



**STATE OF ALASKA**  
Dept. of Environmental Conservation  
Division of Air Quality/ Air Permits Program

**Minor General Permit 9 (MG9)**

**Application**

**for**  
**Rock Crushers**

<b>For Department Use Only</b>	Permit No.: _____
Reviewed by: _____	Date Reviewed: _____
<input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> Does Not Qualify (specify): _____	

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<sup>1</sup> 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. In order to determine the PTE of your stationary source, complete the worksheet in *Attachment 2: Determining Potential to Emit (PTE)*. Regulated pollutant has the meaning given in 40 C.F.R. 71.2.

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 Accounting (907-269-6881) for the current fee. *Note: Fees are subject to change. To ensure the correct fee is submitted, contact the Department for assistance.*

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

<sup>1</sup>Based on AP-42 Emission Factors a diesel engine or engines with a cumulative rating of greater than 2200 bhp will exceed 100 tpy.

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.

## ***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.

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

**Every box in the checklist above must be checked, with necessary documents attached, in order 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

### A. 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
<input type="checkbox"/>	<input type="checkbox"/>	a. Does the stationary source have a stationary source-specific requirement? <i>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.</i>
<input type="checkbox"/>	<input type="checkbox"/>	b. Does the rock crusher plant have emission points with mechanically induced airflow, such as a fan forcing emissions to a stack or control device?
<input type="checkbox"/>	<input type="checkbox"/>	c. Is any equipment in your processing plant exhausted to a baghouse, cyclone, or wet scrubber?
<input type="checkbox"/>	<input type="checkbox"/>	d. Does the stationary source conduct open burning?
<input type="checkbox"/>	<input type="checkbox"/>	e. Does the stationary source contain a gas turbine?
<input type="checkbox"/>	<input type="checkbox"/>	f. Does the stationary source contain an incinerator?
<input type="checkbox"/>	<input type="checkbox"/>	g. Does the stationary source contain asbestos demolition or renovation?
<input type="checkbox"/>	<input type="checkbox"/>	h. Does the stationary source contain servicing of refrigeration equipment containing Class I or Class II substances?
<input type="checkbox"/>	<input type="checkbox"/>	i. Will this rock crusher operate at a Portland cement plant?
<input type="checkbox"/>	<input type="checkbox"/>	j. 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)?
<input type="checkbox"/>	<input type="checkbox"/>	k. Will the rock crusher operate at the same location as a Title V permitted source? <i>If you check “Yes”, contact ADEC for more information.</i>

### B. 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
<input type="checkbox"/>	<input type="checkbox"/>	a. Will the diesel engine(s) have a combined rating of less than 2200 bhp?
<input type="checkbox"/>	<input type="checkbox"/>	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**<sup>2</sup> (see Attachment 1: Definitions) and will not remain at the same location for more than 12 months.

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

<sup>2</sup>Non-road engine is defined in 40 CFR 89.2 and adopted by reference in 18 AAC 50.

**C. 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   |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | a. Will the stationary source follow the location considerations specified in Section 2?   |
| <input type="checkbox"/> | <input type="checkbox"/> | b. If your facility is to be located in a Special Sulfur Dioxide Protection Area (Unalaska or St. Paul Island), will the stationary source follow the restrictions in Section 11: Special Sulfur Dioxide Protection Areas? |

**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	
Physical Address <sup>3</sup>	
City, State, Zip Code	
UTM Coordinates <u>OR</u> Latitude/Longitude	

**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): \_\_\_\_\_

<sup>3</sup>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.

