

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONTROL MINOR GENERAL PERMIT
MINOR GENERAL PERMIT 9 FOR ROCK CRUSHERS**

Permit No. AQ _____ MG90__ Revision 2 Public Comment – February 2, 2017

This minor general permit is to be used for the construction, operation, or relocation of the rock crusher described below, which has a rated capacity of at least five tons per hour, as described in 18 AAC 50.502(b)(3), that is also classified as, or part of, a minor stationary source, but is not a Title V stationary source. This minor general permit also satisfies 18 AAC 50.502(c) for rock crushers that include diesel engine(s). This minor general permit satisfies the Permittee's obligation to obtain a permit under AS 46.14.120(g). Technical support for permit conditions and explanation of revisions from the 2013 Minor General Permit 9 can be found in the Technical Analysis Report. This permit authorizes the Permittee to operate any emission unit identified in Table A at the same location. To operate emission units concurrently at two separate sites, please contact the Department or apply for a separate letter of MG9 permit authorization for the additional locations.

This minor general permit does not expire and is valid until the Alaska Department of Environmental Conservation (Department) terminates, modifies, reopens, or revokes and reissues the permit. The letter of authorization is in effect until withdrawn, modified, revoked and reissued, or if the source no longer qualifies for this permit. The use of sample forms provided with this permit are not a reporting requirement, however, any independently developed form must contain all the reporting requirements listed within this permit.

John F. Kuterbach, Manager
Air Permits Program

Application determined complete by:

Signature

Authorization Date

Printed Name

Table A Facility Information

Permittee:		Plant Name:	
Emission Unit	Make	Model	Rating/Capacity
Diesel Engines:			
Rock Crushers:			
Aggregate Processing Equipment:	Make	Model	Rating/Capacity
Screening Operations:			
Belt Conveyors:			

Table B Pre-Approved Locations

Location Name	Description (Address or Mile Post)	Latitude/ Longitude (decimal degrees**)
*		

* Rock Crusher Storage Location, special consideration given in Condition 2.3 for unexpected maintenance or repair. Storage Location may not be a suitable site for production if minimum setbacks in Condition 1.1 are not satisfied.

**Location must be specified to at least four decimal places.

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* Online submission of reports may require use of standardized Sample Forms.

MG9 OPERATING PERMIT CONDITIONS

Table C Emissions Limits

Emission type	Limit
Opacity (Visible Emissions)	20% for fugitive dust and diesel engines with stack diameters of 18 inches or greater 15% opacity for diesel engines with stack diameters smaller than 18 inches
Particulate Matter	0.05 grains per cubic foot
Sulfur Compounds	500 ppm

LOCATION RESTRICTIONS

1. **Ambient Air Quality Protection.** Give adequate consideration to siting issues when operating or changing locations of a rock crusher plant (see *Note* in Technical Analysis Report).

1.1. Do not operate the rock crusher or diesel engine within 400 feet of the nearest occupied structure off the work site.

1.2. **Nonroad engine location restrictions.** A portable engine does not qualify as a nonroad engine if it remains in place for 12 consecutive months or is located at a seasonal source and operates during the full annual operating period of the seasonal source.

1.3. **SO₂ Special Protection Area.** If operating in one of the sulfur dioxide special protection areas described in 18 AAC 50.025(c) (Unalaska or St. Paul Island areas) you cannot operate diesel engines for electrical power generation unless burning only ULSD.

2. **Relocation Reporting Requirements.** Provide notice to the Department before installing or relocating the Rock Crusher using the Relocation Notification form (Form 1) or reporting all information it contains to the Department. Site selection must comply with the offset of Condition 1.1. If the location is within 2,000 feet of the nearest occupied off-site structure, you must attach a fugitive dust control plan as part of the relocation notice; see Condition 17.

2.1. **Pre-Approved Locations.** Provide notice to the Department at least 8 hours before installing or relocating the Rock Crusher to a pre-approved location listed in Table B using Air Online Services. Provide at least 5 days’ notice to the Department using any method other than Air Online Services.

2.2. **New Locations.** Provide notice to the Department at least 48 hour before installing or relocating the Rock Crusher to a new location using Air Online Services. Provide at least 5 days’ notice to the Department using any method other than Air Online Services.

2.3. **Unexpected Breakdown and Repair.** If the Rock Crusher requires unexpected maintenance or repair, provide notice to the Department within 24 hours of relocating the Plant to its pre-approved storage location listed in the first row of Table B. Note that relocating using this Condition doesn’t allow for production.

MONITORING, RECORDKEEPING, AND REPORTING

3. **General Recordkeeping.** Keep copies of all monitoring, recordkeeping, reporting, and all other documents required in this permit for at least five years.

4. **Equipment Operated.** Report all equipment operated under this permit during the reporting season within each Facility Operating Report (FOR). Include a detailed list of equipment installed, removed and operated during the reporting season. Include make, model and rated capacity with Form 9 or equivalent summary.

4.1. **Rental Agreements.** Report any equipment listed in Table A which is leased, rented or otherwise provided under any business arrangement to a third party . Rental agreements must include language certifying that the third party will comply with Alaska Statutes and Regulations. Both parties must complete the Rental Equipment Notification, Form 11 or an equivalent document. This Permittee must submit the Rental Equipment Notification to the Department within 7 days of rental to the third party.

