

# Air Quality

Albemarle is conducting extensive air quality studies and monitoring ambient air quality around the Kings Mountain Mine to assess the potential impacts of the proposed mining operations and processing of the mined materials. Results from the studies will be used to prepare a mitigation strategy to address emissions generated at the proposed mine.

## GATHERING BASELINE DATA

Albemarle is working with environmental consultants to conduct studies to gather data and develop models to understand how atmospheric processes like wind speed and temperature can disperse potential pollutants during mining activities. The studies also estimate ground-level concentrations of pollutants using air monitors to predict values at specified locations. The information used to create the models is collected through:

- Meteorological data including wind speed, temperature, wind direction, dew point, cloud layer and precipitation
- Topography data is based on the area terrain and considers elevations of the sources and local structures at the project

- Background ambient air sources attributable to natural sources such as wildfires, dust storms, fixed sources from adjacent sites, and other sources such as on-road and off-road vehicles

From our data, Albemarle can develop a full emissions inventory for the project to include a dispersion model to demonstrate compliance with the Initiative for Responsible Mining Assurance (IRMA) Standard for Responsible Mining. The standard represents the most comprehensive definition of responsible mining and is intended to reduce adverse environmental and social impacts that may stem from mining. Albemarle will use this information to evaluate the potential impacts of emissions on the surrounding communities and help to determine an appropriate mitigation strategy.

## AIR EMISSIONS SOURCES

Mining activity at Kings Mountain is expected to generate particulate matter from a variety of emission sources present on the site during the mining process. Emissions can be categorized as either point sources or fugitive sources. Point sources include dust collectors, rock crushing and screening operations and sources associated with the currently operating Albemarle Kings Mountain Lithium Conversion Facility. Fugitive emissions sources include unpaved haul roads, material storage piles and material handling (e.g., blasting and loading). Expected fugitive emissions include mobile or portable sources including trucks hauling material, other wheeled equipment and skid-mounted generators.

Particulate matter, more commonly known as dust, is anticipated to be the primary pollutant emitted from the project, principally created from the mineral processing facility.

The project is designed to have one fixed, nonemergency combustion source, a natural gas-fired dryer for the spodumene concentrate product, but the dryer is not anticipated to emit significant quantities of federally defined hazardous air pollutants (HAP) or state-defined toxic air pollutants (TAP).



## MITIGATION STRATEGIES TO MANAGE DUST

In meeting state and federal air quality standards, including those that meet the New Source Performance Standards for air quality emissions, Albemarle anticipates following industry best practices for managing dust while extracting the resource from the ground, transporting it to the crushing and mineral processing facilities. Mitigation strategies include but are not limited to:

- Working with experienced blasting consultants to develop a drill and blast strategy that mitigates dust produced during the detonation process
- Deploying water trucks to spray haul roads
- Enclosing conveyor systems to capture dust from material movements
- Constructing baghouses containing filters in strategic locations to collect and filter dust during the rock crusher process
- Using dry dust extraction during the crushing circuit to remove and filter the dust

During processing of the crushed materials, filters located within the baghouses are designed to capture most of the dust generated. Albemarle will either process or dispose of the collected dust. Fugitive dust that cannot be captured will be controlled using water sprays and by employing other best management practices.



**Air Emission Mitigation:** Mitigation measures like baghouses help to capture dust particulates generated during the material crushing process.

## AIR QUALITY COMPLIANCE AND PERMITTING

Albemarle's initial inventory of project emissions at the proposed Kings Mountain Mine site show that project emissions is not expected to exceed major source thresholds typically set at 100 tons/year for any regulated air pollutant, and 10 tons/year for individual or 25 tons/year for combined hazardous air pollutants.

The emissions are below major source thresholds even without factoring in the planned use of air pollution control equipment. Therefore, the project is not expected to require Prevention of Significant Deterioration or Title V major source air quality permits. However, Albemarle must obtain a minor source permit from the North Carolina Department of Environmental Quality.



**Albemarle intends to follow industry best practices**  
*to manage dust created during mining operations.*

Further information is available in Spanish upon request or at [albemarlekingsmountain.com](http://albemarlekingsmountain.com)

For more information or to provide community feedback on the project:  
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Albemarle leads the world in transforming essential resources into critical ingredients for mobility, energy, connectivity and health. We partner to pioneer new ways to move, power, connect and protect with people and planet in mind, enabling a more resilient world. Our global headquarters is approximately 35 miles from Kings Mountain in Charlotte, NC.

