

Carolina Sunrock Frequently Asked Questions (FAQs)

1. What was the process used to review this permit application?

As is the case for all air permit applications, the application review process starts with a thorough review of the application forms, including the process description and process flow diagrams. From this review, the DAQ reviewing engineer obtains an understanding of the physical and chemical processes involved, as well as knowledge of the types of process machinery and pollution controls to be employed.

The DAQ engineer determines from the submitted application information the emission rates of air pollutants that are to be emitted from the process, both before and after emission controls are used. The permit classification is determined from this information (Title V, Synthetic Minor, or Small.) The review of emissions includes criteria pollutants (Particulates, SO₂, CO, NO_x, and VOC) as well as Hazardous Air Pollutants (HAPs) and Toxic Air Pollutants (TAPs). The reviewing engineer evaluates the submitted emission rates based on several factors including DAQ in-house data for similar industries/process (when available) and research regarding the industry/process in other states and available emissions data when appropriate).

From the knowledge of the process and air pollution controls and the types and amounts of air pollutants emitted, the DAQ engineer determines which NC State and Federal rules apply to the facility operations. After the applicable rules are determined, appropriate permit conditions are developed which may include operational limitations, monitoring requirements for maintaining minimum operating parameters, requirements for periodic inspection and maintenance of process equipment and control devices, and recordkeeping and periodic reporting requirements. Source testing may also be required after the facility begins operation in order to verify emission rates submitted in the permit application. If the TAP emission rates exceed the Toxics Permitted Emission Rates (TPERs) found in 15A NCAC 02D .0711, then an air dispersion modeling demonstration may be required to demonstrate compliance with Acceptable Ambient Level (AAL) air pollutant concentrations at the facility property boundaries as specified in 15A NCAC 02D .1104.

The DAQ determines public notice requirements for draft permits based on our 15A NCAC 02Q .0306 rule. The Sunrock permit applications and draft permits did not meet the public participation criteria under 15A NCAC 2Q .0306 (a)(2)-(12). However, the Director decided under 15A NCAC 2Q .0306 (a)(1) to provide a public notice for comments. The Director also requested that the Department's Environmental Justice Coordinator perform an environmental justice analysis. The DAQ uses the draft environmental justice results to better inform our outreach activities. Comments received during the public notice period are considered by DAQ prior to deciding the appropriate final action to take on the application.

2. How do we determine what rules apply to the facility?

The engineer employs his/her knowledge of the proposed facility and various State and Federal rules to determine whether any given rule applies, based upon the types and amounts of pollutants emitted from the proposed processes, and the types of equipment utilized.

3. How were emission estimates determined?

Emission estimates were made based on stated process throughput rates and emission factors submitted by the applicant. Emission factors are standardized emission rates for common industrial processes developed through extensive emission testing and review. The US EPA publishes emission factors for asphalt plants, rock quarries, and combustion sources that are accepted by NC DAQ as an acceptable means for emissions estimates in permit applications, provided that the factors are representative of the proposed processes. Emission factors were reviewed by the review engineer to ensure the factors are appropriate.

4. How will emission estimates used in the permitting process be verified?

Source testing will be required at the asphalt plants after startup in compliance with federal New Source Performance Standard (NSPS) Subpart I to verify that the particulate matter emission rates and visible emissions comply with the federal standards. Additionally, DAQ requires most asphalt plants to re-test for particulate matter at least every 10 years.

Source testing will also be required at the quarry for crushers, conveyors, and screens in compliance with federal New Source Performance Standard (NSPS) Subpart OOO to verify that the visible emissions comply with the federal standards.

Source testing would be required for the reciprocating internal combustion engines at the quarry if the permittee does not purchase EPA-Certified engines or if operations trigger testing requirements in federal rules.

This is in addition to frequent equipment inspections the facility must complete and continual monitoring to ensure proper operation. The DAQ has the ability to require additional testing at any time if there are compliance issues.

5. How will additional issues or concerns brought to light as a result of source testing results be addressed?

If source testing results indicate higher than expected emissions or other issues DAQ can require the permittee to investigate the cause of increased emissions and perform corrective action. Should source testing results exceed emissions standards, the DAQ can pursue enforcement including civil penalties up to \$25,000 per day of violation. The DAQ will also require corrective action and re-testing to demonstrate compliance.

6. What are the expected air emissions from this proposed facility compared with existing Caswell County air emissions?

Pollutant	Sunrock Burlington North Potential Emissions (tons per year)	Sunrock Prospect Hill Quarry Potential Emissions (tons per year)	Caswell County Total Air Emissions
Fine Particulate Matter PM2.5	18.01*	34.05	322
Sulfur Dioxide (SO2)	31.15	30.37	17
Carbon Monoxide	33.85	99.56	5,198
Volatile Organic Compounds	12.06	43.95	7,870
Nitrogen Oxides (NOx)	16.63	45.26	725
Hazardous Air Pollutants	2.59	9.78	729
*Assumes PM10=PM2.5			

The potential emissions (with permit limits and controls taken into account) from these facilities, as listed in the table above, shows Carbon Monoxide as the pollutant with the expected largest emissions. Total emissions for Caswell County are also shown in the table. The county-wide emissions data include Point, NonPoint, Mobile (OnRoad & NonRoad), and Fire Events from calendar year 2017.

7. What role does DAQ play in deciding where a facility is to be located?

A facility that plans to operate in North Carolina with emissions levels that trigger the requirement for an air permit must apply for and receive an air permit before construction and operation of the air emissions source. DAQ reviews air permit applications based on North Carolina's air quality statutes and regulations. One of the purposes of North Carolina's air quality statutes and regulations is to ensure that, no matter where a facility is located, it is constructed with all required pollution control technology and does not emit pollutants that violate air quality standards. If an application demonstrates that the facility will be operated with appropriate permit conditions in compliance with all federal and state requirements, DAQ will issue the permit.

In reviewing an air permit application, DAQ does not have statutory authority to require a facility to relocate or to deny a permit application for reasons other than a failure to adhere to federal and state requirements applicable to the air permitting process. Rather, county and local jurisdictions typically define the types of businesses authorized to operate in a geographic area through land use and zoning ordinances.

8. Does DAQ require compliance with local zoning regulations to receive an Air Quality permit?

North Carolina General Statutes require a new facility air permit applicant to submit a request to the local government for a determination of any applicable zoning or subdivision ordinances and whether the proposed facility would be consistent with these ordinances. The request must include a copy of a draft permit application. If the local government determines that the facility is inconsistent with a zoning or subdivision ordinance, DAQ is required attach a condition to the permit requiring that the facility, prior to construction, comply with all lawfully adopted local ordinances, including those cited in the determination, that apply to the facility at the time of construction or operation of the facility. If a local government fails to submit a determination within 15 days after receipt of the request, the statute authorizes DAQ to proceed to consider the permit application without regard to local zoning and subdivision ordinances.

If an area does not have any zoning regulations, DAQ's rules require applicants for new or expanded facilities to publish a legal notice in a local paper and post sign on the proposed site as part of the permitting process.

9. How does DAQ decide when facilities should be grouped into one permit or split into multiple permits?

Federal air quality permitting regulations define what should be considered a single facility using three criteria:

1. The facility is owned and operated by the same company.
2. The facility all falls under a common industrial source category.
3. All equipment is located on a common site or on adjacent sites.

If air emissions sources meet these three criteria, then DAQ requires them to be permitted under one Air Quality permit.