

Class II

General Air Quality Operating Permit for Concrete Batch Plants
and Non-Metallic Minerals Crushing and Screening Plants
Application Forms

Guidance Document

Guide for completing the applications for a General Air Quality
Operating Permit for Concrete Batch Plants and General Air
Quality Operating Permit for Non-Metallic Minerals Crushing
and Screening Plants



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Our goal is to achieve and maintain levels of air quality that will protect human health, prevent injury to plant and animal life, prevent damage to property, and preserve the scenic, historical, and aesthetic treasures of the state

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ACRONYMS AND ABBREVIATIONS

ACFM	Actual Cubic Feet per Minute
AQOP	Air Quality Operating Permit
BAPC	Bureau of Air Pollution Control
BAQP	Bureau of Air Quality Planning
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HA	Hydrographic Area (Basin)
hr	Hour
lb	Pound
N/A	Not Applicable
NAC	Nevada Administrative Code
NAD 83	North American Datum of 1983
NDEP	Nevada Division of Environmental Protection
NO _x	Oxides of Nitrogen
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate Matter with an Aerodynamic Diameter Less Than or Equal to 10 Micrometers
PM _{2.5}	Particulate Matter with an Aerodynamic Diameter Less Than or Equal to 2.5 Micrometers
RO	Responsible Official
SO ₂	Sulfur Dioxide
U.S.C	United States Code
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compounds

INTRODUCTION

This document is a detailed guide for completing an application for a Class II General Air Quality Operating Permit for Concrete Batch Plants or an application for a Class II General Air Quality Operating Permit for Non Metallic Mineral Crushing and Screening Plants.

For additional questions, call (775) 687-9349.

This [guide and its associated application forms](#) can be found on the Nevada Division of Environmental Protection (NDEP) website:

<https://ndep.nv.gov/air/permitting/download-permit-forms>

2 THINGS TO REMEMBER BEFORE STARTING

1. When filling out the application, complete every blank or explain why no information is provided. Specify "N/A" (Not Applicable) if necessary. **Fields that are left blank may cause a delay in the processing time.**
2. If **revising a permit**, the facility must still submit all pages of the application and attachments.

APPLICATION SUBMITTAL AND PROCESSING TIMELINE

In order to start processing the application, both the application packet and fee must be received in accordance with [NAC 445B.327](#).

Mail or hand deliver the application and fee(s), payable by check, to the following address:

Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class II Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249

Fees may also be [submitted online](#).

When submitting an electronic payment, include the facility's name and, if applicable, its existing permit number and facility identification number.

The application and fees are date stamped when received. The regulatory time frame allocates 10 working days in accordance with [NAC 445B.331](#).



Bind the physical copies of the application.

Ensure the physical application contains the wet signature of the responsible official on the Certification Document page (See [“Application Certification Document”](#)).

1. COVER PAGE

The cover page is the first page of the application, which includes the type of application and whether the facility is new or existing.

Facility Name – A company may have several facilities. Provide the name of the facility. If there is no facility name available, write the company name here. The company name will also be requested on page 3 of the application.

Existing Facility ID – A facility identification number (FIN) is only required if the facility already has a permit. On existing operating permits, the FIN is in the header section as Facility ID No. AXXXX (Example: A1234). If the facility currently does not have a permit, specify “N/A.”

Existing Class II AQOP – This refers to the existing permit number located in the header section (Example: Permit No. AP1499-3576). If the facility does not currently have a Class II Air Quality Operating Permit, specify “N/A.”

2. IMPORTANT INFORMATION

The application contains a section titled “Important Information.” Read this information carefully before completing the application. It contains a list of application forms, due dates, regulations, and fee(s) associated with a permit.

3. GENERAL COMPANY INFORMATION FORM

The General Company Information Form requests a brief description of the operations of the facility, the contact and mailing information of the company, the responsible official (RO) of the facility, the plant manager or other appropriate contact, and the location and driving directions to the facility.

