SC DEPARTMENT *of*
ENVIRONMENTAL
SERVICES

**Bureau of Air Quality**
**Response to Comments on Air Quality**

**Luck Stone Corporation - Luck Stone Cherokee Quarry**
**Gaffney, Cherokee County, South Carolina**
**Permit Number CP-50000326 v1.0**

The following is the South Carolina Department of Environmental Services, Bureau of Air Quality's (SCDES or Department) response to the comments made during the formal comment period held August 13, 2025, through October 6, 2025, and the public hearing regarding the draft Synthetic Minor Construction Permit for Luck Stone Corporation - Luck Stone Cherokee Quarry. One written comment was received during the comment period for the draft air quality permit, in addition to comments made at the public hearing.

The written Department Decision, permit, statement of basis, this response document, and a letter of notification are located for viewing at the SCDES Columbia office located at 2600 Bull Street, Columbia SC 29201, and on our webpage at https://des.sc.gov/programs/bureau-air-quality/air-quality-department-decisions.

Hard copies of all the above-listed documents and written comments received can be requested by contacting our Freedom of Information Office at (803) 898-3882.

**Air Permitting Application Process** - A comment was received during the public hearing asserting issues during the application process for environmental permits that the commenter hoped would be addressed.

**Response:** The comment regarding concerns with the environmental permitting application process did not identify specific issues or reference a particular permit. With respect to air quality permitting, applications may involve complex technical and regulatory requirements. As part of its review, the Department may request additional or clarifying information from an applicant to ensure the application is complete and accurate.

An air permit is not issued until the Department has received all information necessary to determine that the facility can be constructed and operated in compliance with all applicable state and federal air quality regulations. When an applicant demonstrates compliance with all permitting requirements, the South Carolina Pollution Control Act requires the Department to issue the permit.

**Air Pollution Impacts** - Comments were received expressing concerns about air quality impacts and associated health and quality of life impacts. Comments raised specific concern about effects of particulate matter, citing various articles and other materials. Comments also expressed disagreement with the 20% opacity limit in SCDES's regulations.

**Response**: Federal and state air quality regulations are established to protect public health and welfare and are based on scientific data and human health risk exposure assessments. These regulations include ambient air quality standards, emission limits, and operational and control requirements for industrial facilities.

Under the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) is required to designate areas as nonattainment when monitored pollutant concentrations exceed the federal National Ambient Air Quality Standards (NAAQS), which are set for pollutants known to be harmful to public health and the environment. Currently, there are no nonattainment areas in South Carolina for any criteria pollutants.

State ambient air quality standards are codified in South Carolina Regulation 61-62.5, Standard No. 2. The primary pollutant of concern associated with this project is particulate matter (PM). State standards include limits for particulate matter with an aerodynamic diameter less than or equal to 10 micrometers ($PM_{10}$) and less than or equal to 2.5 micrometers ($PM_{2.5}$).

The proposed operations at the Luck Stone Cherokee facility were evaluated to determine whether emissions from the project would interfere with compliance with applicable ambient air quality standards. Air dispersion modeling demonstrated that controlled $PM_{10}$ emissions would comply with the applicable standard. In addition, $PM_{2.5}$ emissions were calculated to be below the threshold levels that would require air quality modeling. These analyses indicate that emissions from the proposed quarry would not adversely affect compliance with Standard No. 2 at or beyond the property boundary.

The permit also incorporates additional federal and state regulatory requirements that address particulate matter emissions through emission limits, required controls, monitoring, and operational practices. These requirements include limits on PM emissions and opacity, which is a measure of the amount of light obscured by particulate emissions. The crushed stone processing equipment, including crushers, screens, and conveyor systems, is subject to the federal New Source Performance Standards for Nonmetallic Mineral Processing Plants under 40 CFR Part 60, Subpart OOO, as well as applicable state regulations.

While state regulations establish opacity limits for emission sources, the applicable federal standards incorporated into the permit are more stringent and limit opacity to 12 percent for crushers and 7 percent for screens and conveyors. To demonstrate compliance with

these requirements, the permit requires the facility to conduct initial Method 9 visual opacity observations on all regulated equipment.

