) | | | PTE  (Assessable) | PTE  (Permit Applicability) |
| CO |  |  |  |  |  |  |  |  |  |  |  |
| NOx |  |  |  |  |  |  |  |  |  |  |  |
| SO2 |  |  |  |  |  |  |  |  |  |  |  |
| PM-10 | A | B | C | D | E\* | F |  |  |  |  |  |
| VOC |  |  |  |  |  |  |  |  |  |  |  |

\*Include emissions from E in Assessable but not in Permit Applicability.

If your emissions for PTE (Permit Applicability) for any one (1) pollutant is greater than 100 TPY, a Title V Major Permit may be required. Please contact the Department.

# Attachment 3*:* Calculating Assessable Emissions

Assessable Emissions differ from a source's PTE. PTE is used in calculating a source's permit applicability and classification, i.e., minor or major source. While PTE does not include fugitive particulate emissions, assessable emissions do. A source can be classified as a minor source yet have emission fees based on a criteria pollutant in excess of 100 tons. Likewise, a major source can have a PTE in excess of 100 TPY of a criteria pollutant yet pay emission fees for that pollutant at a rate far lower. Assessable Emissions use the same calculations as PTE, only operating hours are not based on a maximum potential of 3,650 hours (assumed maximum), but instead are based on the actual operation of a source in a calendar year. For examples and steps on completing this form to assist in submission of Assessable Emissions, please see the information below.

Equation:

E = (EF x (tons of rock crushed or hours of operation in a given year x RC)) / 2,000 lbs per ton

|  |  |
| --- | --- |
| Abbreviations: | |
| TPY | Tons Per Year |
| TPH | Tons Per Hour |
| EF | emission factor (AP-42) |
| RC | rated capacity (hp for diesel engines) |
| lbs | pounds |
| E | emissions |
| ULSD | Ultra-low sulfur diesel |
| NoC | number of conveyers |

Report using *Attachment 4: Emission Fee Estimate* and submit with this application. Each emission unit (rock crushers and stationary diesel engines) listed in Section 4: Stationary Source Information will need a separate calculation using equations provided, where rated capacity is the horsepower for stationary diesel engines and tons per hour for the crusher.

Emission factors are pollutant/emission unit specific. Fuel assumes use of ultra-low sulfur diesel (ULSD); please contact the Department for assistance if you use alternative fuels. Please see the worksheet on the next page for emission factors and further assistance.

# *MG9 Assessable Emissions Calculations Worksheet*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Rock Crushing** | **Tertiary Crushing** | **Fines Crushing** | **Screening** | **Fines Screening** | **Aggregate Handling & Storage Piles** |
| PM-10 EF | 0.0024 | 0.015 | 0.0087 | 0.072 | 0.05 |
|  | | | | | |
| **Stationary Diesel Engines**[[24]](#footnote-24) | **CO** | **NOX** | **SO21** | **VOC** | **PM-10** |
| Greater than 600hp | 0.0055 | 0.024 | 0.000012 | 0.000705 | 0.0007 |
| Up to 600hp | 0.00668 | 0.031 | 0.000012 | 0.0000247 | 0.0022 |

1: SO2 EF for use with ULSD

Rock Crushing Worksheet: E = (EF x tons of rock crushed) / 2,000 lbs per ton

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tertiary Crushing[[25]](#footnote-25) | Fines Crushing[[26]](#footnote-26) | Screening | Fines Screening10 | Aggregate Handling & Storage Piles |
| Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. | Click here to enter text. |

Conveyer transfer points can change depending on configuration of your plant. The Department has simplified emissions calculations for conveyers based on reasonable assumptions of transfer points given a set NoC as follows:

Conveyor Transfer Points:

Emissions: \_\_\_\_\_\_\_\_= (((1.3407 x NoC) + 1) x .0011 x tons of rock crushed) / 2,000 lbs per ton

Stationary Diesel Engine19 Worksheet:

E = (EF x hours of operation x RC) / 2,000 lbs per ton

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CO | NOX | SO2 | VOC | PM-10 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Total Emissions: add items in Rock Crushing Worksheet, Conveyor Transfer Points, and PM-10 column from Stationary Diesel Engine Worksheet rows above for total PM-10. Add remaining columns for all other pollutants from Stationary Diesel Engines Worksheet.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CO | NOX | SO2 | VOC | PM-10 |
|  |  |  |  |  |
| **Assessable Emissions**: Enter these values below and on *Attachment 4: Emission Fee Estimate*and submit with this application. | | | | |
| CO | NOX | SO2 | VOC | PM-10 |
|  |  |  |  |  |

# Attachment 4*:* Emission Fee Estimate

Submit the following information to the Department at the same time you submit your application.