Section 1: Company name and address — Provide the company name and address as you want it to appear on the permit.

Section 2: Owner’s name and address — Provide the name and address of the company owner. The owner is the person who owns, leases, operates, controls, or supervises the facility or a stationary source.

Section 3: Facility name and address — Provide the facility name and address if it is different than the company name and address in Section 2, or write “same as above.”

Section 4: Records location — Provide the location where all records required by the permit will be stored. If they will be on-site, rewrite the information from Section 4. If records will be stored at another location, insert the information for the location.



Does the RO need to change?

Attach the [RO Request Form](#) stating who the new RO will be. This should be signed by the appropriate individual.

Section 5: Responsible official — Provide the name, title, and mailing address for the responsible official (RO). If the facility already has an air permit, the RO should be the same as what the BAPC already has on file.

The RO can be:¹

1. For a corporation:
 - (a) A president;
 - (b) A vice president in charge of a principal business function;
 - (c) A secretary;
 - (d) A treasurer; or
 - (e) An authorized representative of such a person who is responsible for the overall operation of the facility and who is designated in writing by an officer of the corporation and approved in advance by the director of the Nevada Department of Conservation and Natural Resources.
2. For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
3. For a municipality or a state, federal, or other public agency, a ranking elected official or a principal executive officer, including, for a federal agency, a chief executive officer who has responsibility for the overall operations of a principal geographic unit of the agency.
4. For an affected source, the designated representative or his or her alternate, as defined in [42 U.S.C. § 7651a\(26\)](#).

Section 6: Plant manager or other appropriate contact — This is the person the BAPC will communicate with when on site if the RO is not available. Provide the name, title, and contact information for a plant manager or other appropriate contact from the facility if it will not be the RO. For example, if the company president is the RO but is not physically at the facility, provide an appropriate contact who works on-site.

¹ [NAC 445B.156](#)

Section 7: Location and driving directions to the facility:

- Provide the hydrographic area (HA) number(s) and name(s), township(s), range(s), and section(s) of the facility;
- Provide the Universal Transverse Mercator (UTM) coordinates of the front gate of the facility. The UTM coordinates must be in metric units using North American Datum of 1983 (NAD 83), Zone 11;
- Describe the location of the facility with respect to the nearest road and city (such as 8th Street, Wells, Nevada) and the county the facility is located in;
- Provide driving directions from nearest city to the facility.



Find the right maps.

The BAPC keeps online maps that can help determine HA basin number and names; township, section, and range; and UTM coordinates.

[Maps can be found online](#)

Section 8: What is the minimum setback of equipment from public access and maximum hours of operation? — When choosing a minimum setback please choose the option for where any piece of equipment will be the closest to the fence line or where the public has access. For the maximum hours of operation please choose the maximum hours your facility will operate.

4. DETAILED EMISSION CALCULATIONS: FORMS 1A AND 1B

Tables for detailed emission calculations has been provided in Form 1A and Form 1B, Form 1A is to be utilized for units that only have emissions from particulate matter such as crushers or conveyor transfers. Form 1B is to be utilized for units that emit gaseous emissions such as a heater in the case of concrete batch plant or a generator in the case of a non-metallic crushing and screening plan. The submitted detailed emission calculations do not need to follow the same format as those provided by the BAPC, as long as all of the information is included.

4.1 Emission Unit Description

Give each emission unit a name. Emission units can be grouped in systems (Example: System 1 – Conveyor 1; System 1 – Screen 1; etc.). A system contains emission units that are part of the same process (Example: Crushing Plant- a screening process and associated conveyors) or are controlled by the same air pollution control equipment (Example: all stacks lead to one baghouse).

4.2 Material Process Rate

Hourly – The Hourly Throughput Rate is the weight of material processed in one hour by the listed equipment, in tons.

Project – For the Project Throughput Rate provide the total amount of material that is estimated to be processed by the job, in tons.

4.3 Operating Hours

Specify maximum daily hours you intend to operate- these calculations should match the operating hours you answered for Question 8 of the General Company Information section of the application.