The permit further requires the use of wet suppression systems to control particulate matter and fugitive dust emissions, except when elevated material moisture content resulting from rainfall provides adequate suppression. Wet suppression equipment must be inspected on a weekly basis to ensure proper operation. When recent rainfall is relied upon in lieu of active wet suppression, required logbook entries must document those conditions in accordance with 40 CFR 60.676(b).

Additionally, the facility is required to develop and implement a comprehensive Fugitive Dust Control Plan. At a minimum, the plan must address dust control measures for haul roads and truck traffic, storage piles, and process equipment. When implemented in accordance with the permit, these measures are expected to effectively minimize fugitive dust emissions from the facility.

**Free Silica and Silicosis -** A comment was received expressing concern about crystalline silica, a type of particulate matter, and links to silicosis and other health impacts.

**Response:** Crystalline silica is a naturally occurring mineral that is widely present in the earth's crust and is a component of materials such as granite, sand, soil, and other common minerals. As a result, low levels of silica are present in ambient air from natural and routine activities, including windblown dust and travel on unpaved roads.

Crystalline silica is a known human carcinogen, and silicosis is a disease associated with long-term exposure to high concentrations of respirable silica, primarily in occupational settings. To address these risks, occupational exposure standards have been established to protect workers from elevated silica levels. In 1996, the U.S. Environmental Protection Agency (EPA) evaluated available scientific information related to silica exposure, including extensive occupational health studies and data on ambient (non-occupational) exposure. Based on this evaluation, EPA concluded that healthy individuals exposed to ambient concentrations of silica are adequately protected by the National Ambient Air Quality Standards (NAAQS) for $PM_{10}$, which at that time were set at 50 micrograms per cubic meter (μg/m³) (annual standard) and 150 μg/m³ (24-hour standard). Since that evaluation, EPA has further strengthened particulate matter standards to provide increased protection of public health and the environment.

While EPA has identified a health benchmark level for crystalline silica, it has determined that regulation of silica exposure through existing particulate matter standards is protective of public health. Accordingly, EPA has not established a separate NAAQS for crystalline silica and has not listed silica as a Hazardous Air Pollutant (HAP). Consistent with EPA's conclusions,

the Department's air quality regulations focus on controlling particulate matter emissions during the permitting process, including emissions that may contain silica.

Exposure to elevated levels of silica dust remains primarily an occupational concern. The Occupational Safety and Health Administration (OSHA) and the Mine Safety and Health Administration (MSHA) regulate workplace exposure to respirable crystalline silica and have established standards to protect workers. Many of the control measures used to reduce occupational exposure, such as wet suppression, also reduce particulate emissions and potential off-site impacts. The permit requires dust generated from crushing, screening, and conveying operations to be controlled through wet suppression and requires fugitive dust emissions to be minimized using wet suppression, water trucks, road paving, and other appropriate control measures. When implemented as required, these measures are effective in reducing both workplace exposure and ambient air emissions.

**Agency Oversight** – Comments were received during the public hearing expressing hope that the Department would follow through and do due diligence with respect to oversight of the facility.

**Response:** The Department provides ongoing oversight of all facilities that are issued air quality permits. As part of this oversight, Department staff review reports and other required submittals submitted by the facility to ensure compliance with permit conditions and applicable regulations.

In addition, Department inspectors conduct unannounced air quality inspections during which they review required records, observe facility operations, perform visual emission observations, verify that on-site equipment is consistent with the equipment authorized under the current permit, and examine any other relevant information. The findings from these inspections are documented in inspection reports. Inspections may also be conducted in response to complaints or other compliance concerns.

The air construction permit further requires the facility to track and document particulate matter (PM) and $PM_{10}$ emissions on a monthly basis, including 12-month rolling totals. The facility must submit annual reports that include emissions calculations and rolling sums. The methodology used to calculate PM and $PM_{10}$ emissions is specified in the permit's Statement of Basis.

Any alleged violations identified through inspections, reporting reviews, or complaint investigations are referred to the Department's Enforcement Section for appropriate action and resolution.