Submit emissions online through Air Online System (AOS) at the following website: <https://dec.alaska.gov/Applications/Air/airtoolsweb/>

Or

Email to: [DEC.AQ.Airreports@alaska.gov](mailto:DEC.AQ.Airreports@alaska.gov)

*(If emailed, the report must be signed and certified in accordance with 18 AAC 50.345(j).)*

Or

Mail to:

ADEC Air Compliance Program

610 University Avenue

Fairbanks, AK 99709-3643

Or

FAX to (907) 451-2187

Stationary Source Name: \_\_Click here to enter text.\_\_

Permit Number: \_\_Click here to enter text.\_ Date: \_Click here to enter text.

Emission Fee Estimate for: \_\_Click here to enter text. (State fiscal year)

**Table 1. Assessable Emission Fee Estimate**

|  |  |  |  |
| --- | --- | --- | --- |
| **Pollutant** | **Rock Crusher(s)** | **Stationary Diesel Generator(s)** | **Assessable Emissions** |
| NOx | N/A | Click here to enter text. | Click here to enter text. |
| CO | N/A | Click here to enter text. | Click here to enter text. |
| SO2 | N/A | Click here to enter text. | Click here to enter text. |
| PM-10 | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| VOC | N/A | Click here to enter text. | Click here to enter text. |

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_Click here to enter text.\_\_ \_\_Click here to enter text.

*Signature Printed Name Title*

# Attachment 5*:* Sample Fugitive Dust Control Plan

Please note it is the responsibility of the Permittee to ensure that no part of their fugitive dust control plan violates any local, state, or federal law.

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| **Section 1 – General Information** | |
| **1-A Facility Information** | |
| Company Name: | Click here to enter text. |
| Plant Name: | Click here to enter text. |
| Permit No.: | Click here to enter text. |
| **1-B Contacts** | |
| Report the names, address, and phone numbers of persons and owners or operators responsible for the implementation of the Dust Control Plan and responsible for the dust generating operation and dust control applications. | |
| *Responsible Official* (authorized under 18 AAC 50.990(93)) | |
| Name: | Click here to enter text. |
| Phone Number: | Click here to enter text. |
| *On-site Manager/Operator or Point of Contact* (if different from above) | |
| Name: | Click here to enter text. |
| Phone Number: | Click here to enter text. |
| **1-C Recordkeeping and Reporting** | |
| Keep a copy of Fugitive Dust Control Plan on-site at all times.  Keep records of deviations from dust plan, reasons for the deviation, and corrective actions taken for at least five years. | |
| **Section 2 – Fugitive Emission Points** | |
| **2-A Fugitive Emission Points** | |
| Identify the relative locations of actual and potential sources of fugitive dust emissions.  Bulk material handling and storage areas.  Paved and unpaved access roads, haul roads, traffic areas, and equipment storage yards.  Exit points where carryout and vehicle trackout onto paved public roads may occur.  Water supply locations if water application will be used for controlling visible dust emissions.  Rock crushing operations.  Screening  Conveyors  Fines Screening  Asphalt plant operations  Screening  Conveyors  Baghouse Catch  Drum Mixer Discharge  Hot mix storage silo receiving point | |
| **2-B Comments – Fugitive Emission Points** | |
| Click here to enter text. | |