4.4 Emissions Control Technology

Provide the type of control equipment used (baghouse, bin vent, enclosure, water spray, wet scrubber, etc.) and add a label and number (Baghouse BH-1). If an emission unit is not equipped with control equipment, write “no control” in this section.

4.5 Emission Factors

Emission factors are used to calculate the requested emission limits for regulated pollutants and are pre-defined for either of the General Air Quality Operating Permits application types. The throughput rate with the emission factor gives the emission limit of a pollutant. The emission factors that are to be utilized are provided in appendixes 1 and 2.

4.6 Calculated Emissions

Calculate and enter the projected emissions in lbs/day for each emission unit. Below is an example of the emission calculations.

$$\text{Emission rate } \frac{\text{tons}}{\text{hr}} \times \text{Operating Hours } \frac{\text{hrs}}{\text{day}} \times \text{Emission Factor } \frac{\text{lbs}}{\text{ton}} = \text{Calculated Emissions } \frac{\text{lbs}}{\text{day}}$$

$$500 \frac{\text{tons}}{\text{hr}} \times 16 \frac{\text{hrs}}{\text{day}} \times 0.00014 \frac{\text{lbs}}{\text{ton}} = 1.12 \frac{\text{lbs}}{\text{day}}$$

4.7 Plant Wide Totals

At the bottom of Form 1B there is table for the total emissions for the plant. Please fill in the totals from all units requested in the application. These totals will need to be under the total limits that are presented in the Applications for Concrete Batch Plants and Non-metallic minerals Crushing and Screening Plants. These plant wide limits are also presented in Appendixes 3 and 4.

5. SPECIAL USE AREA ADDITIONAL INFORMATION

Forms 1C and 1D only need to be used if a request for a General Permit is being made in the areas of Hydrographic Basin (HA) 83 – Tracy Segment listed in the table below. These forms provide the additional information that the BAPC will need to conduct an environmental evaluation.

Township	Range	Sections
19 North	21 East	1, 2, 10 through 14, and 23 through 25
19 North	22 East	All Sections
19 North	23 East	3 through 10, 16 through 21, and 29 through 31
20 North	22 East	24 through 26, 28, 29, and 31 through 36
20 North	23 East	19 through 21, and 27 through 34

Emission Unit Descriptions — These should match the descriptions listed in Forms 1A and 1B.

UTM Coordinates — The specific UTM coordinates for each emission unit. The UTM coordinates must be in metric units using North American Datum of 1983 (NAD 83), Zone 11.

Release Height — The release height is the distance from the top of the emission unit to ground level.

Drop Length — The drop length is how far material falls from one emission unit to the next emission unit (i.e. such as from a conveyor to crusher or stockpile, or a screen to a conveyor).

Emission Unit Dimensions — Provide the physical dimensions of the emission unit - length (L), width (W), and height (H) of the equipment in feet.. For example, a feed hopper would be 8 feet long x 6 feet wide x 7 feet high (8x7x6) and a conveyor would be 3 feet wide x 4 feet high (3x4).

Stack Height — Provide the height of the stack in feet (i.e. the height of the stack on the baghouse controlling the HMA Plant).

Stack Inside Diameter — Provide the inside diameter of the stack in feet. If the diameter is non-cylindrical, provide the actual dimensions (LxW).

Stack Flow Rate — Provide the gas volume flow rate through the stack measured in actual cubic feet per minute (acfm).

Stack Exit Velocity — Provide the exit velocity of the exhaust gas from the stack measured in feet per second (ft/sec).

Stack Temperature — Provide the temperature of the stack exhaust in degrees Fahrenheit.

Start Time — You may request to operate certain hours of the day. If you choose to do so, provide your start time in this section. Conditions will be written into the permit accordingly.

End Time — You may request to operate certain hours of the day. If you choose to do so, provide your end time in this section. Conditions will be written into the permit accordingly.