5. General Reporting.

5.1. **Submittals.** Unless otherwise directed by the Department, submit original reports, compliance certifications, or other required documents, using one of the following methods:

- i. Using the Air Online Services Permittee Portal located at <http://dec.alaska.gov/Applications/Air/airtoolsweb>. This requires the Permittee to have a MyAlaska account and the Responsible Official documented with the Department for electronic signature.
- ii. Via email to dec.aq.airreports@alaska.gov;
- iii. By mail to: Alaska Department of Environmental Conservation
Air Permits Program
Attn: Compliance Technician
610 University Avenue
Fairbanks, AK 99709-3643

5.2. **Certification.** Certify any permit application, report, affirmations, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: “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.” Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. See 18 AAC 50.990(93) for the definition of “Responsible Official.”

5.3. **Operating Reports.** Submit operating reports as directed by Condition 5.1 by the dates listed in Table D. The semi-annual Facility Operating Report (FOR) must include all information required by other conditions of this permit. If the facility does not operate during the winter season, you may submit a report early with your summer FOR. You may use Form 4 or a format of your own provided all information is reported.

Table D Operating Report Schedule

Report Type	Reporting Period	Due Date
FOR	April 1 – October 31	November 30
FOR	November 1 – March 31	April 30

5.4. **Information Requests.** Furnish to the Department, within a reasonable time, any information that the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, furnish to the Department copies of records required to be kept by the permit. The Department may require you to furnish copies of those records directly to the federal administrator.

6. Visible Emissions.

6.1. **Rock Crushers and Crushing Process Equipment.** Visible emissions limits are listed in Table .

Monitor:	<ul style="list-style-type: none"> ● Use EPA Method 9 to determine the opacity of fugitive dust emitted from the rock crushing process. All observations must be at least 18 consecutive minutes. ● Identify the emission points capable of producing fugitive emissions. Determine which point has the highest continuous opacity and use this point for monitoring. ● Observe fugitive dust with Method 9 at the emission point identified above: <ul style="list-style-type: none"> ○ During regular operation loads (not on idle or reduced loads); ○ Within two days of startup at the beginning of the season or after relocation; and ○ Within the first two days of production during each calendar month of operation.
Record:	<ul style="list-style-type: none"> ● Keep all observation sheets and summaries for at least five years. ● Calculate and record the greatest 6-consecutive-minute averages observed.

	<ul style="list-style-type: none"> If you collocate a separate Rock Crushing plant at a site, calculate and record the actual emissions of each criteria air pollutant for all sources at the end of each month.
Report:	<ul style="list-style-type: none"> Submit a list of emission points identified and which point was monitored. This list may be in the form of a simple list, picture with points circled and labeled, or a flow diagram with labeled emissions points. Submit copies of all Method 9 observations with the FOR. Submit copies of all Method 9 training certificates for all observers in the reporting period. Report any failure to monitor as a permit deviation according to Condition 9. If six-minute average opacity is observed as greater than 20%, report as excess emissions under Condition 9 and refer to Condition 17 for Reasonable Precautions to Prevent Fugitive Dust; take corrective actions as appropriate. Report any excess emission (greater than 20% opacity) according to Condition 9. If you collocate another Rock Crushing plant at the same site, report the total actual emissions of each criteria air pollutant for each month from the site and the 12 month rolling total emissions for each month of the prior 12 month period. Emission calculations are to use the methods set out in Appendix A of this permit or other methods approved by the Department.

6.2. **Diesel Engines.** Visible emissions limits are listed in Table C.

Monitor:	<ul style="list-style-type: none"> Use the Smoke/No Smoke Plan or EPA Method 9 to observe emissions from the exhaust stack or port of each diesel engine. <u>Smoke/No Smoke Plan:</u> Observe each exhaust stack for presence or absence of smoke, excluding water vapor. <ul style="list-style-type: none"> Initial Frequency: Conduct Smoke/No Smoke observations once every operating day. After monitoring for 30 consecutive operating days, conduct Smoke/No Smoke observations at least once every 14 operating days. If smoke is observed, follow the corrective actions in Condition 6.3 <u>Method 9:</u> All observations must be at least 18 consecutive minutes. <ul style="list-style-type: none"> First observation: within two days of startup at the beginning of the season or after relocating the crusher, or within three days after changing from the Smoke/No Smoke Plan. After the first observation, conduct observations at least once every 14 operating days.
Record:	<ul style="list-style-type: none"> Keep all observation sheets, logs, summaries, and Method 9 training certificates for at least five years. Record date, time, production rate, observer name, and smoke observation in Smoke/No Smoke log.
Report:	<ul style="list-style-type: none"> Report which method you used during the reporting period. Include copies of all Method 9 observations and/or complete Smoke/No Smoke log for the reporting period (Form 5 or equivalent). Report if/when you change visible emissions observation methods. Report any smoke observed under the Smoke/No Smoke Plan and a summary of any corrective actions taken. If opacity of greater than 20% is observed, refer to corrective actions in 6.3(e)-(f). Report any failure to monitor in accordance with Condition 9.