**Stationary Source Contact Information**

<b>*Permittee</b> - The entity applying for the permit. This can be either the owner or the operator.			
Name		Title	
Mailing Address		Phone Number	
City, State, Zip		Email Address (optional)	
<b>*Responsible Official<sup>4</sup></b> - The name of the individual responsible for the plant's day- to-day operations.			
Name		Title	
Mailing Address		Phone Number	
City, State, Zip		Email Address (optional)	
<b>*Billing Contact</b>			
Name		Title	
Mailing Address		Phone Number	
City, State, Zip		Email Address (optional)	
<b>Legal Owner</b> - The stationary source's legal owner. The legal owner could be either a person or a company.			
Name		Title	
Mailing Address		Phone Number	
City, State, Zip		Email Address (optional)	
<b>Point of Contact</b> – If different from Responsible Official.			
Name		Title	
Mailing Address		Phone Number	
City, State, Zip		Email Address (optional)	
<b>Stationary Source's Consultant</b> - If applicable, the name of the business or entity that prepared the application and/or prepares reports.			
Name		Title	
Mailing Address		Phone Number	
City, State, Zip		Email Address (optional)	
<b>Designated Agent</b> - 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		Title	
Mailing Address		Phone Number	
City, State, Zip		Email Address (optional)	
<b>Individuals from your organization authorized to incur fees</b> (please include consultants, if applicable)			
Name		Name	
Name		Name	

\*Required fields.

<sup>4</sup>Responsible Official is defined in 18 AAC 50.990(93). See Attachment 1.

### 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?			tph
<i>An initial crusher is any crusher that can receive material that has not been processed by another crusher first.</i>			
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? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Was your facility constructed, reconstructed <sup>5</sup> or modified after Aug 31, 1983? <input type="checkbox"/> Yes <input type="checkbox"/> No			

Diesel Engines – complete all fields for each diesel engine.	
<b>Engine 1</b>	Is this engine stationary or non-road? <input type="checkbox"/> Stationary <input type="checkbox"/> Non-road <sup>6</sup>
Make:	Model:
Serial #:	Manufacture Date:
Portable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Design Capacity: hp, kW, MW
Exhaust Stack Diameter: inches	Maximum fuel rate: gal/hr
<b>Engine 2</b>	Is this engine stationary or non-road? <input type="checkbox"/> Stationary <input type="checkbox"/> Non-road
Make:	Model:
Serial #:	Manufacture Date:
Portable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Design Capacity: hp, kW, MW
Exhaust Stack Diameter: inches	Maximum fuel rate: gal/hr
<b>Engine 3</b>	Is this engine stationary or non-road? <input type="checkbox"/> Stationary <input type="checkbox"/> Non-road
Make:	Model:
Serial #:	Manufacture Date:
Portable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Design Capacity: hp, kW, MW
Exhaust Stack Diameter: inches	Maximum fuel rate: gal/hr

<sup>5</sup> “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 limited to any 2 year period.

Please see 40 C.F.R. 60.15 and 40 C.F.R. 60.673.

<sup>6</sup> Non-road engine is defined in 40 C.F.R. 89.2. See Attachment 1.





## **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 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 non-road engine. See attachment 1 for the non-road engine definition.