**Noise Levels** – Comments were received concerning noise levels of the facility and related operations.

**Response:** Noise levels that are excessive or not typical for the facility should be reported to the Department's regional office, as such conditions may indicate that equipment is not operating properly. While noise is not regulated under the air permit or underlying Department air quality regulations, the facility is also subject to requirements under its mining permit, which includes the use of best management practices to minimize noise. Additional information regarding these requirements can be found in the Luck Stone mining permit.

**Impacts on Other Non-Air Quality Resources** – Comments were received during the public hearing and public comment period expressing concern about potential impacts of the mine with respect to water, aesthetics, blasting and vibration impacts, property impacts, and drowning/safety risks.

**Response:** Air permit decisions are based solely on the applicable state and federal air quality regulations and standards in effect at the time of the Department's technical review of the permit application. Based on this review, Luck Stone Cherokee has demonstrated compliance with the requirements for issuance of an air quality permit.

Concerns related to water resources, aesthetics, blasting and vibration, property impacts, and safety risks are outside the scope of the Department's air quality regulatory authority and, therefore, are not addressed through the air quality permitting process. The facility has also applied for a mining permit from the Bureau of Land and Waste Management (BLWM) and a National Pollutant Discharge Elimination System (NPDES) permit from the Bureau of Water (BOW). Issues relevant to those regulatory programs are evaluated by the appropriate program areas as part of their respective permit reviews.

While not addressed through the air quality permit, it is noted that secondary ambient air quality standards for particulate matter are designed to protect public welfare, including protection against damage to buildings, animals, crops, and vegetation.

**Community/Quality of Life Concerns** – Comments were received expressing concern about reductions in quality of life and property values and potential expansion of commercial or other development in the area.

**Response:** A community's quality of life and economic conditions may be influenced by a wide range of factors. The Department does not have the authority to base permitting decisions on these considerations. In addition, decisions regarding facility siting, zoning, and land use are outside the Department's jurisdiction and are typically addressed at the local level by city or county authorities, often prior to the submission of permit applications.

The Department's decision regarding the air permit application is based on its technical review of the proposed project, applicable state and federal air quality regulations, and the applicant's demonstrated ability to comply with those requirements.

**Truck traffic –** Comments were received during the public comment period concerning the influx of truck traffic. Comments also expressed concern with trucks and other heavy equipment at the quarry that may generate nitrogen oxide, sulfur dioxide, carbon monoxide and/or volatile organic compounds.

**Response:** The Department does not have authority to regulate truck traffic on public roadways, as this responsibility lies with the South Carolina Department of Transportation. Additionally, the Department does not regulate tailpipe emissions from mobile sources. Emissions from mobile sources, including nitrogen oxides, sulfur dioxide, carbon monoxide, and volatile organic compounds, are regulated by the U.S. Environmental Protection Agency under the Clean Air Act.

However, the Department does regulate fugitive dust emissions from roadways located within the facility. The air permit requires the facility to maintain dust control measures on on-site roadways and to develop and implement a Facility-Wide Fugitive Dust Control Plan. As part of this plan, the facility is required to post signage referencing Sections 56-5-4100 and 56-5-4110 of the South Carolina Code of Laws, which require haul trucks transporting aggregate to prevent material from escaping vehicles, promptly remove spilled materials from roadways, and ensure loads and covers are securely fastened.

Additional permit conditions and regulatory requirements addressing particulate matter and opacity emissions are discussed under "Air Pollution Impacts," including requirements that non-enclosed operations be conducted in a manner that minimizes the amount of particulate matter becoming airborne.

**General Opposition and Support** – Commenters during the public hearing expressed general support or opposition to the facility.

**Response:** The Department considers and appreciates all comments received regarding the draft air quality permit for Luck Stone Cherokee. However, the Department does not have the authority to base permitting decisions on general expressions of support or opposition from the community, businesses, employees, or customers.

The Department's permitting decision is based on a technical review of the application and the applicable state and federal air quality regulations in effect at the time of review, including the applicant's demonstrated ability to comply with those requirements.