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| **Section 3 – Control of Fugitive Dust Sources** |
| **3-A Control of Fugitive Dust Sources**  Check any boxes that apply. Checked boxes represent methods that will be used ***as needed***. |
| *Active Operations*  Water will be applied to dry areas during leveling, grading, trenching, and earthmoving activities.  Wind barriers will be constructed and maintained, and water or dust suppressants will be applied to the disturbed surface areas. |
| *Inactive Operations,* including after work hours, weekends, and holidays  Not applicable for this project (Please explain why in Section 3-C).  Water or dust suppressants will be applied on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust. |
| *Sites Inactive for Seven or More Days*  Not applicable for this project (Please explain why in Section 3-C).  Vehicle access will be restricted, and water/dust suppressants will be applied at all un-vegetated areas.  Vegetation will be established on all previously disturbed areas.  Gravel will be applied and maintained at all previously disturbed areas.  Previously disturbed areas will be paved. |
| *Unpaved Access and Haul Roads, Traffic and Equipment Storage Areas*  Not applicable for this project (Please explain why in Section 3-C).  Apply water or dust suppressants to unpaved haul and access roads.  Post speed limit signs of not more than 15 mph at each entrance, and again every 500 ft.  Water or dust suppressants will be applied to vehicle traffic and equipment storage areas. |
| *Wind Events*  Water application equipment will apply water to control fugitive dust during wind events, unless unsafe to do so. Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled. |
| **3-B Bulk Materials** |
| Check any boxes that apply. Checked boxes represent methods that will be used ***as needed***. |
| *Outdoor Handling of Bulk Materials*  Water or dust suppressants will be applied when handling bulk materials.  Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied. |
| *Outdoor Storage of Bulk Materials*  Water or dust suppressants will be applied to storage piles.  Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind actions.  Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles and water or dust suppressants will be applied.  A three-sided structure (< 50% porosity) will be used that is at least as high as the storage piles. |
| *On-Site Transporting of Bulk Materials*  Vehicle speed will be limited on the work site.  All haul trucks will be loaded such that the freeboard is not less than six inches when transported across any paved public access road.  A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.  Haul trucks will be covered with a tarp or other suitable cover. |

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| **Section 3 – Control of Fugitive Dust Sources (cont.)** |
| **3-B Bulk Materials - continued** |
| *Off-Site Transporting of Bulk Materials*  No bulk materials will be transported to or from the project site.  Materials for transport will be wetted as needed.  Covers will be used, as needed. Some or all of the following will be used as necessary:   * The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site. * Spillage or loss of bulk materials from holes or other openings in the cargo compartment’s floor, sides, and tailgates will be prevented. * Haul trucks will be covered with a tarp or other suitable cover or will be loaded such that the freeboard is not less than six inches when transported on any paved public access road to or from the project site. |
| *Outdoor Transport using a Chute or Conveyor*  No chutes or conveyors will be used.  Chute or conveyor will be fully enclosed.  Water spray equipment will be used to sufficiently wet the materials.  Transported materials will be washed or screened to remove fines (PM-10 or smaller). |
| **3-C Comments – Control of Fugitive Dust Sources** |
| Click here to enter text. |
| **Section 4 – Dust Control Methods** |
| **4-A Water Application**  Complete this section if water application will be used as a control method for limiting visible dust emissions and stabilizing surface areas. Check and answer everything that applies. Checked boxes represent methods that will be used ***as needed***. |
| *Water Application Equipment:*  Sprinklers:  Describe the activities that will utilize sprinklers: Click here to enter text.  Water Truck, Water Trailer,  Water Wagon,  Other: Click here to enter text.  Describe the activities that will utilize this equipment: Click here to enter text.  Water application equipment is available to operate after normal working hours, on weekends, and holiday.  After-hours contact: Click here to enter text.Phone number:Click here to enter text. |
| *Water Supply (as needed):*  Fire hydrants. Obtain necessary approval to use specific hydrants.  Storage tanks Number and capacity: Click here to enter text.  Wells Number and flow rate: Click here to enter text.  Canal, River, Pond, Lake, etc. Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Approval granted by the owner or public agency to use their water source for this project.  Owner or Agency: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Contact: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone number:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **Section 4 – Dust Control Methods (cont.)** |
| **4-B Dust Suppressant Products**  Suppressant materials include but are not limited to: hygroscopic suppressants (road salts), adhesives, petroleum emulsions, polymer emulsions, and bituminous material (road oils).  Copy this section if more than one dust suppressant product will be used. |
| Not applicable. Only water application will be the control method used. |
| Applicable.  Product Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Application Equipment: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Number of Application Equipment Available: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Attach each of the following information that fully describes this product. Use the checklist below to make sure all information is submitted with this plan.  Product Specifications (MSDS, Product Safety Data Sheet, etc.).  Manufacturer’s Usage Instructions (method, frequency, and intensity of application).  Environmental impacts and approvals or certifications related to the appropriate and safe use for ground application. |
| **4-C Other Dust Control Methods** |
| Check the other types of dust control methods that will be implemented at the construction site. |
| Physical barriers for restricting unauthorized vehicle access:  Fences  Gates  Posts  Berms  Concrete Barriers  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Wind barriers – Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Posted speed limit signs meet state and Federal Department of Transportation standards.  Posted at 15 miles per hour,  Posted at \_\_\_\_\_\_\_\_ miles per hour (less than 15 mph)  Re-establish vegetation for temporarily stabilizing previously disturbed surfaces.  Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Apply and maintain gravel:  On haul roads  On access roads  At equipment storage yards  At vehicle traffic areas  For temporarily stabilizing previously disturbed areas.  Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Apply pavement – Explain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **4-D Comments – Dust Control Methods** |
| Click here to enter text. |