## **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).

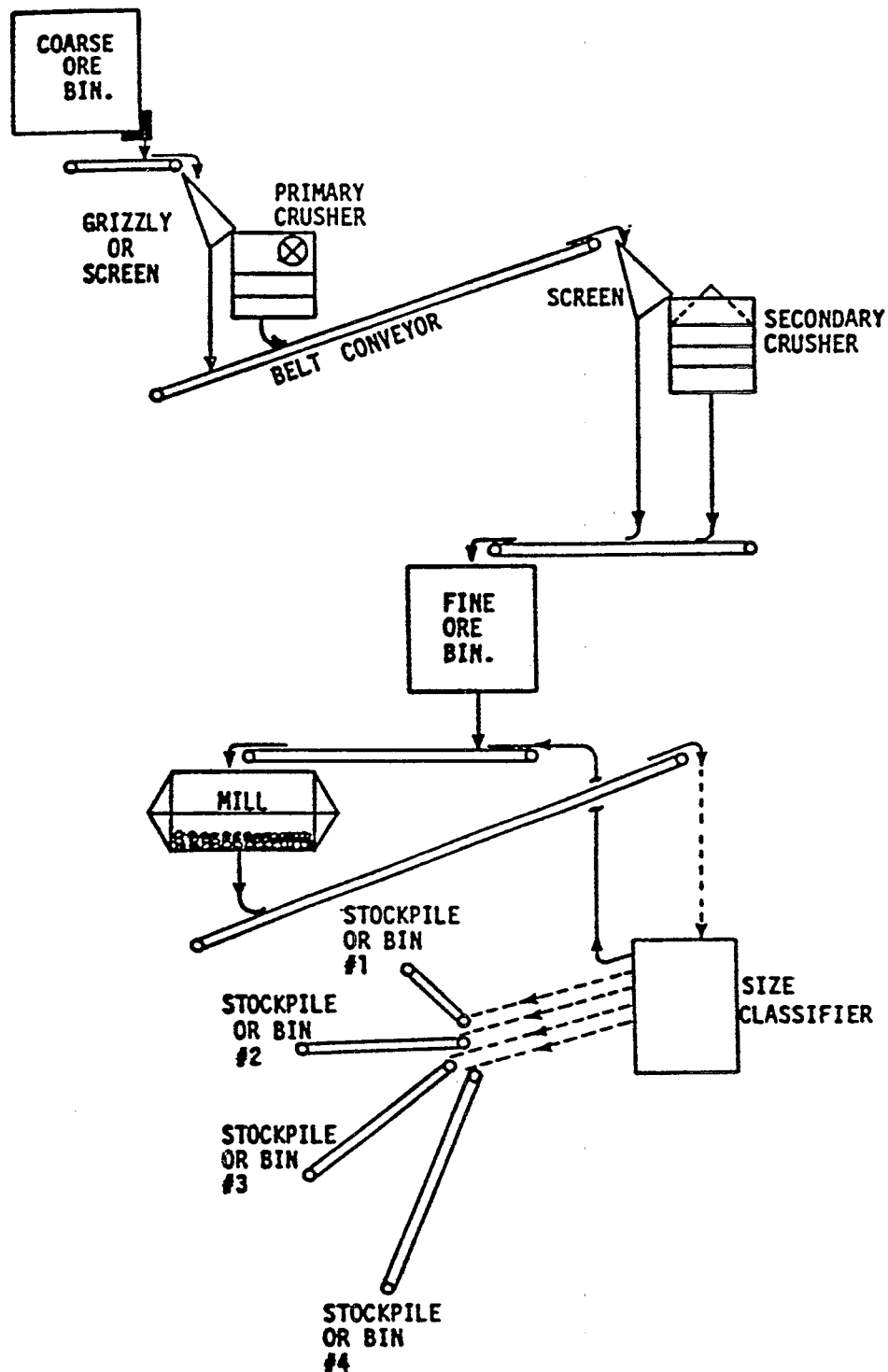


Figure 2. General schematic for nonmetallic minerals processing.

## **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:

- A. A blank copy of operator's inspection and maintenance forms, if applicable.
- B. A list of vendor contacts and suppliers for the air pollution control equipment, list the spare parts required on site by manufacturer.
- C. A summary of the maintenance tracking system used at this stationary source. This does not mean a complex computer system. It could be as simple as index cards that show when parts were replaced to track problems.
- D. List automated indicators/alarms that may aid the operator in determining malfunctions and correcting the problem.
- E. 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 track-out 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 Potential to Emit (PTE) for PM-10 in tons per year (tpy) in **Table A**. If your diesel engines qualify as non-road engines (See *Attachment 1: Definitions*), count their PTE in “Total PTE” but do not count in “Stationary Source PTE.”

See *Attachment 2: Determining Potential to Emit (PTE)* for instructions on how to determine PTE for your facility. If the PTE tables in *Attachment 2: Determining Potential to Emit (PTE)* are not used for completing **Table A**, please include your PTE calculations with this application.

**Table A: Potential to Emit (PTE)**

Pollutant	Rock Crusher Facility	Diesel Generator	Total PTE
NO <sub>x</sub>	N/A		
CO	N/A		
SO <sub>2</sub>	N/A		
PM-10			
VOC	N/A		

**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 (PTE) in quantities greater than 10 tpy. The quantity for which fees will be assessed is the lesser of the stationary source’s assessable PTE measured in tpy; or the stationary source’s projected annual rate of emissions that will occur from July 1 to the following June 30. Alternately, you may opt to use PTE from Section 9: Potential to Emit for your Emission Fee calculation. The use of larger potential emissions will result in larger fees.

