



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

**Minor General Permit 9 (MG9) Application**  
**for**  
**Rock Crushers**

For Office Use Only:

Permit Number: \_\_\_\_\_

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Complete

Incomplete

Does Not Qualify (Specify) : \_\_\_\_\_

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 more than 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 1. Regulated pollutant has the meaning given in 40 C.F.R. 71.2.

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.

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 Permits Program**  
**619 E. Ship Creek, Suite 249**  
**Anchorage, AK 99501**

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

## Minor General Permit 9 (MG9) for Rock Crusher Facilities

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

If the stationary source operates in the Unalaska or St. Paul areas, the stationary source must burn a fuel oil with a sulfur content no more than 0.075% Sulfur by weight. These areas have been designated as special protection areas (delineated in Section 8 and in Attachment 1).

If this stationary source would like to **remediate soils**, the owner must also apply for a soil remediation permit. Please see the ADEC's general permit for soil remediation units (GP-4). The stationary source may apply for a specific Title I or Title V permit that would cover all aspects of their operation, but have the flexibility to operate under two general permits.

If this stationary source would like to operate an **asphalt plant** and is applying for a **MG9**, for rock crusher facilities, they will need to apply for a separate Minor General Permit 3 (MG3) for asphalt plants in addition to the MG9.

The administrative fee for this application is not listed in 18 AAC 50.400(d). Contact Air Quality 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.*

## 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
<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 non-metallic mineral processing 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 contain open burning?
<input type="checkbox"/>	<input type="checkbox"/>	e. Does the stationary source contain asbestos demolition or renovation?
<input type="checkbox"/>	<input type="checkbox"/>	f. Does the stationary source contain servicing of refrigeration equipment containing Class I or Class II substances?
<input type="checkbox"/>	<input type="checkbox"/>	g. Will this rock crusher operate at a Portland cement plant?
<input type="checkbox"/>	<input type="checkbox"/>	h. 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)?

### 2. Location Considerations.

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?

### 3. 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 1,100 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** (see *Attachment 2*) 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.

### 4. Alaska Coastal Management Plan

Sources that will operate within the boundaries of a coastal district shall comply with Coastal District Plant Designated Area Enforceable Policies in accordance with 11 AAC 114.250.

This stationary source will not be located in a coastal district. Should the stationary source be relocated to a coastal district the stationary source will comply with the enforceable policies of that district.

This stationary source will be located within the boundaries of a coastal district and will comply with all enforceable policies of that district.

Provide the name of the coastal district the stationary source will be located in.

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## Section 2: Location Considerations

When applying for an application to operate a rock crusher facility, the applicant should consider the permit conditions relating to selecting an operating site for the rock crusher facility. The permit condition relating to the location of the rock crusher facility is reproduced here in its entirety.

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

### 5. Location

In order to protect the State ambient air quality standards and increments listed in 18 AAC 50.010 and 18 AAC 50.020, the Permittee shall

- 8.1 not operate the Rock Crusher or a diesel engine used to provide electrical or mechanical power<sup>2</sup> to the Rock Crusher, within 400 feet of the nearest residential structure;<sup>3</sup>
- 8.2 not operate for more than *two* construction seasons a Rock Crusher, or a diesel engine used to provide electrical or mechanical power to the Rock Crusher, that is located within 1,000 feet of the nearest residence or other occupied structure; and
- 8.3 give adequate consideration to siting issues as described in the note below when operating or changing locations of a crusher permitted to operate under this permit.

***NOTE:*** *The above setback distances are minimum requirements. Permittees should give adequate consideration to local siting issues which may exist within a given area. Poor siting can lead to public complaints regarding dust impacts and/or impacts from other air pollutants. The Department does investigate these types of public complaints. These investigations could result in:*

1. *formal enforcement with punitive damages;*
2. *a formal request under 18 AAC 50.201 that the Permittee demonstrate, by air quality dispersion modeling or other means, that the air quality impacts are not violating State air quality standards or increments; or creating a public nuisance (under 18 AAC 50.110);*
3. *the requirement to reduce emissions or implement another control strategy to reduce the ambient impact of those emissions as necessary to ensure that the concentration of air pollutants does not exceed the State air quality standards or increments; or the concerns listed in 18 AAC 50.110;*
4. *a requirement to install and operate air quality monitoring equipment; or*
5. *the requirement to obtain a site specific permit with which would contain requirements tailored to that exact operation.*

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<sup>2</sup> This does not include wheeled or tracked equipment powered by a diesel engine such as front end loaders.