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| **Section 5 – Carryout and Vehicle Trackout** |
| **5-A Treatments for Preventing Trackout** |
| Trackout is any material that adheres to vehicle tires and is deposited onto a paved public road or the paved shoulder of a paved public road. Check one or a combination that will apply. |
| *Grizzly:* Rails, pipes, or grates used to dislodge debris off of vehicles before exiting the site. Extends from the intersection with the paved public road surface for the full width of the unpaved exit surface for the distance of at least 25 feet.  Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *Gravel Pad:* A layer of washed gravel at least one inch or larger in diameter, three inches deep, and extends from the intersection with the public paved road surface for the full width of the unpaved exit surface for a distance of at least 50 feet.  Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *Paved Surface:* Extends from the intersection with the paved public road surface for the full width of the unpaved access road for at least 100 feet to allow mud and dirt to drop off of vehicles before exiting the site.  Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Mud and dirt deposits accumulating on paved interior roads will be removed with sufficient frequency, but not less frequently than once per workday.  Clean-up Frequency: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *Wheel Washer:* Uses water to dislodge debris from tires and vehicle undercarriage.  Describe: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *Other:* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **5-B Treatments for Preventing Carryout** |
| Carryout occurs when materials from emptied or loaded haul trucks, vehicles, or trailers falls onto a paved public road or paved shoulder of a paved public road. Check all methods that apply. |
| No haul trucks will be routinely entering or leaving the project site. |
| *Emptied Haul Trucks:*  Interior cargo compartments will be cleaned before leaving the project site.  Cargo compartment will be covered with a tarp or suitable cover before leaving the project site.  *Loaded Haul Trucks:* Spillage or loss of materials from holes or other opening in the cargo compartment will be prevented when material is transported onto any paved public access road.  Haul trucks will be loaded such that the freeboard is not less than six inches with water applied to the top of the load before leaving the project site.  Cargo compartment and load will be covered with a tarp or suitable cover before leaving the project site.  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **5-C Cleaning up Vehicle Carryout and Trackout** |
| Clean up Method: Check the method(s) below that will be used for cleaning carryout and trackout.  Manually sweeping and picking up.  Mechanical sweeping with a rotary brush or broom accompanied or preceded by water.  Describe the types of equipment that will be used:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Operating a PM10-efficient street sweeper.  Make and Model: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Flushing with water – allowed if:   * No curbs or gutters are present. * Using water will not result as a source of trackout and carryout. * Using water will not result in adverse impacts on storm water drainage systems. * Using water will not violate any National Pollutant Discharge Elimination System permit program or Alaska Department of Environmental Conservation, Division of Water Permit. |
| **5-D Comments – Vehicle Carryout and Trackout** |
| Click here to enter text. |

