

The Element

October 2023



PARTNERSHIP TO SUPPORT SUSTAINABLE MINING ▶

Albemarle and Caterpillar have joined forces to explore solutions to support the full circular battery value chain and sustainable mining operations.



DEWATERING THE MINE PIT FAQ ▶

Read how Albemarle is preparing the existing pit for safe and environmentally friendly mining methods.



MINE PERMITTING Q&A ▶

See how Albemarle is working toward acquiring local, state, and federal permits and approvals needed to construct, operate, and close a mine.



Upcoming Events *Calendar* ▶

NOVEMBER 22: KINGS MOUNTAIN COMMUNITY THANKSGIVING

Albemarle is excited to help lead the effort to bring the Kings Mountain community together for a shared Thanksgiving meal. Held on Wednesday, November 22 at the Deal Street Walking Track, adjacent to the YMCA, this event will be open to the entire community.

Local businesses, churches, organizations, groups, and individuals are encouraged to attend and embrace service and fellowship with one another. The Kings Mountain location is new this year, and there are 5 additional meal sites throughout Cleveland County.

The food is provided by Feeding Kids Cleveland County, a Cleveland County non-profit.

More upcoming community events ▶



Visit the Albemarle Kings Mountain Website ▶



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to read more news!

Albemarle and Caterpillar

Collaborate to Pioneer Sustainable Mining Technologies and Operations

Late last month, Albemarle signed agreements with Caterpillar Inc. to collaborate on solutions to support the full circular battery value chain and sustainable mining operations.

The collaboration aims to support Albemarle's efforts to establish Kings Mountain as the first-ever net zero greenhouse gas emissions lithium mine site in North America. These efforts include utilization of next-generation, battery-powered mining equipment. Caterpillar and Albemarle signed an agreement making Albemarle's North American-produced lithium available for use in Caterpillar battery production. The two companies will also explore opportunities to collaborate on research and development of battery cell technology and recycling techniques.

"At Albemarle, we are committed to building a more resilient world. Our partners are critical to achieving that impact, and this collaboration with Caterpillar exhibits how we 'walk the talk' to pioneer what's next. It's a win-win-win scenario, in which we are both customers and suppliers of each other, and the innovation we pursue together benefits the world," said Eric Norris, Albemarle's Energy Storage President.

"Beyond supplying infrastructure and materials, battery-powered Caterpillar machinery and potential improvements to cell technology will open up new possibilities for the future of sustainable mining," said Norris. "We look forward to replicating at Kings Mountain the same progress that we have made toward social and environmental responsibility at our Salar de Atacama operation in Chile, where we became the first lithium producer in the world to complete a third-party audit and publish our report through the Initiative for Responsible Mining Assurance's (IRMA) stringent standard."

"Caterpillar is developing lithium-ion batteries and battery-electric products today for our customers around the world who, like Albemarle, are driving toward net zero carbon emissions goals," said Rod Shurman, senior vice president of Electrification and Energy Solutions at Caterpillar. "The agreements for lithium offtake and potential collaboration on R&D signed today will help to



advance this work and further build out a secure, resilient, and sustainable value chain for electrified equipment across the Caterpillar portfolio, while also supporting Albemarle's journey to more sustainable operations."

"Through this collaboration with Caterpillar, Albemarle is creating a new pathway where we can make a global impact – outside of the leadership we're known for with EVs," said Anita Natesh, Albemarle's Commercial VP for North America, Europe, and India for Energy Storage. "Together with Caterpillar, we will bring more sustainable mining equipment to market...and in the process, demonstrate that our commitment to powering the clean energy transition extends beyond our collaborations with auto OEMs."

"By working together, we have the opportunity to support Albemarle's goal of becoming the first zero-emissions lithium producer in North America while contributing to a more sustainable future for the mining industry," said Rob Hoenes, senior vice president of Resource Industries Operations and Products at Caterpillar.

The announcement comes on the heels of Albemarle's recent award of \$90 million from the Department of Defense, to help support the expansion of domestic mining and the production of lithium for the nation's battery supply chain.

Answering Your Questions

About the Pit Dewatering Process

What is Albemarle doing with the water in the existing pit?

Albemarle is awaiting a permit decision from the state to dewater the existing mine pit. If the permit is issued, over the next year and a half, Albemarle will dewater the existing mine pit to prepare for conducting additional prefeasibility studies and mining. We will treat and filter the water before eventually discharging it to Kings Creek.

Why does the pit need to be dewatered?

Open pit mining requires dry conditions for the implementation of safe and environmentally friendly mining methods. Currently, pit water has been accumulating since the 1990s.

The treated water would be pumped from the temporary wastewater treatment plant (WTP) to South Creek Reservoir for discharge into Kings Creek, at a rate that is compliant with our pending permit to ensure the integrity of Kings Creek and the river basin.