<sup>3</sup> For purposes of complying with Conditions 8.1 and 8.2, all distances shall be measured from the air emission release point, or material handling activity, that is located nearest to a residential/occupied structure to the nearest face of the residence/structure.

### Section 3 Stationary source Identification Information

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

Stationary Source Location \_\_\_\_\_

UTM Coordinates or \_\_\_\_\_

Latitude/Longitude \_\_\_\_\_

Physical Address \_\_\_\_\_

Stationary Source Contact Person \_\_\_\_\_

Mailing Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

Legal Owner \_\_\_\_\_

Mailing Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

Permittee (*if different from owner*) \_\_\_\_\_

Mailing Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

Responsible Official \_\_\_\_\_

Mailing Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

Stationary Source's Consultant (*if applicable*) \_\_\_\_\_

Mailing Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

Designated Agent \_\_\_\_\_

Mailing Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

Billing \_\_\_\_\_ Contact \_\_\_\_\_ Person \_\_\_\_\_

Mailing \_\_\_\_\_ Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

Minor General Permit 9 (MG9) for Rock Crusher Facilities

Individuals from your organization, authorized to incur fees (please include consultants, if applicable) \_\_\_\_\_

See following pages for instruction to this section

**SIC Codes: (circle the applicable code(s))**

Sand and gravel

Construction – 1442

Industrial – 1446

Asphalt Paving

Heaving construction – 1629

Roads – 1611

Driveways & parking lots – 1771

Portland cement plant – 3241

Other (describe activity) \_\_\_\_\_ - \_\_\_\_\_

Minor General Permit 9 (MG9) for Rock Crusher Facilities

**Instructions for Section 3.** Where applicable, please provide fax numbers and e-mail addresses.

**Stationary Source Name:** The name of the stationary source that to be operating this permit.

**Stationary Source Location:** Provide either the UTM coordinates or the latitude and longitude where the Asphalt Plant will operate.

**UTM Coordinates:** the stationary source's Universal Transverse Mercator (UTM) coordinates.

**Latitude/Longitude:** The stationary source's Latitude and Longitude coordinates.

**Physical Address:** the stationary source's address. 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 Person:** The name of the individual responsible for the stationary source's day-to-day operations.

**Mailing Address:** The business address where the person receives mail.

**Telephone Number:** The contact person's telephone number.

**Legal Owner:** The stationary source's legal owner. The legal owner could be either a person or a company.

**Mailing Address:** The owner's mailing address.

**Telephone Number:** The owner's telephone number.

**Permittee:** The entity applying for the permit. This can be either the owner or the operator of the rock crusher facility.

**Mailing Address:** The Permittee's mailing address.

**Telephone Number:** The operator's telephone number.

**Responsible Official:** See *Attachment 2* definitions.

**Mailing Address:** The Responsible Official's mailing address.

**Telephone Number:** The Responsible Official's telephone number.

**Stationary Source's Consultant Name:** If applicable, the name of the business or entity that prepared the application and/or prepares reports.

**Mailing Address :** The consultant's mailing address.

**Telephone Number:** The consultant's telephone number.

**Designated Agent:** The designated agent's name. 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.

**Mailing Address:** The designated agent's mailing address.

**Telephone Number:** The designated agent's telephone number.

**Billing Contact:** The billing contact's name.

**Mailing Address:** The billing contact's mailing.

**Telephone Number:** The billing contact's telephone number.

**Individuals Authorized to Incur Fees** – The department charges a fee for staff time, per 18 AAC 50.400 (j). Staff time includes answering questions, working on applications, and issuing permits. List any individual with your organization that you authorize to incur department fees.