Corner Number — Provide a map showing the fence line of the facility’s operations. Number each corner of the fence line and provide the UTM coordinates for each corner.

6. ADDITIONAL REQUIRED ATTACHMENTS

There are several other attachments that support and contextualize the information the facility provides elsewhere in the application. The BAPC uses these attachments to inform the public of facilities that need permits, prepare the technical review supporting the permit, verify data used in the application, and write permit conditions. Please draft the required attachments in a readable format, with both appropriate font and size.



These attachments are an important part of the application.

The BAPC may have to reject the application if the required attachments are illegible or incomplete.

PROCESS FLOW DIAGRAM(S)

A process flow diagram is a drawing that illustrates how all processes are interconnected. The process flow diagram should include each emission unit(s), drop point(s), and minimum requirements as described in [our Guidance Document for Process Flow Diagrams](#).

Only include information that is relevant to air pollution control. The facility does not need to include the locations of valves and electrical and water plans.

PROCESS NARRATIVE

The process narrative should describe all processes in the application and any renewal or revision details. The goal is to give the BAPC a clear picture of the process of the facility so the BAPC can understand how the facility will monitor emissions and know what to write into the permit. Make sure the process narrative matches the process flow diagram.

Here's a basic outline to follow when drafting the process narrative:

- Specify the location of the facility and its parent company, if part of a larger business (**Example:** Arturo Mine is located 45 miles Northwest of Elko in Elko County, Nevada, Hydrographic Area 61 – Boulder Flat. The mine is part of the Nevada Gold, LLC.).
- Describe what the facility does (**Example:** mining gold ore, crushing and screening aggregates, etc).
- Describe the emission units (equipment) used at the facility. Include information that helps describe what the facility does and how it functions.
- Characterize all regulated air pollutants that may be emitted by each emission unit.
- If the facility is requesting a revision, explain what is going to change and why it is necessary.
- Outline how and where the facility will be monitoring throughputs to show compliance.

MAPS: FACILITY LOCATION AND AREA MAP OF THE FACILITY

Submit the following maps as visible, readable printouts (color optional):

1. A vicinity map that shows the location of the facility with respect to the nearest recognizable city, town, and major road, all labeled. Outline the facility.
2. An area map of the facility with a closer, aerial view that includes the fence line, the location of the front gate, and emission unit locations (clearly labeled).
3. For Plants located in the Special Area provide the site plan of the entire facility, preferably on an aerial or topographic map (drawn to scale). Include the dimensions scale and north arrow. The site plan should include the UTM coordinates (NAD 83 / UTM Zone 11), though this can be formatted as an excel table for UTM coordinates (NAD 83 / UTM Zone 11) and dimensions. Make sure the facility site plan indicates and labels the locations of systems.

7. APPLICATION CERTIFICATION DOCUMENT

The last page of the Class II air permit application packet is the Application Certification Document — a short summary of the required documents in the application. It must be signed *in ink* by the responsible official (RO) of the company or facility.

Check the boxes next to each submitted document, and make sure the Application Certification Document is signed by the RO listed in Section 6 of the General Company Information Form. Create a digital copy of the application, including all requested documents, and submit a digital and hard copy of the application with the application processing fee. The complete application package can be mailed or hand delivered to the BAPC office (see “[Application Submittal and Processing Timeline](#)”).