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. 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 1<sup>st</sup> 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.

Total the estimated emissions from the Rock Crusher Facility and the Diesel Generator(s) for each pollutant. Enter the total amount in the Total Estimated Emissions block.

The current emission fee rate may be found in 18 AAC 50.410.

**Section 11: Special Sulfur Dioxide Protection Areas**

Two areas in the state have been defined as special protection areas for sulfur dioxide under 18 AAC 50.025(c)(1).

- The Unalaska area, the land and water areas within 3.4-mile radius of the intersection of 53° 53’ 4” N latitude and 166° 32’ 11” W longitude.
- The St. Paul Island area, the land and water areas south of UTM Northing 6333.00 kilometers (57° 8’ 29” N latitude) and within 0.6 kilometers of St. Paul Island.

The special protection areas for sulfur dioxide are established to prevent the violation of the ambient air quality standard and maximum allowable ambient concentration for sulfur dioxide. The following restrictions on operation apply in the protection areas:

- The stationary source must use only Ultra Low Sulfur Diesel fuel in diesel engines or use highline power for electricity generation.

## **Section 12: 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.

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*Signature of Responsible Official*

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*Printed Name*

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*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

- A) The stationary source’s potential to emit, in tons per year, each air pollutant; or
- B) 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)]

- A) 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
  - i. The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million in second quarter 1980 dollars; or
  - ii. The delegation of authority to the representative is approved in advance by the department;
- B) For a partnership or sole proprietorship, a general partner or the proprietor, respectively; and
- C) 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:

[18 AAC 50.990(63)]

“Nonroad engine” has the meaning given in 40 C.F.R. 89.2, as revised as of September 18, 2007, adopted by reference.

[40 C.F.R. 89.2]

- A) Except as discussed in paragraph (B) of this definition, a nonroad engine is any internal combustion engine:
- i. 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); or
  - ii. In or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or
  - iii. That, by itself or in or on a piece of equipment, 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.
- B) An internal combustion engine is not a nonroad engine if:
- i. The engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under section 202 of the Act; or
  - ii. The engine is regulated by a federal New Source Performance Standard promulgated under section 111 of the Act; or
  - 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. 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 will be included 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. This paragraph does not apply to an engine after 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 (EF) and equations to complete **Table A** in Section 9: Potential to Emit of this application. The tables below provide approved EFs and emissions equation based on AP-42, 5<sup>th</sup> edition.

How to use the Emissions Calculation Tables:

### Rock Crusher

1. You will need to the following information to proceed:
  - a. The rated capacity (RC) of your initial crusher in tons per hour (tph);
  - b. Number of conveyor transfer points in your operation (this number changes with equipment configuration, so use maximum); and
  - c. If your operation has fines screening.<sup>7</sup>
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 Record the PM-10 potential emissions in Section 9, Table A, Rock Crusher Facility column.

### Diesel Engines

1. You will need the following information to proceed:
  - a. Rated capacity (in horsepower (hp)) of each diesel engine; and
  - b. If your engines are classified as stationary or non-road.
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, **Table A**, Diesel Engines column.

### Total and Stationary PTE

1. For Total PTE, add all diesel engine PTE values for each pollutant, and add all engines plus rock crusher PTE for PM-10. Non-road engine PTE should be included in this total.
2. For Stationary PTE, total all PTE values for each pollutant for the stationary engines. Subtract the Aggregate Handling and Storage Piles value (from calculation table E) from the Rock Crusher PTE, then add the result to the PTE of the stationary engines. Do not count non-road engines in this total.
3. Record the Total and Stationary Total in Section 9, **Table A**, Total and Stationary columns.

**NOTE:** You can calculate PTE without using the tables in this attachment. 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 3650 operating hours, as a reference for completing your own calculations.