**SIC Codes:** Circle one or both codes as they apply to your stationary source.

## Section 4 Stationary Source Information

### Information to determine what requirements apply

1. What is the combined rated capacity of your initial crushers? \_\_\_\_\_ tons per hour

*An initial crusher is any crusher that **can** receive material that has not been processed by another crusher first.*

2. Is your facility portable?

Yes                      No

3. Was your facility constructed, reconstructed<sup>4</sup>, or modified after August 31, 1983?

Yes                      No

### Electrical Power Generation for Rock Crusher

Make # \_\_\_\_\_ Model # \_\_\_\_\_

Serial # \_\_\_\_\_ Year of Manufacture \_\_\_\_\_

Portability Yes/No (circle one)

Is the diesel generator Stationary or Nonroad?

Stationary/Nonroad (circle one)

Design capacity\* \_\_\_\_\_ hp, kW, MW

Nameplate maximum rated capacity\* \_\_\_\_\_ MW

Maximum fuel rate \_\_\_\_\_ gal/hr

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<sup>4</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.

### Crusher Source List

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

Initial crushers (*list all initial crushers regardless of size or age*)

- Equipment Id. \_\_\_\_\_ Rated capacity \_\_\_\_\_ tons per hour Date built: \_\_\_\_\_
- Equipment Id. \_\_\_\_\_ Rated capacity \_\_\_\_\_ tons per hour Date built: \_\_\_\_\_
- Equipment Id. \_\_\_\_\_ Rated capacity \_\_\_\_\_ tons per hour Date built: \_\_\_\_\_
- Equipment Id. \_\_\_\_\_ Rated capacity \_\_\_\_\_ tons per hour Date built: \_\_\_\_\_
- Equipment Id. \_\_\_\_\_ Rated capacity \_\_\_\_\_ tons per hour Date built: \_\_\_\_\_

Screening Operations

- Equipment Id: \_\_\_\_\_ Date built: \_\_\_\_\_

Belt Conveyors

- Equipment Id: \_\_\_\_\_ Date built: \_\_\_\_\_

Bucket Elevators

- Equipment Id: \_\_\_\_\_ Date built: \_\_\_\_\_

Storage bins

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Equipment	Id:	Date	built:
Equipment	Id:	Date	built:
Equipment	Id:	Date	built:
Equipment	Id:	Date	built:
Equipment Id:	_____	Date built:	_____
Equipment Id:	_____	Date built:	_____

Stationary fuel storage tanks

Date Installed	_____	Capacity	_____	(gallons)
Date Installed	_____	Capacity	_____	(gallons)

## Section 5 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 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.

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

Use Attachment 1 as a guide 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 crush 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).

For determining the emission fee estimate for the rock crusher facility, substitute the estimated actual hours of operation in Equation 1, in Attachment 1, for the potential hours of operation used to determine PTE. Enter the amount in tons for PM-10 under the Rock Crusher Facility column in the form in *Attachment 4*.

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.

To determine the emission fee estimate for the diesel generator(s), substitute the actual hours of operation in either

or Equation 3, in Attachment 1, for potential hours of operation. Enter the amount in tons for each pollutant under the Diesel Generator column in the form in *Attachment 4*.

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 6 Other Documents Required

In addition to this application, please include:

- ❑ certification that the diesel engine generator will meet the grain loading standard for fuel burning equipment of 0.05 gr/dscf. (See item 1 below)
  - ❑ process flow diagrams and stack heights. (See item 2 below)
  - ❑ operation and Maintenance Plan (see Section 7 of the application for plan content suggestions and item 3 below)
  - ❑ a fugitive dust control plan that addresses each fugitive dust source, if located within one mile of the nearest residence or other inhabited structure. See the applicable permit for details on the fugitive dust control plan.
1. There is some question whether engines less than 200 hp meet the particulate matter standard of 0.05 grains per dry standard cubic feet. 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.
  2. Stationary source process diagrams show the typical stationary source process including the stack heights and identify each emission point and control device.
  3. The manufacturer's operating and maintenance manual that describes when preventative maintenance should occur and how to operate the equipment.

## Section 7 Operations 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 fugitive dust) on a continuous basis.

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 air pollution control equipment is a crucial element in complying with emission standards.

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

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.

Below are some suggestions to include in an O&M plan. 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 submit that as your PM plan. The plan should consider and discuss the following applicable sources and equipment.

### **Roads, work pads, and stockpiles**

They should be wetted or treated to limit generation of fugitive dust.