The water would be discharged at a higher water quality than is required by the North Carolina Department of Environmental Quality Class C water body standard. Following the dewatering, clean, potable water is used for drilling operations.

How will Albemarle remove the water from the pit?

The pit would be dewatered over a period of months in a safe, sustainable manner. Electric pumps would convey water to a temporary WTP.

The water treatment/filtration process is designed to remove the “rotten egg” smell that may be present in the deep water. There may be an occasional local smell as the water level drops in the pit during dewatering and mixes with the atmosphere and rain. It is estimated that there will be little to no smell during the process.

Quarterly water quality sampling and analysis will be done from our groundwater and surface water monitoring network.

What should I know about this process?

1. There will be no impacts on local groundwater based on our groundwater modeling. To help ensure there are in fact no impacts, Albemarle has put in place an extensive groundwater monitoring well network on our property and we would like your help to determine if there are gaps between our network and private well users so we can add additional monitoring equipment, if necessary.
2. Open pit mining does not employ fracking and no fracking will be done at the Kings Mountain Mine.
3. Albemarle has developed a wildlife management plan for the species found throughout the site. As the pit slowly drains over time, our qualified biologists will monitor the fish and turtles and relocate them to other water bodies on the site.



Answering Your Questions *About Permitting the Mine*

What is the permitting process(es) for mine construction?

Local, state, and federal permits or approvals are needed to construct, operate, and close a mine. The permitting process starts with early coordination with regulatory agencies to understand what permits are necessary and the type of information required. Next, we prepare a permit application with detailed information about the project and potential impacts. Governmental agencies will review this information and publish a draft permit. The public may have an opportunity to comment on the draft permit during a hearing if one is held. Once concluded, the agency will issue a permit with conditions under which the project proponent must operate.

How long does it take to get mining permits?

Permitting will occur at the federal, state, and local levels, and it can take a few months to several years to complete.

How will we progress through permitting?

Our process starts with a thorough understanding of the existing natural environment and the community where we would like to operate. From there we undertake a thorough and timely assessment of potential impacts. We have been working with relevant stakeholders to understand their needs and inform them of our preparations for the proposed re-mining project.

We plan to follow the National Environmental Protection Act (NEPA) process to the extent it applies to particular areas of our site and expect to do a scoping study as part of the IRMA and ESIA processes that includes community input to identify the right approval process.



Albemarle Community Highlights

Albemarle Goes to the Fair!

As a sponsoring partner, Albemarle hosted a booth at this year's Cleveland County Fair in Goforth Exhibition Hall. Additionally, Albemarle could be found at the main gate's heavy equipment display to highlight its partnership with Cleveland Community College. We enjoyed visiting with the many people who stopped by Albemarle's booth to talk about geology, mining and future job opportunities. The Cleveland County Fair is the largest agricultural event—and one of the largest fairs—in North Carolina, averaging between 125,000–150,000 visitors each year.



Cleveland County Rescue Mission Receives Support From The Albemarle Foundation

This month, the Albemarle Foundation was recognized for its donation to help remodel the Women and Children's building at the Cleveland County Rescue Mission (CCRM). CCRM is dedicated to serving the homeless and disadvantaged populations of Shelby, and Cleveland County, NC. By providing access to basic needs as well as opportunities for restoration, personal growth, and development, CCRM enables people to begin their journey out of crisis and into self-sufficiency.

Albemarle-Sponsored Summer Concert Series Comes to a Close

Live Music at Patriots Park Summer Concert Series came to a close October 14 to the sounds of the Dirty Grass Soul Concert. A major sponsor of this series, Albemarle helped bring this event to the Liberty Falls Amphitheater for the Kings Mountain community to enjoy from May through October!





LINKS TO TOWN HALL VIDEOS ▶

On September 28, Albemarle hosted a community Town Hall to share information regarding the mining lifecycle, and other important elements in the development of the proposed mine project. We also provided updates to our permitting timeline, environmental and social impact assessments, and other project milestones. If you missed the Town Hall, you can watch the video link here: [2023 September](#)

[2023 May](#)

[2023 February](#)



Visit the
Albemarle Kings Mountain Website ▶



Upcoming Events *Calendar ▶*

OCTOBER 31: THE GREAT PUMPKIN PARADE

The Great Pumpkin Parade will be held at 10am in Downtown Kings Mountain and end at Patriots Park. Albemarle will be on hand with a fun mining activity!

NOVEMBER 2 AND 15: KINGS MOUNTAIN MINE TOURS

The 45-minute tour will include history, geology, and current information on the pre-feasibility studies that have been completed, with plenty of opportunities to ask questions. Tour attendees will meet at the Albemarle Project Center (129 W. Mountain Street), and travel together by van to the mine site. Times vary and registration is required, contact Cindy Estridge at cynthia.estridge@albemarle.com

Tell Us How We're Doing ▶



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