6.3. **Corrective Actions for Smoke Observed in Condition 6.2 (for diesel engines only).** If smoke is observed while conducting Smoke/No Smoke observations:

- a. Do an initial Method 9 observation. If opacity is greater than 20%, see corrective actions in Condition 6.3(c). Continue using Method 9 to monitor visible emissions, following specifications in Condition 6.1. In order to return to Smoke/No Smoke Plan, follow Conditions 6.3(b)-(d).
- b. Initiate actions to eliminate smoke from the engine within 24 hours of the observations;
- c. Keep a written record of the starting date, completion date, and a description of the actions taken to reduce smoke; and
- d. If seven consecutive observations are made of 0% opacity, you may return to the Smoke/No Smoke Plan beginning with initial frequency (Condition 6.2).
- e. If Method 9 observations result in 6-minute average opacity greater than 20%, either:
 - i. Conduct a Particulate Matter source test within 60 days, following the requirements in Condition 19; or
 - ii. Make repairs so that emissions no longer exceed 20% opacity averaged over 6 minutes.
- f. For diesel engines with stack diameter of less than 18 inches, conduct a Particulate Matter source test if Method 9 observations result in 6-minute average opacity greater than 15%.

7. Sulfur Compound Emissions. Applies to fuel for all engines, including nonroad engines. Emissions limits are listed in Table .

Record:	<ul style="list-style-type: none"> • Keep fuel delivery receipts that specify fuel grade and amount. • If diesel delivery receipts do not show that the diesel is Ultra Low Sulfur Diesel (ULSD) or Low Sulfur Diesel (LSD), test delivered fuel for sulfur content, or get a certification statement or analysis from the supplier that shows fuel sulfur percent by weight. • If a permitted facility uses fuel from a bulk supply/tank, identify the bulk supply/tank by name, and comply as otherwise set out in this section for all fuel supplied to the bulk tank for the reporting period. • For liquid fuel from a North Slope topping plant, obtain results of a monthly fuel analysis from the topping plant.
Report:	<ul style="list-style-type: none"> • If only ULSD or LSD was used for the entire reporting period, certify only ULSD or LSD was consumed in fuel burning equipment with your semi-annual operating report. • If anything other than ULSD or LSD was used, submit a list of those fuel deliveries with fuel grades, a certificate from the supplier verifying the sulfur content, or a fuel analysis showing sulfur content of the fuel used. • If natural gas was used during the reporting period, submit a statement certified by the Responsible Official. • If highline power was used during the reporting period, submit a statement certified by the Responsible Official. • Include a copy of the fuel analysis from a North Slope topping plant, if applicable.

8. Pollution Control Equipment Breakdowns.

Record:	<ul style="list-style-type: none"> • Keep records of pollution control equipment breakdowns and corrective actions.
Report:	<ul style="list-style-type: none"> • Notify the Department within two days of a pollution control equipment breakdown as a Permit Deviation in accordance with Condition 9. • Include a summary of each breakdown in the FOR.

9. Excess Emissions and Permit Deviations.

Record:	<ul style="list-style-type: none"> • Keep records of excess emissions, permit deviations, and corrective actions.
Report:	<ul style="list-style-type: none"> • Report excess emissions that present a potential threat to human health or safety or that the owner, operator, or Permittee believes to be unavoidable as soon as possible. • Report unavoidable emergencies, malfunctions, or non-routine repairs that cause excess emissions within two working days after the event started or was discovered.

	<ul style="list-style-type: none"> • Report excess emissions for a site operated with co-located sources for any month in which the 12-month rolling actual emissions from combined sources exceeds 100 tons of a criteria air pollutant. • Report all other excess emissions or permit deviations, including failure to monitor, within 30 days of the end of the month in which the incident occurs. • Report using the online form at http://www.dec.state.ak.us/air/ap/site.htm or the Excess Emissions and Permit Deviation Form (Form 2 or equivalent summary). • Include a summary of excess emissions and permit deviations in each FOR.
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10. Air Pollution Prohibited.

Record:	<ul style="list-style-type: none"> • Record the date, time, and nature of all emissions complaints received. • Record the name of the person(s) that complained, if known. • Record a summary of any investigations including reasons you do or do not believe the emissions have caused a violation. • Record any corrective actions taken or planned for complaints.
Report:	<ul style="list-style-type: none"> • Include in FOR for each reporting period: <ul style="list-style-type: none"> ○ Number of complaints received. ○ Number of times you or the Department found corrective action necessary. ○ Number of times action was taken on a complaint within 24 hours. ○ Status of corrective actions found necessary that were not taken within 24 hours.

11. Nonroad Engines. Defined in 18 AAC 50.990(63) and 40 C.F.R. 89.2.

Record:	<p>Keep a log of the following for each nonroad engine for at least five years:</p> <ul style="list-style-type: none"> • Date and location of the engine each time it is relocated. • Make, model, serial number, and rated capacity of the engine.
Report:	<ul style="list-style-type: none"> • Include the Nonroad Engine Location Log in each FOR (Form 8 or an equivalent summary)

12. Stored Equipment. If you store out of operation rock crushers, asphalt plants or nonroad engines at the same physical location as the emission units authorized under this permit, you must maintain a Stored Non-Operating Equipment Log for the site (Form 10 or equivalent). Unless recorded in the Log and stored in a non-operable status, this equipment will be considered stationary emission units associated with this permit. Any nonroad engine at the site must also be recorded in the Nonroad Engine Location Log under Condition 11.