### **Diesel Engines**

#### *Weekly checks*

- A. Oil lube system maintenance
- B. Other Preventative Maintenance
  1. fuel filters(s) sediment bowl
  2. injector condition

**Please explain corrective actions:**

## **Section 8 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 a 3.4-mile radius of the intersection of 53° 53' 4" N latitude and 166° 32' 11" W longitude; and

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 maps in Attachment 3 show the areas defined as special protection areas for sulfur dioxide.

Areas defined as special protection areas for sulfur dioxide have the following restrictions on operation:

- 1) The stationary source must use diesel fuel with a sulfur content of  $\leq 0.075\%$  by weight or use natural gas.
- 2) Diesel electric generators or other diesel engines may not be used. The rock crusher facility must operate using high line power.

## Section 9 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*

### Determining Potential to Emit (PTE)

When determining the PTE of a rock crusher(s), take into consideration whether you will use a diesel engine for electrical power generation and whether that engine will be classified as a stationary source or a nonroad engine (see *Attachment 2*)

**PTE for the rock crusher(s).** Provide the PTE for PM-10 in tpy in Table A in this attachment.

**PTE for the diesel generator(s).** Report the PTE for NO<sub>x</sub>, CO, SO<sub>x</sub>, PM-10, and VOC in tpy in this attachment. If your stationary source operates more than one diesel engine, add the totals for all the diesel engines together before entering them in the appropriate column. If your stationary source does not use a diesel engine but uses highline electrical power, mark the appropriate blocks “Uses Highline Power”.

If your diesel generator is classified as a stationary source, add the total of each pollutant in the column labeled Stationary Source PTE with the amount listed in the “Rock crusher facility” column.

If your diesel generator is classified as a nonroad engine, do not add the emissions from the diesel generator to the Stationary source PTE column. Only count the emissions from the rock crusher facility column to the Stationary Source PTE column.

NOTE: If a nonroad engine is at the same location for more than 12 consecutive months, that engine is classified as a stationary engine from the date it first arrived at that location. Rock crusher facilities may find that the emissions from the diesel generator would change their classification from a minor source (Title I) to a major source (Title V). Any source determined to be a major stationary source without a Title V GP9 would be found in violation and could be subject to enforcement actions and penalties.

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

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

If your stationary source has 10 tpy or more of any one pollutant, but all pollutants are less than 100 tpy you qualify for a MG9, provided you do not have any disqualifying criteria listed on the cover page of this application.

If your stationary source has a total of any one pollutant that is 100 tpy or greater you need to obtain a Title V major operating permit or an applicable General Operating Permit.

**Determining the PTE for the Rock Crusher**

To determine the PTE for your rock crusher facility, use Equation 1 for PM-10 and using **8,760** for the variable “Hours of Operation.” If the manufacturer has provided more accurate emission factors than the factors listed in this section, you may use those emission factors provided the Department approves the use of the factors and the methods used to perform the calculations. You may also use emission factors based upon the latest source test provided the source test has been approved by the Department. The calculations shall be recorded and kept on site for a minimum of five years. The calculations shall clearly reflect the emission factors used. If you are using emission factors based upon manufacturer’s data attach the manufacturer’s data to the calculations.

**Equation 1 (Rock Crushers)**

$$\text{Emissions} = (\text{EF} \times (\text{Hours of operation} * \text{RC})) / \text{lbs per ton}$$

Where:

EF = pollutant emission factor in lb/ton of rock crushed processed

RC = rated capacity of Rock Crusher in tons per hour

Hours of operation = hours of operation of Rock Crusher

lbs per ton = 2,000

$$\text{Emissions} = (\text{EF} \times (\text{hrs} * \text{RC})) / 2,000 = \text{tons per year}$$

**Emission Factors for Crushed Stone Processing (lb/ton of stone crushed)<sup>1</sup>**

	Primary and Secondary Crushing	Tertiary Crushing	Fines Crushing	Screening	Fines Screening	Conveyor Transfer Point	Aggregate Handling and Storage Piles <sup>2</sup>
PM	None	0.0054	0.0390	0.025	0.30	0.0030	0.05
PM-10	None	0.0024	0.0150	0.0087	0.072	0.00110	0.05

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1. Emission factor units are lb per ton of stone processed. The preceding emission factors were compiled from AP-42, 5<sup>th</sup> addition, Table 11.19.2 and Equation 1 of Section 13.2.4.