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<sup>7</sup> DEFINITION OF FINES OR WHERE TO FIND DEFINITION

**MG9 Attachment 2: Emissions Calculation Table**

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

Constants:

2.) 2000 (lbs/ton)

Assumptions:

1.) 3650 hours of operation per year

2.)  $E = (EF \times (\text{Hours of operation per year} \times RC)) / \text{lbs per ton}$

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

*Initial and Secondary crushing is counted through subsequent processes.*

**A: Tertiary Crushing; 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; 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; 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.

**MG9 Attachment 2: Emissions Calculation Table**

Aggregate handling emissions are considered fugitive, include in total but not stationary emissions.

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.

**MG9 Attachment 2: Emissions Calculation Table**

**ULSD IC Engine > 600hp, Uncontrolled**

EF(lbs/hp-hr) RC(hp)	600	650	700	750	800	850	900	950	1000	1050	1100	1050	1100	1150	1200	1250	1300	1350	1400
0.0055 <b>CO</b>	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
0.024 <b>Nox</b>	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
0.0007 <b>PM-10</b>	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
0.000705 <b>VOC</b>	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
<i>SO2 with ULSD .0015% sulfur content limit by weight</i>																			
1.2135E-05 <b>SO2</b>	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 IC Engine < 600hp**

EF(lbs/hp-hr) RC(hp)	50	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	550
0.00668 <b>CO</b>	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
0.031 <b>Nox</b>	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
0.0022 <b>PM-10</b>	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
0.0000247 <b>VOC</b>	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
<i>SO2 with ULSD .0015% sulfur content limit by weight</i>																			
1.2135E-05 <b>SO2</b>	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.

Total emissions calculated on actual operating hours in a calendar year (not 3650), are your Assessable Emissions for Emission Fees.

Stationary, or Potential to Emit is the total emissions not including any Non-Road Engines (See restrictions on Non-Road Engines in Condition 1.3)

**Rock Crushing Plant Emissions Totals**

(tpy)	Rock Crushing						IC Engines			Total	Stationary
<b>CO</b>											
<b>NOx</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E*</b>	<b>F</b>					
<b>SO2</b>											
<b>PM-10</b>											
<b>VOC</b>											

\*Include emissions from E in Total, but not Stationary.

If Stationary emissions for any one (1) pollutant are greater than 100tpy, at Title V Major Permit may be required. Please contact the Department.

### ***Attachment 3: Calculating Assessable Emissions***

Assessable Emissions differ from a source's Potential to Emit (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 3650 hours (assumed) but instead are based on actual operation for a calendar year. For examples and steps on completing this form to assist in submission of Assessable Emissions, please see the information below.

Equation:

$$E = (EF \times (\text{tons of rock crushed or hours of operation in a given year} \times RC)) / 2000 \text{ lbs per ton}$$

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 diesel engines) listed in Section 4: Stationary Source Information will need a separate calculation using equations provided, where rated capacity is the horsepower for 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

Diesel Engines	CO	NO <sub>x</sub>	SO <sub>2</sub> <sup>1</sup>	VOC	PM-10
Greater than 600hp	0.0055	0.024	0.000012	0.000705	0.0007
Less than 600hp	0.00668	0.031	0.000012	0.0000247	0.0022

<sup>1</sup>: SO<sub>2</sub> EF for use with ULSD

Rock Crushing Worksheet:  $E = (EF \times \text{tons of rock crushed}) / 2000 \text{ lbs per ton}$

Tertiary Crushing	Fines Crushing	Screening	Fines Screening	Aggregate Handling & Storage Piles

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: \_\_\_\_\_ =  $((1.3407 \times \text{NoC}) + 1) \times .0011 \times \text{tons of rock crushed} / 2000 \text{ lbs per ton}$

Diesel Engine Worksheet (for every engine listed in Section 4):

$E = (EF \times \text{hours of operation} \times RC) / 2000 \text{ lbs per ton}$

CO	NO <sub>x</sub>	SO <sub>2</sub>	VOC	PM-10

Total Emissions: add items in Rock Crushing Worksheet and Conveyor Transfer Points and PM-10 column from diesel engines rows above for total PM-10. Add remaining columns for all diesel engines.