Record:	<p>Keep a log of the following items for at least five years:</p> <ul style="list-style-type: none"> • All non-operating equipment stored on-site during the Reporting Period • Any equipment moved to non-operating status during the Reporting Period • Any equipment moved off-site during the reporting period, where it was relocated, if it is co-located with another Permitted source including the permit number, and if it was returned to service
Report:	<ul style="list-style-type: none"> • Include the Equipment Operated Report Form with each FOR (Form 9 or an equivalent summary).

GENERAL CONDITIONS

13. Change of Ownership. If the ownership of the Rock Crusher is changed, both the new and previous owners must complete a transfer of ownership form and receive authorization to operate from the Department before the plant is operated by the new owner. The transfer of ownership form is available from ADEC Air Permits Program staff or on the Department’s website. The website address at the time of issuance of this permit is: <http://dec.alaska.gov/air/ap/operatingperapp.html>.

14. Administration Fees. You are required pay to the Department all permit administrations fees. Administration fee rates are set out in 18 AAC 50.400-405.

15. Assessable Emissions & Emission Fees. You are required to pay to the Department annual emission fees based on the stationary source’s assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities great than 10 tons per year. No later than March 31 of each year, you may submit an estimate of the stationary source’s assessable emissions to the Department, using the Emission Reporting and Emission Fee Estimate form. Otherwise, emission fees for the next fiscal year will be based on the potential to emit. See Appendix A for calculation of assessable emissions and Form 3 for the Emission Fee Estimate report form.

16. Good Air Pollution Control Practice. For all emission units authorized by this permit, perform regular maintenance considering the manufacturer’s or the operator’s maintenance procedures, keep records of any maintenance that would have a significant effect on emissions, and keep a copy of either the manufacturer’s or the operator’s maintenance procedures on site.

17. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent the release of airborne particulate matter and fugitive dust from aggregate piles, conveyors and elevators, loading locations, the rotary drum, screens, vehicle traffic within the stationary source boundaries and other sources of fugitive dust into the ambient air.

17.1. Follow the Fugitive Dust Control Plan (Appendix B) that you included with your minor general permit application or a revised version if submitted to or requested by the Department. A revised or site-specific Fugitive Dust Control Plan must be submitted with each relocation notice if the new location is within 2,000 ft. of the nearest occupied structure (see Condition 2).

17.2. Reasonable precautions to prevent fugitive dust may include the following:

- a. installation and use of hoods;
- b. fans and dust collectors to enclose and vent dusty materials;
- c. other covers and enclosures;
- d. cleanup of loose material on work surfaces;
- e. minimizing drop distances on the conveyor systems and lowering loader buckets to be in contact with the surface of the soil or ground before dumping;
- f. application of water or dust suppressants;
- g. stopping activity in windy conditions; and
- h. measures to prevent carryout or trackout of dust or mud by trucks.

18. Terms to Make the Permit Enforceable.

18.1. Compliance with permit terms and conditions is considered to be in compliance with those requirements that are

- a. Included and specifically identified in the permit; or
- b. Determined in writing in the permit to be inapplicable.

18.2. Comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50.345, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

- a. An enforcement action; or
- b. Permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.

18.3. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

18.4. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

18.5. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or notification of planned changes or anticipated noncompliance does not stay any permit condition.

18.6. The permit does not convey any property rights of any sort, nor any exclusive privilege.

18.7. Allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

- a. Enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;
- b. Have access to and copy any records required by the permit;
- c. Inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
- d. Sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

SOURCE TESTING REQUIREMENTS

19. Source Testing Requirements.

19.1. **General Requirements.** In addition to any source testing explicitly required by the permit, conduct source testing as required by the Department to determine compliance with applicable permit requirements.

19.2. **Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, you should conduct source testing

- a. At a point or points that characterize the actual discharge into the ambient air; and
- b. At the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

19.3. **Reference Test Methods.** Refer to the Technical Analysis Report for approved reference test methods and details.

19.4. **Excess Air Requirements.** Standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68°F and absolute pressure of 760 mm of mercury).

19.5. **Test Exemption.** You are not required to comply with Condition 19.6-19.8 when the exhaust is observed for visible emissions by Method 9 Plan or Smoke/No Smoke Plan under Conditions 6.2 and 6.3 for diesel engines only. This does not apply to fugitive emission sources.

19.6. **Test Plans.** Before conducting any source tests, submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the emission unit will operate during the test and how you will document that operation. Submit a complete plan within 60 days after receiving a request under Condition 6.3.e.i or 19.1 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

You may request an extension to a source test deadline established by the Department. You may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

19.7. **Test Notification.** At least 10 days before conducting a source test, give the Department written notice of the date and the time the source test will begin.

19.8. **Test Reports.** Within 60 days after completing a source test, submit a copy of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. Certify the results in the manner set out in Condition 5.3. If requested in writing by the Department, provide preliminary results in a shorter period of time specified by the Department.

Appendix A: Assessable Emissions Calculation (MG9)

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:

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

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 Form 3 Emission Estimates MG9 total emissions for each pollutant in a calendar year. Each emission unit listed in Table A will need a separate calculation using equations provided, where rated capacity is the horsepower for diesel engines.

Emission factors (EF) are pollutant/emission unit specific. Fuel values assumes the use of Ultra Low Sulfur Diesel (ULSD); please, contact the Department for assistance if you used alternative fuels. Please see the worksheet on the next page for emission factors and further assistance.