Appendix 1

Concrete Batch Plant Emission Factors

Concrete Batching			
Emission Unit	Emission Factor (lb/ton)		
	PM	PM ₁₀	PM _{2.5}
Loader to Feeder or Bin - Water Spray Controlled ¹	0.00075	0.00028	0.00004
Loader to Feeder or Bin - Uncontrolled	0.003	0.0011	0.00017
Aggregate/Sand Conveyor Transfer Point - Water Spray Controlled ¹	0.00075	0.00028	0.00004
Aggregate/Sand Conveyor Transfer Point - Enclosure Controlled ⁴	0.00150	0.00055	0.00009
Aggregate/Sand Conveyor Transfer Point - Uncontrolled	0.003	0.0011	0.00017
Cement Silo Loading - Controlled ²	0.00099	0.00034	0.00005
Cement Silo Unloading - Uncontrolled	0.0048	0.0028	0.0004
Cement Silo Unloading - Enclosure Controlled ⁴	0.0024	0.0014	0.0002
Weigh Hopper Loading - Uncontrolled	0.0048	0.0028	0.0004
Weigh Hopper Loading - Enclosure Controlled ⁴	0.0024	0.0014	0.0002
Cement Supplement Silo Loading - Controlled ²	0.0089	0.0049	0.0007
Cement Supplement Silo Unloading - Uncontrolled	0.0048	0.0028	0.0004
Central Mixer Loading - Controlled ³	0.0184	0.0055	0.0008
Central Mixer Loading - Uncontrolled	0.572	0.156	0.024
Truck Mixer Loading - Controlled ³	0.098	0.0263	0.004
Truck Mixer Loading - Uncontrolled	1.118	0.31	0.047
Notes:			
(1) The emission factors listed for controlled emissions require wet dust suppression located at each emission unit and transfer point. Wet dust suppression consists of water sprays, fogging water sprays, fogging water sprays with chemical surfactant, or pneumatic fogging water sprays. Pre-wetting of material does not constitute wet dust suppression. Uncontrolled emission units are not permitted for nonmetallic mineral processing. No uncontrolled emission factors available.			
(2) Emissions during loading are controlled by a bin vent or baghouse			
(3) Installations that employ water sprays, enclosures, hoods, curtains, shrouds, moveable and telescoping chutes, and central duct collection systems.			
(4) The emission factors listed for controlled emissions require the use of an enclosure at the transfer point. An enclosure must have a solid cover surrounding the transfer point. This excludes entries and exits. Transfer points must not be clearly visible.			

Heater							
Emission Unit	Emission Factor (lb/hr)						
	PM	PM ₁₀	PM _{2.5}	NO _x	SO ₂	CO	VOC
Natural Gas Heater Equal to or Less Than 3.98 MMBtu/hr	0.030	0.030	0.030	0.391	0.0023	0.328	0.021
Propane Heater Equal to or Less Than 3.98 MMBtu/hr	0.031	0.031	0.031	0.566	0.065	0.326	0.044

Appendix 2

Non-Metallic Minerals Crushing and Screening Plants Emission Factors

Nonmetallic Crushing and Screening			
Emission Unit	Emission Factor (lb/ton)		
	PM	PM ₁₀	PM _{2.5}
Truck Unloading to Hopper - Controlled ¹	0.00075	0.00028	0.00004
Truck Unloading to Hopper - Uncontrolled	0.003	0.0011	0.00017
Primary Crusher - Water Spray Controlled ¹	0.0014	0.0006	0.0001
Primary Crusher - Enclosure Controlled ²	0.0027	0.0012	0.0002
Primary Crusher - Uncontrolled	0.0054	0.0024	0.0004
Secondary Crusher - Water Spray Controlled ¹	0.0014	0.0006	0.0001
Secondary Crusher - Enclosure Controlled ²	0.0027	0.0012	0.0002
Secondary Crusher - Uncontrolled	0.0054	0.0024	0.0004
Tertiary Crusher - Water Spray Controlled ¹	0.0014	0.0006	0.0001
Tertiary Crusher - Enclosure Controlled ²	0.0027	0.0012	0.0002
Tertiary Crusher - Uncontrolled	0.0054	0.0024	0.0004
Primary Screen - Water Spray Controlled ¹	0.0063	0.0022	0.00033
Primary Screen - Enclosure Controlled ²	0.0027	0.0012	0.0002
Primary Screen - Uncontrolled	0.025	0.0087	0.0013
Secondary Screen - Water Spray Controlled ¹	0.0063	0.0022	0.00033
Secondary Screen - Enclosure Controlled ²	0.0013	0.0044	0.0007
Secondary Screen - Uncontrolled	0.025	0.0087	0.0013
Tertiary Screen - Water Spray Controlled ¹	0.0063	0.0022	0.00033
Tertiary Screen - Enclosure Controlled ²	0.0013	0.0044	0.0007
Tertiary Screen - Uncontrolled	0.025	0.0087	0.0013
Conveyor Transfer Point - Water Spray Controlled ¹	0.00075	0.00028	0.00004
Conveyor Transfer Point - Enclosure Controlled ²	0.0015	0.00055	0.00009
Conveyor Transfer Point - Uncontrolled	0.003	0.0011	0.00017
Notes:			
(1) The emission factors listed for controlled emissions require wet dust suppression located at each emission unit and transfer point. Wet dust suppression consists of water sprays, fogging water sprays, fogging water sprays with chemical surfactant, or pneumatic fogging water sprays. Pre-wetting of material does not constitute wet dust suppression.			
(2) The emission factors listed for controlled emissions require the use of an enclosure at the transfer point. An enclosure must have a solid cover surrounding the transfer point. This excludes entries and exits. Transfer points must not be clearly visible.			