CO	NO <sub>x</sub>	SO <sub>2</sub>	VOC	PM-10

**Assessable Emissions**: for any pollutant total greater than 10 (tons), round to nearest whole number, for any pollutant less than 10 tons, round down to 0. Enter these values below and on **Attachment 4**: Emission Fee Estimate and submit with this application.

CO	NO <sub>x</sub>	SO <sub>2</sub>	VOC	PM-10

### ***Attachment 4: Emission Fee Estimate***

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

ADEC Air Permits Program  
 610 University Avenue  
 Fairbanks, AK 99709-3643

Or

FAX to (907) 451-2187

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

Submit emissions online at the following website: <https://myalaska.state.ak.us/deca/air/airtoolsweb/>

Stationary Source Name: \_\_\_\_\_

Permit Number: \_\_\_\_\_ Date: \_ Emission Fee

Estimate for : \_\_\_\_\_ (State fiscal year)

**Table 1.** Total Emissions & Assessable Emission Fee Estimate

<b>Pollutant</b>	<b>Rock Crusher</b>	<b>Diesel Generator</b>	<b>Assessable Emissions</b>
NO <sub>x</sub>	N/A		
CO	N/A		
SO <sub>2</sub>	N/A		
PM-10			
VOC	N/A		

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*

\_\_\_\_\_  
*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.

### Section 1 – General Information

<b>1-A Facility Information</b>	
Company Name:	
Plant Name:	
Permit No.:	
<b>1-B Contacts</b>	
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.	
<i>Responsible Official</i> (authorized under 18 AAC 50.990(93))	
Name:	
Phone Number:	
<i>On-site Manager/Operator or Point of Contact</i> (if different from above)	
Name:	
Phone Number:	
<b>1-C Recordkeeping and Reporting</b>	
Keep 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

<b>2-A Fugitive Emission Points</b>
Identify the relative locations of actual and potential sources of fugitive dust emissions.
<input type="checkbox"/> Bulk material handling and storage areas. <input type="checkbox"/> Paved and unpaved access roads, haul roads, traffic areas, and equipment storage yards. <input type="checkbox"/> Exit points where carryout and vehicle track-out onto paved public roads may occur. <input type="checkbox"/> Water supply locations if water application will be used for controlling visible dust emissions. <input type="checkbox"/> Rock crushing operations. <input type="checkbox"/> Screening <input type="checkbox"/> Conveyors <input type="checkbox"/> Fines Screening <input type="checkbox"/> Asphalt plant operations <input type="checkbox"/> Screening <input type="checkbox"/> Conveyors <input type="checkbox"/> Baghouse Catch <input type="checkbox"/> Drum Mixer Discharge <input type="checkbox"/> Hot mix storage silo receiving point
<b>2-B Comments – Fugitive Emission Points</b>