MG9 Assessable Emissions Calculations Worksheet

Rock Crushing (AC)	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 _x	SO ₂ ¹	VOC	PM-10
Greater than 600hp	0.0055	0.024	1.2x10 ⁻⁵	0.000705	0.0007
Less than 600hp	0.00668	0.031	1.2x10 ⁻⁵	.0000247	0.0022

¹: SO₂ EF for use with ULSD

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

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 number of conveyors (NoC) as follows:

Conveyor Transfer Points:

Emissions: _____ = $((1.3407 \times \text{NoC}) + 1) \times .0011 \times \text{tons of rock crushed} / 2000$

Diesel Engine Worksheet: $E = (EF \times \text{hours of operation} \times \text{RC}) / 2000$

CO	NO _x	SO ₂	VOC	PM-10

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

CO	NO _x	SO ₂	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 on Form 3 and submit as required under Condition 10.

CO	NO _x	SO ₂	VOC	PM-10

Appendix B: Fugitive Dust Control Plan Guidelines

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 (MG3 Condition 18, MG9 Condition 17).

A sample plan is on the following page in Appendix B. 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 trackout or carryout, such as:
 - Grizzlies or grates;
 - Gravel pads;
 - Paved surfaces;
 - Wheel washers;
 - Truck washing.

Appendix B: 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

1-A Facility Information	
Company Name:	
Plant Name:	
Permit No.:	
1-B Contacts	
Report the names, address, and phone numbers of persons and owners or operators responsible for the implementation of the Dust Control Plan and responsible for the dust generating operation and dust control applications.	
<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:	
1-C Recordkeeping and Reporting	
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

2-A Fugitive Emission Points
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 trackout 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
2-B Comments – Fugitive Emission Points

Section 3 – Control of Fugitive Dust Sources

3-A Control of Fugitive Dust Sources

Check any boxes that apply. Checked boxes represent methods that will be used *as needed*.

Active Operations

- Water will be applied to dry areas during leveling, grading, trenching, and earthmoving activities.
- Wind barriers will be constructed and maintained, and water or dust suppressants will be applied to the disturbed surface areas.

Inactive Operations, including after work hours, weekends, and holidays

- Not applicable for this project (Please explain why in Section 3-C).
- Water or dust suppressants will be applied on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust.

Sites Inactive for Seven or More Days

- Not applicable for this project (Please explain why in Section 3-C).
- Vehicle access will be restricted and water/dust suppressants will be applied at all un-vegetated areas.
- Vegetation will be established on all previously disturbed areas.
- Gravel will be applied and maintained at all previously disturbed areas.
- Previously disturbed areas will be paved.

Unpaved Access and Haul Roads, Traffic and Equipment Storage Areas

- Not applicable for this project (Please explain why in Section 3-C).
- Apply water or dust suppressants to unpaved haul and access roads.
- Post speed limit signs of not more than 15 mph at each entrance, and again every 500 ft.
- Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.

Wind Events

- Water application equipment will apply water to control fugitive dust during wind events, unless unsafe to do so. Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.

3-B Bulk Materials

Check any boxes that apply. Checked boxes represent methods that will be used *as needed*.

Outdoor Handling of Bulk Materials

- Water or dust suppressants will be applied when handling bulk materials.
- Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.

Outdoor Storage of Bulk Materials

- Water or dust suppressants will be applied to storage piles.
- Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind actions.
- Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles and water or dust suppressants will be applied.
- A three-sided structure (< 50% porosity) will be used that is at least as high as the storage piles.

On-Site Transporting of Bulk Materials

- Vehicle speed will be limited on the work site.
- All haul trucks will be loaded such that the freeboard is not less than six inches when transported across any paved public access road.
- A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
- Haul trucks will be covered with a tarp or other suitable cover.

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

3-B Bulk Materials - continued

Off-Site Transporting of Bulk Materials

- No bulk materials will be transported to or from the project site.
- Materials for transport will be wetted as needed.
- Covers will be used, as needed. Some or all of the following will be used as necessary:
 - The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.
 - Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented.
 - Haul trucks will be covered with a tarp or other suitable cover or will be loaded such that the freeboard is not less than six inches when transported on any paved public access road to or from the project site.

Outdoor Transport using a Chute or Conveyor

- No chutes or conveyors will be used.
- Chute or conveyor will be fully enclosed.
- Water spray equipment will be used to sufficiently wet the materials.
- Transported materials will be washed or screened to remove fines (PM-10 or smaller).

3-C Comments – Control of Fugitive Dust Sources

Section 4 – Dust Control Methods

4-A Water Application

Complete this section if water application will be used as a control method for limiting visible dust emissions and stabilizing surface areas. Check and answer everything that applies. Checked boxes represent methods that will be used *as needed*.

Water Application Equipment:

- Sprinklers:
Describe the activities that will utilize sprinklers: _____
- Water Truck, Water Trailer, Water Wagon, Other: _____
Describe the activities that will utilize this equipment: _____

Water application equipment is available to operate after normal working hours, on weekends, and holiday.
After-hours contact: _____ Phone number: _____

Water Supply (as needed):

- Fire hydrants. Obtain necessary approval to use specific hydrants.
 - Storage tanks Number and capacity: _____
 - Wells Number and flow rate: _____
 - Canal, River, Pond, Lake, etc. Describe: _____
- Approval granted by the owner or public agency to use their water source for this project.
Owner or Agency: _____
Contact: _____ Phone number: _____
- Other: _____

Section 5 – Carryout and Trackout

5-A Treatments for Preventing Trackout

Trackout is any material that adheres to vehicle tires and is deposited onto a paved public road or the paved shoulder of a paved public road. Check one or a combination that will apply.