2. This emission factor conservatively assumed 10 mph wind speed and 0.25 percent moisture content.

### Determining PTE for Diesel Engine Generator

To determine the PTE for the diesel generators use either Equation 2 – with emission factors expressed in lb/hp-hr, or Equation 3 - with emission factors expressed in lb/MMBtu. Perform the calculation for each pollutant. If you operate more than one diesel generator, perform the calculations for each generator. If the manufacture has provided more accurate emission factors than the factors listed in this section, you may use those emission factors provided the Department approves the use of the factors and the methods used to perform the calculations. You may also use emission factors based upon the latest source test provided the source test has been accepted by the Department. The calculations shall be recorded and kept on site for a minimum of five years. The calculations shall clearly reflect the emission factors used. If you are using emission factors based upon manufacturer's data, attach the manufacturer's data with the calculations.

#### Equation 2 (Diesel Generators, Horsepower)

Emissions = ((EF x Hp)\* Hours of operation) / lbs per ton

Where:

EF = emission factor

HP= horse power of unit

Hours of operation = hours of rock-crushing operations

lbs per ton = 2,000

$$((EF * hp) * hrs) / 2,000 = \text{tons per year}$$

#### Equation 3 (Diesel Generators, MMBtu)

Emissions = ((EF x MMBtu) \* Hours of operation) / lbs per ton

Where:

EF = emission factor

MMBtu = Manufacturer's rated capacity

Hours of operation = hours of rock-crushing operations

lbs per ton = 2,000

Emissions = ((EF x MMBtu) \* hrs) / 2,000 = tons per year

### Emission Factors for Diesel Engines less than or equal to 600 hp

Pollutant	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM-10	VOC
Emission factor (lb/hp-hr) power output	6.68 E -03	0.031	2.05 E -03	2.20 E -03	2.47 E-05
Emission factor (lb/MMBtu) fuel input	0.95	4.41	0.29	0.31	0.35

The preceding emission factors were compiled from AP-42, 5<sup>th</sup> addition, Table 3.3-1

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**Emission Factors for Large Diesel Engines more than 600 hp Diesel Fuel, Uncontrolled Emissions**

Pollutant	CO	NO <sub>x</sub>	SO <sub>2</sub> <sup>5</sup>	PM-10	VOC
Emission factor (lb/hp-hr) power output	5.5 E-03	0.024	8.09 E-03S <sub>1</sub>	0.0007	7.05 E-04
Emission factor (lb/MMBtu) fuel input	0.85	3.2	1.01S <sub>1</sub>	0.1	0.09

*The preceding emission factors were compiled from AP42, 5<sup>th</sup> addition, Table 3.4-1*

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<sup>5</sup> Assumes that all sulfur in the fuel is converted to SO<sub>2</sub>. S<sub>1</sub> = % sulfur in fuel oil. For example, if sulfur content is 1.5%, S = 1.5.

## ***Attachment 2 Definitions***

***Regulated air pollutant*** means the following:

- (1) Nitrogen oxides or any volatile organic compounds;
- (2) Any pollutant for which a national ambient air quality standard has been promulgated;
- (3) Any pollutant that is subject to any standard promulgated under section 111 of the Act;
- (4) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act; or
- (5) Any pollutant subject to a standard promulgated under section 112 of the Act or other requirements established under section 112 of the Act, including sections 112 (d), (j), and (r) of the Act, including the following:
  - (i) Any pollutant subject to requirements under section 112(j) of the Act. If the Administrator fails to promulgate a standard by the date established pursuant to section 112(e) of the Act, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to section 112(e) of the Act; and
  - (ii) Any pollutant for which the requirements of section 112(d)(2) of the Act have been met, but only with respect to the individual source subject to section 112(d)(2) requirements.

