

South Carolina Concrete Batch Facilities: *Air Quality Permit Requirements & Environmental Oversight*

Regulatory Authority

The South Carolina Department of Environmental Services's (SCDES) Bureau of Air Quality (BAQ) is responsible for regulating air emissions from concrete batch plants to protect public health and the environment.

Note: The general concrete permit **does not** cover cement kilns. A cement kiln is used to manufacture cement from raw materials at high temperatures. Concrete batch plants receive cement that is already formed.

Permit Requirements for Concrete Batch Facilities

Types of Air Permits

Most concrete batch plants are required to obtain one of two permits.

- *General Construction Permit:* combined former General Construction Permit and General Synthetic Minor Construction Permit. Establishes enforceable limits for larger facilities to avoid classification as a major source. Smaller or standardized operations do not have to establish enforceable limits.
- *General Operating Permit:* combined former General State Operating Permit and Conditional Major Operating Permit. Enforceable limits apply as needed based on the potential emissions from the operations.

Emission Sources Covered by an Air Permit

A facility's permit includes limits on the amount of air emissions that may come from these activities:

- Sand and aggregate storage
- Sand and aggregate transfer to an elevated bin
- Cement and/or cement supplement loading
- Weigh hopper loading
- Truck loading, central mixer loading, and/or pug mixer loading
- Loading, transfer or storage associated with emission control systems

Control Technology Requirements

Control technologies are systems or processes that help limit emissions. For concrete batch facilities, control technology requirements include:

- baghouse filters or fabric collectors must be used for silos and conveyors,
- water spray systems or other dust suppression for roads and open areas,
- proper installation and operation of pressure drop gauges on baghouse,
- and daily maintenance and inspections of control equipment.

Fugitive Dust Plan

The draft general construction and operating permits for concrete plants have a new requirement for a fugitive dust plan. Each facility shall minimize and control its dust emissions at all times by developing and implementing a dust control plan that is to be reviewed and approved by the Bureau of Air Quality. The dust plan:

- is submitted prior to concrete plant operation;
- addresses onsite truck traffic, storage piles, material spillage and process equipment;
- addresses onsite water trucks, sprinkles, and other alternative dust control processes;
- and addresses maintenance, written guidelines, and required logs.

Actions by SCDES

Public Notice

When the general permit for a concrete batch plant is renewed or modified, it is put on public notice to inform residents and solicit input. Public hearings or meetings may be held if requested.

Overseeing Compliance

Once a permit is issued, SCDES helps oversee a facility's compliance with its permit by:

- conducting unannounced compliance inspections and responding to complaints;
- reviewing the operation and maintenance records facilities are required to keep current;
- and reviewing the annual emissions reporting required for certain facilities.

Taking Necessary Enforcement Actions

If a facility is determined to be non-compliant, SCDES may pursue enforcement actions. These actions could result in corrective orders or fines. Facilities may be required to implement additional controls or upgrades to help reassure future compliance.

Potential Health Impacts from Concrete Plants

The main hazard associated with concrete plants is Particulate Matter (PM) or dust; specifically, silica that is contained within PM. Silica is naturally occurring and is one of the most common minerals on earth. Glass, sand, dirt roads, and granite rock all contain silica. Air permits are written to minimize PM and require a facility to meet state and federal PM limits.

- The control technologies previously listed help control PM and dust. Other methods can be engineering (filters) or administrative (spraying water on dirt roads).
- A major source of potential emissions is the movement of heavy trucks over unpaved or dusty surfaces, which can be controlled by proper maintenance and wetting road surfaces.

Contact Us and Learn More

- SCDES Bureau of Air Quality: des.sc.gov/air | 803-898-4123 | airpermitting@des.sc.gov
- Air Permitting and Public Participation information: des.sc.gov/AirPermittingPublicParticipation
- Air Quality Permits: des.sc.gov/AirQualityPermits

Submitting Complaints to SCDES

SCDES is committed to addressing public concerns. We follow-up on every complaint we receive. Report complaints at des.sc.gov/reportit or contact your local SCDES Office (des.sc.gov/LocalOffices).