Grizzly: Rails, pipes, or grates used to dislodge debris off of vehicles before exiting the site. Extends from the intersection with the paved public road surface for the full width of the unpaved exit surface for the distance of at least 25 feet.

Describe: _____

Gravel Pad: A layer of washed gravel at least one inch or larger in diameter, three inches deep, and extends from the intersection with the public paved road surface for the full width of the unpaved exit surface for a distance of at least 50 feet.

Describe: _____

Paved Surface: Extends from the intersection with the paved public road surface for the full width of the unpaved access road for at least 100 feet to allow mud and dirt to drop off of vehicles before exiting the site.

Describe: _____

Mud and dirt deposits accumulating on paved interior roads will be removed with sufficient frequency, but not less frequently than once per workday.

Clean-up Frequency: _____

Wheel Washer: Uses water to dislodge debris from tires and vehicle undercarriage.

Describe: _____

Other: _____

5-B Treatments for Preventing Carryout

Carryout occurs when materials from emptied or loaded haul trucks, vehicles, or trailers falls onto a paved public road or paved shoulder of a paved public road. Check all methods that apply.

No haul trucks will be routinely entering or leaving the project site.

Emptied Haul Trucks:

Interior cargo compartments will be cleaned before leaving the project site.

Cargo compartment will be covered with a tarp or suitable cover before leaving the project site.

Loaded Haul Trucks: Spillage or loss of materials from holes or other opening in the cargo compartment will be prevented when material is transported onto any paved public access road.

Haul trucks will be loaded such that the freeboard is not less than six inches with water applied to the top of the load before leaving the project site.

Cargo compartment and load will be covered with a tarp or suitable cover before leaving the project site.

Other: _____

5-C Cleaning up Carryout and Trackout

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

Manually sweeping and picking up.

Mechanical sweeping with a rotary brush or broom accompanied or preceded by water.

Describe the types of equipment that will be used: _____

Operating a PM10-efficient street sweeper.

Make and Model: _____

Flushing with water – allowed if:

- No curbs or gutters are present.
- Using water will not result as a source of trackout and carryout.
- Using water will not result in adverse impacts on storm water drainage systems.
- Using water will not violate any National Pollutant Discharge Elimination System permit program or Alaska Department of Environmental Conservation, Division of Water Permit.

5-D Comments - Carryout and Trackout

Form 1: Relocation Notification (Application Addendum)

Report any facility relocation according to the schedule of Condition 2.

Facility Information:

Permittee Name: _____ Permit No.: AQ _____

Plant Name: _____

Contact Person: _____ Telephone: _____

Make & Model of the Equipment/Stationary Source to be relocated: _____

Attach a complete list of equipment to be operated at the new location.

Relocation Type: Pre-Approved Location (Condition 2.1)

New Location (Condition 2.2)

Unexpected Breakdown or Repair (Condition 2.3)

Location name as recorded on Table B: _____

Estimated Operating Dates:

Estimated start-up date: _____ Estimated shut-down date: _____

Location Information:

New Plant Location (street address, milepost number, etc. – Include site maps):

Latitude _____ Longitude _____ (specify to at least four decimal degrees)

Distance from Plant boundary to nearest inhabited structure: _____ ft.

Nearest inhabited structure(s) are on (check one): flat terrain elevated terrain

If this distance is within 2,000 ft. (for rock crushers) or 1 mile (for asphalt plants), include with this addendum a dust control plan that is specific to this location and is adequate to prevent violations of Air Pollution Prohibited (MG3 Condition 11, MG9 Condition 10).

If the plant is to be located in a city or borough with zoning restrictions, please attach the location or siting approval documents from that city or borough to this form.

Comments: _____

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.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

Submit Report using the electronic methods outlined in Condition 5.1 or by mail to Compliance Technician, ADEC Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643.

Form 2: Excess Emissions and Permit Deviation Reporting Form

State of Alaska Department of Environmental Conservation
Division of Air Quality

Stationary Source Name _____ Air Quality Permit No. _____

Company Name _____ Date _____

When did you discover the Excess Emissions/Permit Deviation?

Date: _____ / _____ / _____ Time: _____ : / _____

When did the event/deviation?

Begin Date: _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

End Date _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

What was the duration of the event/deviation? _____ : _____ (hrs:min) or _____ days
(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for notification: (please check only 1 box and go to the corresponding section)

- Excess Emissions Complete Section 1 and Certify
 Deviation from permit conditions complete Section 2 and certify
 Deviation from COBC, CO, or Settlement Agreement Complete Section 2 and certify

Section 1. Excess Emissions

(a) Was the exceedance Intermittent or Continuous

(b) Cause of Event (Check one that applies):

- Start Up/Shut Down Natural Cause (weather/earthquake/flood)
 Control Equipment Failure Scheduled Maintenance/Equipment Adjustments
 Bad fuel/coal/gas Upset Condition Other

(c) Description

Describe briefly what happened and the cause. Include the parameters/operating conditions

exceeded, limits, monitoring data and exceedance.