Diesel Engines							
Emission Unit	Emission Factor (lb/hr)						
	PM	PM ₁₀	PM _{2.5}	NO _x	SO ₂	CO	VOC
Diesel Engine Equal to or Less Than 299 Horsepower Combusting 15 Gallons Per Hour or Less of Diesel Fuel	0.651	0.651	0.651	9.261	0.609	1.995	0.735

Appendix 3

Concrete Batch Plant Emission Limits

Operating Scenario	Operating Parameters		Emission Limits (lb/day)	
	Minimum Setback (meters)	Maximum Daily Hours of Operation	PM ₁₀	PM _{2.5}
Concrete batch plants (may include aggregate/sand hopper/bin loading/unloading and associated conveyor transfers, cement/cement supplement silo loading/unloading, mixer loading, including 2.75 MMBtu propane heater or a 3.98 MMBtu natural gas heater)	5	8	8.96	1.57
		12	10.69	1.93
		16	12.00	2.24
		24	13.84	2.73
	10	8	9.96	1.72
		12	11.95	2.12
		16	13.31	2.44
		24	15.11	2.92
	25	8	11.69	1.98
		12	13.26	2.32
		16	14.93	2.68
		24	16.81	3.18
	50	8	17.80	2.90
		12	20.32	3.39
		16	22.61	3.84
		24	23.34	4.16
	75	8	25.38	4.05
		12	29.28	4.75
		16	31.40	5.17
		24	33.10	5.64
100	8	32.33	5.10	
	12	38.18	6.09	
	16	41.62	6.72	
	24	44.31	7.34	

Note: PM emissions should be calculated using the emission factors listed in appendix 1; however, since there are no Nevada Ambient Air Quality standards for PM, there will be no emission limits for PM emissions.

Appendix 4

Non-Metallic Minerals Crushing and Screening Plant Emission Limits

Operating Scenario	Operating Parameters		Emission Limits (lb/day)	
	Minimum Setback (meters)	Maximum Daily Hours of Operation	PM ₁₀	PM _{2.5}
Crushers, screens, and conveyors operated only for the processing of nonmetallic minerals, including diesel engines that are equal to or less than 299 horsepower, consuming 15 gallons per hour or less of diesel fuel.	25	8	14.54	6.53
		12	18.47	9.32
		16	21.85	12.03
		24	28.16	17.40
	50	8	16.81	6.85
		12	21.19	9.71
		16	24.85	12.46
		24	31.85	17.92
	75	8	19.17	7.18
		12	15.88	6.72
		16	27.86	12.88
		24	35.33	18.41
	100	8	21.42	7.50
		12	26.44	10.45
		16	30.78	13.30
		24	38.38	18.84

Note: PM emissions should be calculated using the emission factors listed in appendix 2; however, since there are no Nevada Ambient Air Quality standards for PM, there will be no emission limits for PM emissions.