1. Based on AP-42 Emission Factors in Chapter 3.4, a diesel engine or engines (greater than 600 hp each) with a cumulative rating of greater than 2,280 bhp will exceed 100 TPY for oxides of nitrogen (NOx) if the engines do not qualify as nonroad engines under 40 C.F.R. 1068.30. [↑](#footnote-ref-1)
2. Air Quality’s General Permits Website: <https://dec.alaska.gov/air/air-permit/general-permits/>. [↑](#footnote-ref-2)
3. Air Quality’s General Permits Website: <https://dec.alaska.gov/air/air-permit/general-permits/>. [↑](#footnote-ref-3)
4. Nonroad engine is defined in [40 CFR 1068.30](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068/subpart-A/section-1068.30) and adopted by reference in 18 AAC 50. See *Attachment 1: Definitions* for complete definition. [↑](#footnote-ref-4)
5. Nonroad engine is defined in [40 CFR 1068.30](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068/subpart-A/section-1068.30) and adopted by reference in 18 AAC 50. See *Attachment 1: Definitions* for complete definition. [↑](#footnote-ref-5)
6. This should include a street number or legal description of the property. For a portable stationary source operating at a location without an address, describe the location to the nearest landmark. [↑](#footnote-ref-6)
7. Responsible Official is defined in 18 AAC 50.990(93). See *Attachment 1: Definitions* . [↑](#footnote-ref-7)
8. “Reconstruction” means replacing components of an existing crusher, belt conveyor, grinding mill, bagging operation, screening operation, storage bin, bucket elevator, or enclosed truck or railcar loading station so that the cost of replacement is 50% or more of the cost of a comparable new unit. In computing the cost of replacement and of a comparable new unit, do not include the cost of ore contact surfaces: crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets. Costs are based on component replacement commenced within any 2-year period. (Please see 40 C.F.R. 60.15 and 40 C.F.R. 60.673.) [↑](#footnote-ref-8)
9. Nonroad engine is defined in [40 CFR 1068.30](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068/subpart-A/section-1068.30) and adopted by reference in 18 AAC 50. See *Attachment 1: Definitions* for complete definition. [↑](#footnote-ref-9)
10. Nonroad engine is defined in [40 CFR 1068.30](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068/subpart-A/section-1068.30) and adopted by reference in 18 AAC 50. See *Attachment 1: Definitions* for complete definition. [↑](#footnote-ref-10)
11. Nonroad engine is defined in [40 CFR 1068.30](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068/subpart-A/section-1068.30) and adopted by reference in 18 AAC 50. See *Attachment 1: Definitions* for complete definition. [↑](#footnote-ref-11)
12. Air Quality’s General Permits Website: <https://dec.alaska.gov/air/air-permit/general-permits/>. [↑](#footnote-ref-12)
13. Assessable emissions do not include emissions from diesel engines that meet the definition of nonroad engine in 40 C.F.R. 1068.30. [↑](#footnote-ref-13)
14. Air Quality’s General Permits Website: <https://dec.alaska.gov/air/air-permit/general-permits/>. [↑](#footnote-ref-14)
15. Air Quality’s General Permits Website: <https://dec.alaska.gov/air/air-permit/general-permits/>. [↑](#footnote-ref-15)
16. AP-42 Chapter 11.19.2.1 refers to tertiary crushing as usually performed by cone crushers or other types of impactor crushers with an output typically around 0.50 to 2.5 centimeters (3/16th to 1 inch). [↑](#footnote-ref-16)
17. AP-42 Chapter 11.19.2.1 refers to fines “manufactured sand” as small-sized rock product with a maximum size of 0.50 centimeters (3/16th inch). [↑](#footnote-ref-17)
18. Nonroad engine is defined in [40 CFR 1068.30](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068/subpart-A/section-1068.30) and adopted by reference in 18 AAC 50. See *Attachment 1: Definitions* for complete definition. [↑](#footnote-ref-18)
19. Air Quality’s General Permits Website: <https://dec.alaska.gov/air/air-permit/general-permits/>. [↑](#footnote-ref-19)
20. AP-42 Chapter 11.19.2.1 refers to tertiary crushing as usually performed by cone crushers or other types of impactor crushers with an output typically around 0.50 to 2.5 centimeters (3/16th to 1 inch). [↑](#footnote-ref-20)
21. AP-42 Chapter 11.19.2.1 refers to fines “manufactured sand” as small-sized rock product with a maximum size of 0.50 centimeters (3/16th inch). [↑](#footnote-ref-21)
22. AP-42 Chapter 11.19.2.1 refers to fines “manufactured sand” as small-sized rock product with a maximum size of 0.50 centimeters (3/16th inch). [↑](#footnote-ref-22)
23. Nonroad engine is defined in [40 CFR 1068.30](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068/subpart-A/section-1068.30) and adopted by reference in 18 AAC 50. See *Attachment 1: Definitions* for complete definition. [↑](#footnote-ref-23)
24. Assessable emissions do not include emissions from diesel engines that meet the definition of nonroad engine in 40 C.F.R. 1068.30. [↑](#footnote-ref-24)
25. AP-42 Chapter 11.19.2.1 refers to tertiary crushing as usually performed by cone crushers or other types of impactor crushers with an output typically around 0.50 to 2.5 centimeters (3/16th to 1 inch). [↑](#footnote-ref-25)
26. AP-42 Chapter 11.19.2.1 refers to fines “manufactured sand” as small-sized rock product with a maximum size of 0.50 centimeters (3/16th inch). [↑](#footnote-ref-26)