(d) Emission unit(s) Involved:

Identify the emission units involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

<u>EU ID</u>	<u>Emission Unit Name</u>	<u>Permit Condition Exceeded/Limit/Potential Exceedance</u>

(e) Type of Incident (please check only one):

- | | | |
|--|--|---|
| <input type="checkbox"/> Opacity % | <input type="checkbox"/> Venting (gas/scf) | <input type="checkbox"/> Control Equipment Down |
| <input type="checkbox"/> Fugitive Emissions | <input type="checkbox"/> Emission Limit Exceeded | <input type="checkbox"/> Record Keeping Failure |
| <input type="checkbox"/> Marine Vessel Opacity | <input type="checkbox"/> Failure to monitor/report | <input type="checkbox"/> Flaring |
| <input type="checkbox"/> Other: | | |

(f) Unavoidable Emissions:

- Do you intend to assert that these excess emissions were unavoidable? YES NO
- Do you intend to assert the affirmative defense of 18 AAC 50.235? YES NO

Certify Report (go to end of form)

Section 2. Permit Deviations

(a) Permit Deviation Type (check one only) (check boxes correspond with sections in permit)

- Emission Unit Specific
- General Source Test/Monitoring Requirements
- Recordkeeping/Reporting/Compliance Certification
- Standard Conditions Not Included in Permit
- Generally Applicable Requirements
- Reporting/Monitoring for Diesel Engines
- Insignificant Emission Unit
- Stationary Source-Wide
- Other Section: (title of section and section # of your permit)

(b) Emission unit(s) Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding Permit condition and the deviation.

EU ID	Emission Unit Name	Permit Condition /Potential Deviation

(c) Description of Potential Deviation: Describe briefly, what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions: Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

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.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To submit this report:

1. Fax this form to: 907-451-2187

Or

2. Email to: DEC.AQ.Airreports@alaska.gov
if faxed or emailed,

Or

3. Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Or

4. Phone notifications: 907-451-5173
Phone notifications require written follow up report.

Or

5. Submission of information contained in this report can be made electronically at the following website:

<http://dec.alaska.gov/Applications/Air/airtoolsweb/Home/Index>

If submitted online, report must be submitted by an authorized E-Signer for the stationary source.

Form 3: Emission Reporting and Emission Fee Estimate

Submit the following information no later than March 31 of each year to:

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

(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

Pollutant	Rock Crusher	Diesel Generator	Assessable Emissions
NO _x	N/A		
CO	N/A		
SO ₂	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

Form 4: Minor General Permit (MG9) – Facility Operating Report Form

Facility Information

Stationary Source: _____ Permit No.: AQ _____

Facility Name: _____

Reporting Period: 11/1/____ to 3/31/____ 4/1/____ to 10/31/____

Did this plant operate during this reporting period?

Yes (please complete form) No (complete the “Certification” section only)

Certification (Condition 5.2)

Certification Statement Signed by a Responsible Official (at end of form)

Relocation Reporting Requirements (Condition 2)

Would the Permittee like to add any new pre-approved locations to Table B since the previous FOR?

Yes No

If yes, for each new location attach Relocation Notification form (Form 1) or equivalent form with maps.

Equipment Operated (Condition 4)

Was new equipment added or existing equipment removed? Yes No

Was any part of this facility rented or leased? Yes No

Form 9 or equivalent attached for equipment operated Form 11 or equivalent attached for equipment rentals.

Visible Emissions - Rock Crusher (Condition 6.1)

Emissions Point observed: _____ (please describe)

Method 9 Observations Summary:

Number of Observations	
Highest 6-consecutive-minute Average	
Number of Observations >20%	

All Method 9 Observation forms attached

Visible Emission training certificates for all observers attached

Excess Emissions/Permit Deviation Forms attached for failure to monitor or for observations of opacity >20%.

Was this Facility collocated with an additional asphalt plant or rock crusher: Yes No

If yes, attach the 12 Month rolling total of criteria emissions for both facilities.

Permit Numbers for collocated Facilities _____

Visible Emissions – Diesel Engines (Condition 6.2)

Method used: Smoke/No Smoke Plan Method 9 Both

Smoke/No Smoke Plan Summary:

Number of Observations	
Number of Days Smoke Observed	

- Complete Smoke/No Smoke Log attached
- Summary of Smoke/No Smoke corrective actions attached

Method 9 Observations Summary:

Number of Observations	
Highest 6-consecutive-minute Average	
Number of Observations >20%	

- All Method 9 Observation forms attached
- Visible Emission training certificates for all observers attached Excess Emissions/Permit Deviation Forms attached for failure to monitor or for observations of opacity observed as greater than 20%.

Sulfur Compound Emissions (Condition 7)

Was ULSD the ONLY fuel used for the entire reporting period?

- Yes, this statement is certified by Responsible Official at the end of this form.
- No, list of diesel deliveries and fuel analysis or certification from supplier showing fuel sulfur content attached.
- Highline power used. Statement certified by Responsible Official attached.
- Natural gas used. Statement certified by Responsible Official attached.
- North Slope topping plant fuel used. If checked, attach a copy of fuel analysis.

