

DRILLING / BLASTING WORKSHEET INSTRUCTIONS

How to Complete this Worksheet

- Submit this worksheet as a supplemental document to an *Application for a Minor Source Authority to Construct/Permit to Operate*. If submitting this worksheet without a permit application, or in response to an AQMD request for supplemental information, locate and check the “Supplemental Information” box at the top left of Page 2.
- The worksheet must be filled out completely for all items that are applicable, except where noted as optional.
- The *Application for a Minor Source Authority to Construct/Permit to Operate*, all applicable emission unit and/or control device worksheet(s), and payment should be hand delivered to the AQMD drop box located ([here](#)), or mailed to:
NNPH, AQMD
1001 E. Ninth Street, Suite B171
Reno, NV 89512
- Other forms that may be required in addition to this worksheet:
 - If not operating on grid power and/or if there is an engine on site, use the *Internal Combustion Engine Worksheet*.
- **More detailed instructions can be found on page 3.**

DRILLING / BLASTING WORKSHEET

<u>FOR AQMD USE ONLY</u>
Permit No.:

Supplemental Information

Facility Information		
1. New Permit	Permit Modification	2. Existing facilities only. Permit Number:
3. Facility Name:		
4. Facility Address:		
City:	State:	ZIP Code:
Specifications		
Drilling:		
5. Proposed maximum number of holes per year:		
Blasting:		
6. Maximum surface area per blast (ft ² /blast):		
7. Proposed maximum number of blasts per year:		
8. Proposed maximum ANFO (tons/year):		

All information above this line is required for this form to be considered complete. Duplicate sheet as needed.

DETAILED WORKSHEET INSTRUCTIONS

Facility Information

1. Specify if the worksheet is for a new permit or for modification of an existing permit by checking appropriate box.
2. **For existing sources only.** Provide the Permit Number, which can be found at the top of page 1 of the existing Permit to Operate (ex. AAIRXX-XXXX).
3. Provide the source name as it appears on the *Application for a Minor Source Authority to Construct/Permit to Operate*. If a permit already exists for this operation, enter the name as it appears on the existing permit, which can be found at the top of page 1 of the existing Permit to Operate where it says, "Permit Issued To".
4. Provide the facility address.

Specifications

5. Specify the number of holes to be drilled at the source per year. This will be an operational limit in the permit.
 - Calculate drilling emissions based on 0.68 lb/hole for PM₁₀ and 0.04 lb/hole for PM_{2.5}, based on AP-42.
6. Specify the surface area blasted in square feet per blast. This will be an operational limit in the permit.
7. Specify the number of blasts at the source per year. This will be an operational limit in the permit.
 - Calculate PM10 and PM2.5 emissions per blast based on the AP-42 formula:

$$PM_{10} \text{ (lb/blast)} = 0.52 * 0.000014 * A^{1.5}$$

$$PM_{2.5} \text{ (lb/blast)} = 0.03 * 0.000014 * A^{1.5}$$
 Where A = the surface area blasted in square feet per blast.
8. Specify the amount of ammonium nitrate-fuel oil mixture (ANFO) that could be used at the source in tons per year. This will be an operational limit in the permit.
 - Calculate CO and NO_x emissions from blasting using the emission factors generated by the National Institute for Occupational Safety and Health in 1997:
 - CO = 40.97 lb/ton of ANFO
 - NO_x = 7.92 lb/ton of ANFO