[40 CFR 71.2]

***Responsible official*** means:

- (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
  - (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;
- (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;

[18 AAC 50.990 (93)]

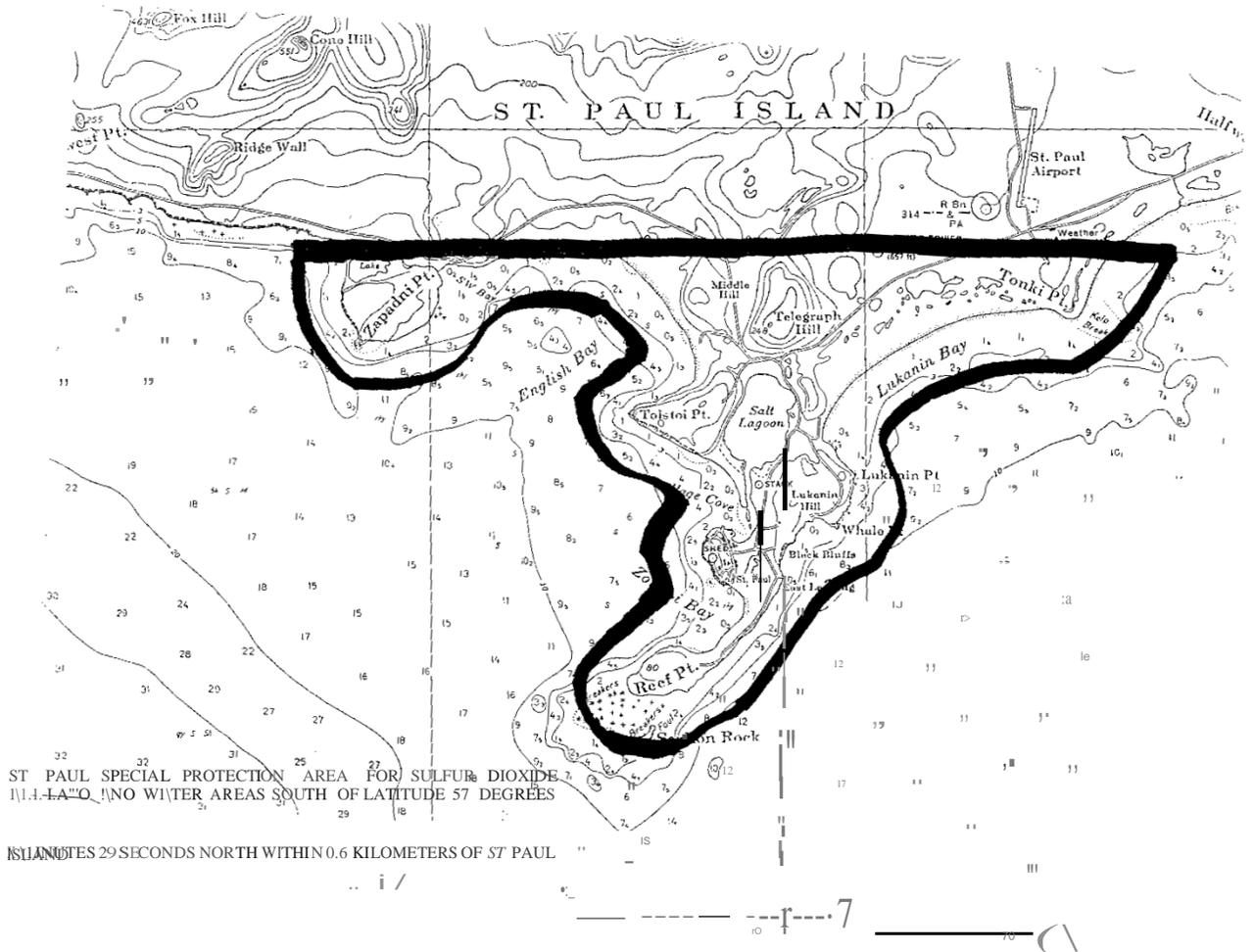
***Nonroad engine*** [40 C.F.R. 89.2] means:

- (1) Except as discussed in paragraph (2) of this definition, a nonroad engine is any internal combustion engine:

## Minor General Permit 9 (MG9) for Rock Crusher Facilities

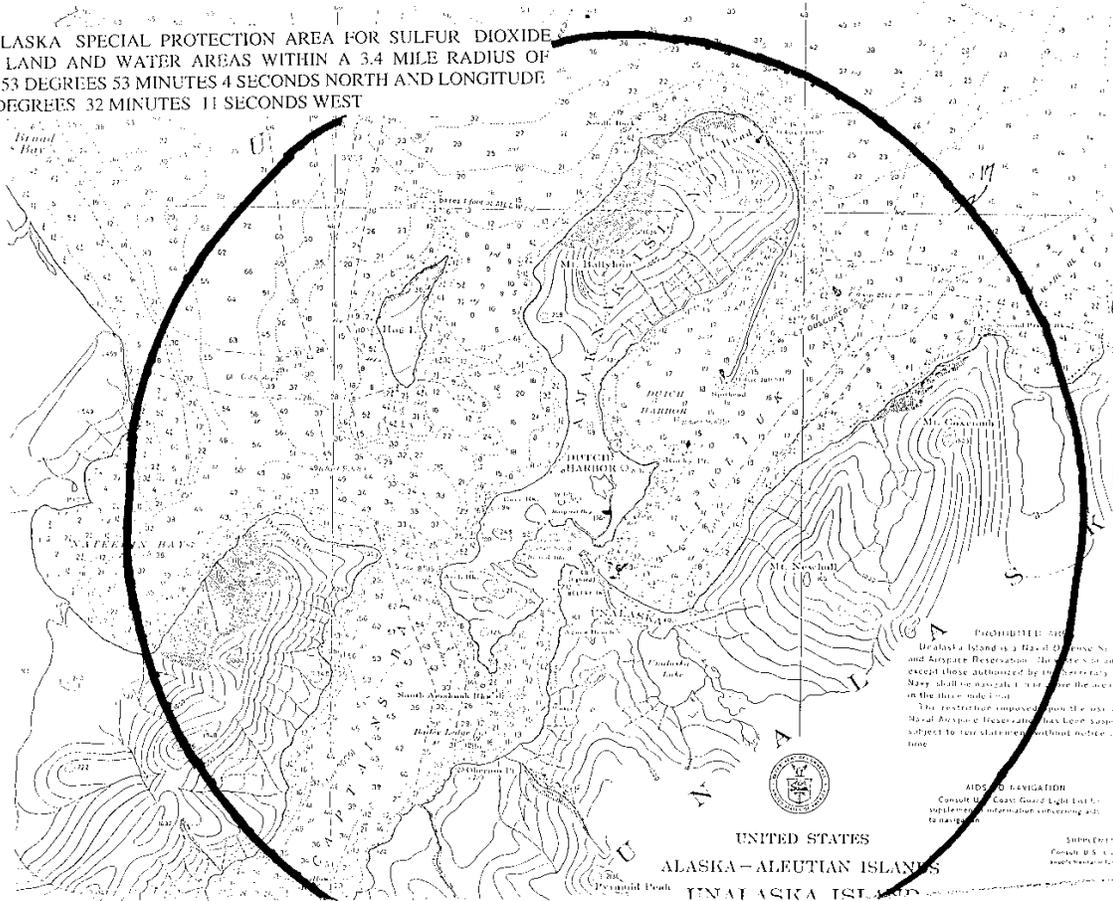
- (i) In or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or
  - (ii) In or on a piece of equipment that is intended to be propelled while performing 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.
- (2) 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 3 Special Protection Areas for Sulfur Dioxide



# Minor General Permit 9 (MG9) for Rock Crusher Facilities

UNALASKA SPECIAL PROTECTION AREA FOR SULFUR DIOXIDE  
ALL LAND AND WATER AREAS WITHIN A 3.4 MILE RADIUS OF  
LAT 53 DEGREES 53 MINUTES 4 SECONDS NORTH AND LONGITUDE  
166 DEGREES 32 MINUTES 11 SECONDS WEST



### Attachment 4 Emission Fee Estimate

Submit the following information to the Department at the same time when submitting 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, report must be signed and certified in accordance with 18 AAC 50.345(j).)*

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

Permit Number (if known) \_\_\_\_\_ Date: \_\_\_\_\_

Emission Fee Estimate for \_\_\_\_\_  
(State fiscal year)

**Table 2 Total Emissions & Assessable Emission Fee Estimate**

Pollutant	Rock Crusher Plant	Diesel Generator	Assessable Emissions
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