**Section 3 – Control of Fugitive Dust Sources**

<p><b>3-A Control of Fugitive Dust Sources</b>                  Check any boxes that apply. Checked boxes represent methods that will be used <i>as needed</i>.</p>
<p><i>Active Operations</i></p> <p><input type="checkbox"/> Water will be applied to dry areas during leveling, grading, trenching, and earthmoving activities.</p> <p><input type="checkbox"/> Wind barriers will be constructed and maintained, and water or dust suppressants will be applied to the disturbed surface areas.</p>
<p><i>Inactive Operations, including after work hours, weekends, and holidays</i></p> <p><input type="checkbox"/> Not applicable for this project (Please explain why in Section 3-C).</p> <p><input type="checkbox"/> 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.</p>
<p><i>Sites Inactive for Seven or More Days</i></p> <p><input type="checkbox"/> Not applicable for this project (Please explain why in Section 3-C).</p> <p><input type="checkbox"/> Vehicle access will be restricted and water/dust suppressants will be applied at all un-vegetated areas.</p> <p><input type="checkbox"/> Vegetation will be established on all previously disturbed areas.</p> <p><input type="checkbox"/> Gravel will be applied and maintained at all previously disturbed areas.</p> <p><input type="checkbox"/> Previously disturbed areas will be paved.</p>
<p><i>Unpaved Access and Haul Roads, Traffic and Equipment Storage Areas</i></p> <p><input type="checkbox"/> Not applicable for this project (Please explain why in Section 3-C).</p> <p><input type="checkbox"/> Apply water or dust suppressants to unpaved haul and access roads.</p> <p><input type="checkbox"/> Post speed limit signs of not more than 15 mph at each entrance, and again every 500 ft.</p> <p><input type="checkbox"/> Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.</p>
<p><i>Wind Events</i></p> <p><input type="checkbox"/> 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.</p>
<p><b>3-B Bulk Materials</b>                  Check any boxes that apply. Checked boxes represent methods that will be used <i>as needed</i>.</p>
<p><i>Outdoor Handling of Bulk Materials</i></p> <p><input type="checkbox"/> Water or dust suppressants will be applied when handling bulk materials.</p> <p><input type="checkbox"/> Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.</p>
<p><i>Outdoor Storage of Bulk Materials</i></p> <p><input type="checkbox"/> Water or dust suppressants will be applied to storage piles.</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> A three-sided structure (&lt; 50% porosity) will be used that is at least as high as the storage piles.</p>
<p><i>On-Site Transporting of Bulk Materials</i></p> <p><input type="checkbox"/> Vehicle speed will be limited on the work site.</p> <p><input type="checkbox"/> All haul trucks will be loaded such that the freeboard is not less than six inches when transported across any paved public access road.</p> <p><input type="checkbox"/> A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.</p> <p><input type="checkbox"/> Haul trucks will be covered with a tarp or other suitable cover.</p>

**Section 3 – Control of Fugitive Dust Sources (cont.)**

<p><b>3-B Bulk Materials - continued</b></p> <p><i>Off-Site Transporting of Bulk Materials</i></p> <p><input type="checkbox"/> No bulk materials will be transported to or from the project site.</p> <p><input type="checkbox"/> Materials for transport will be wetted as needed.</p> <p><input type="checkbox"/> Covers will be used, as needed. Some or all of the following will be used as necessary:</p> <ul style="list-style-type: none"> <li>• The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.</li> <li>• Spillage or loss of bulk materials from holes or other openings in the cargo compartment’s floor, sides, and tailgates will be prevented.</li> <li>• 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.</li> </ul> <p><i>Outdoor Transport using a Chute or Conveyor</i></p> <p><input type="checkbox"/> No chutes or conveyors will be used.</p> <p><input type="checkbox"/> Chute or conveyor will be fully enclosed.</p> <p><input type="checkbox"/> Water spray equipment will be used to sufficiently wet the materials.</p> <p><input type="checkbox"/> Transported materials will be washed or screened to remove fines (PM-10 or smaller).</p> <p><b>3-C Comments – Control of Fugitive Dust Sources</b></p>   
--

**Section 4 – Dust Control Methods**

<p><b>4-A Water Application</b></p> <p>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 <i>as needed</i>.</p> <p><i>Water Application Equipment:</i></p> <p><input type="checkbox"/> Sprinklers: Describe the activities that will utilize sprinklers: _____</p> <p><input type="checkbox"/> Water Truck, <input type="checkbox"/> Water Trailer, <input type="checkbox"/> Water Wagon, <input type="checkbox"/> Other: _____ Describe the activities that will utilize this equipment: _____</p> <p>Water application equipment is available to operate after normal working hours, on weekends, and holiday. After-hours contact: _____ Phone number: _____</p> <p><i>Water Supply (as needed):</i></p> <p><input type="checkbox"/> Fire hydrants. Obtain necessary approval to use specific hydrants.</p> <p><input type="checkbox"/> Storage tanks      Number and capacity: _____</p> <p><input type="checkbox"/> Wells      Number and flow rate: _____</p> <p><input type="checkbox"/> 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: _____</p> <p><input type="checkbox"/> Other: _____</p>
---

**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**

**Section 5 – Carryout and Vehicle Track-out**

**5-A Treatments for Preventing Track-out**

Track-out 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 Track-out**

Clean up Method: Check the method(s) below that will be used for cleaning carryout and track-out.

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 track-out 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 Track-out**