Pollution Control Equipment Breakdowns (Condition 8)

Where there any control equipment breakdowns during this reporting period? Yes No

- If Yes, Permit Deviation forms attached
- Summary of breakdowns attached

Excess Emissions and Permit Deviations (EE/PD) (Condition 9)

Where there any EE/PDs during this reporting period? Yes No

- If Yes, EE/PD forms attached

Complaint Summary (Condition 10)

Did you receive any public complaints about emissions during this reporting period? Yes No

- If Yes, Complaint Summary attached.

Nonroad Engines (Condition 11)

Are there engines classified as nonroad engines at this facility?

- Yes, Nonroad Engine Location Log attached.
 - No.
-

Source Testing (Condition 19)

Where any source tests conducted during this reporting period?

Yes, on date: _____ No.

Certification (Condition 5.2)

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.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

Send completed report to: Compliance Technician, ADEC Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643.

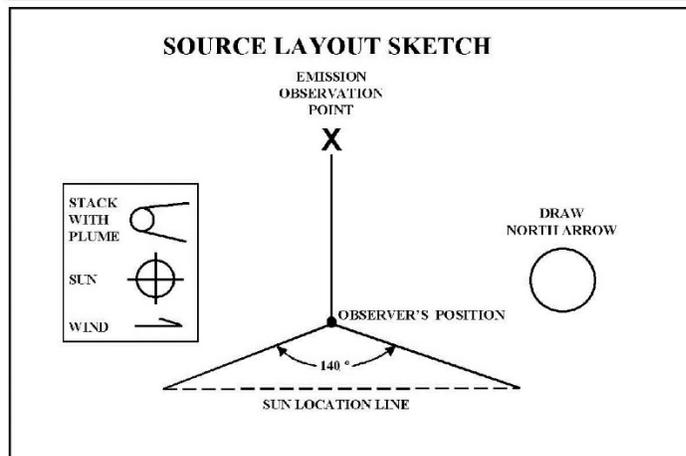
Form 5: Method 9 Visible Emissions Observations

This form is designed to be used in conjunction with EPA Method 9, “Visual Determination of the Opacity of Emissions from Stationary Sources.” Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under additional information. Following are brief descriptions of the type of information that needs to be entered on the form: for a more detailed discussion of each part of the form, refer to “Instructions for Use of Visible Emission Observation Form.”

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
 - Address: street (not mailing or home office) address of facility where VE observation is being made.
 - Phone (Key Contact): number for appropriate contact.
 - Source ID Number: number from NEDS, agency file, etc.
 - Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
 - Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
 - Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
 - Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
 - Height Relative to Observer: indicate height of emission point relative to the observation point.
 - Distance from Observer: distance to emission point; can use rangefinder or map.
 - Direction from Observer: direction plume is traveling from observer.
 - Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
 - Visible Water Vapor Present?: check “yes” if visible water vapor is present.
 - If Present, is Plume...: check “attached” if water droplet plume forms prior to exiting stack, and “detached” if water droplet plume forms after exiting stack.
 - Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
 - Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
 - Background Color: sky blue, gray-white, new leaf green, etc.
 - Sky Conditions: indicate cloud cover by percentage or by description (clear, scattered, broken, overcast).
 - Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
 - Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
 - Ambient Temperature: in degrees Fahrenheit or Celsius.
 - Wet Bulb Temperature: can be measured using a sling psychrometer
 - RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
 - Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
 - Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
 - Sun’s Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen’s shadow crosses the observer’s position.
 - Observation Date: date observations conducted.
 - Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
 - Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
 - Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
 - Range of Opacity: note highest and lowest opacity number.
 - Observer’s Name: print in full.
 - Observer’s Signature, Date: sign and date after performing VE observation.
 - Organization: observer’s employer.
- Certified By, Date: name of “smoke school” certifying observer and date of most recent certification.

VISIBLE EMISSION OBSERVATION FORM

Company Name			
Location			
City	State	Zip	
Process Equipment		Operating Mode	
Control Equipment		Operating Mode	
Describe Emission Point			
Height of Emission Point		Height Relative to Observer	
Start		End	
Distance to Emission Point		Direction to Emission Point	
Start		End	
Vertical Angle to Observation Pt.		Direction to Observation Point	
Start		End	
Describe Emissions			
Start		End	
Emission Color		If Water Droplet Plume (Circle)	
Start		End	
		Attached Detached N/A	
Point In The Plume At Which Opacity Was Determined			
Start		End	
Describe Plume Background			
Start		End	
Background Color		Sky Condition	
Start		End	
Wind Speed		Wind Direction	
Start		End	
Ambient Temp		Wet Bulb Temp	RH Percent
Start		End	



Additional Information

Observation Date		Start Time			End Time	
Min	Sec	0	15	30	45	Comments
	1					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
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21						
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23						
24						
25						
26						
27						
28						
29						
30						

Observer's Name (Print)	
Observer's Signature	Date
Organization (Observer's Company)	
Certified By (M9 Observer Training Organization)	Date

Form 7: Complaint Summary Form

Reporting Period: 11/1/___ to 3/31/___ 4/1/___ to 10/31/___

Permittee Name: _____ Permit No.: AQ _____

Facility Name: _____

Number of Complaints Received:	
Number of Times Corrective Actions were Found Necessary:	
Number of Times Corrective Action was Taken Within 24 hours:	

Status of corrective actions deemed necessary that were not taken within 24 hours:

Comments:
