

The Element

November/December 2024



PROTECTING TRICOLORED BATS AT THE PROPOSED KINGS MOUNTAIN MINE SITE ►

Albemarle is developing a wildlife management plan that is considerate of the species which was detected in the project area.

LITHIUM HELPING TO EVENLY COOK YOUR HOLIDAY MEAL ►

Lithium is an essential component of glass-ceramic cookware products, making them more durable and thermal resistant. Whether its baking dishes, roasting pans or ramekins, its sure to play a role in making your favorite dishes this holiday season.



ALBEMARLE INSPIRES FUTURE INNOVATORS ON STEAM DAY AT A ROBOTICS WORKSHOP ►

Metallurgists from Albemarle shared insights with the Cleveland County Schools Robotics Team. This year-long program equips students with 21st-century skills such as critical thinking, collaboration and creative innovation.



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Protecting Tricolored Bats *at the Proposed Kings Mountain Mine Site*

Albemarle is developing a wildlife management plan that is considerate of the tricolored bat species

As part of our commitment to responsible development at the proposed Kings Mountain Mine, Albemarle has conducted a comprehensive wildlife assessment on the site. The findings will be publicly shared in our forthcoming Environmental and Social Impact Assessment (ESIA).

Preliminary findings indicate that during acoustic surveys the tricolored bat was detected in the project area. Although this bat is not currently listed as a threatened or endangered species at the state or federal level, the U.S. Fish and Wildlife Service has proposed listing it as endangered. The species has had population declines caused by a fungal disease that has spread rapidly since 2006.

In response, Albemarle is developing a wildlife management plan that is considerate of the tricolored bat species. Ongoing biodiversity surveys, including pedestrian surveys and acoustic monitoring, help wildlife experts track the presence of these species. Additionally, before any tree-clearing activities commence during the construction phase of the project, we will conduct threatened and endangered species surveys to minimize potential impacts on local wildlife. Construction schedules will also be adjusted to avoid sensitive periods, such as the migration and birthing seasons of the tricolored bat.

Field surveys show that other at-risk wildlife species were not found, or are unlikely to be found because the area doesn't have the right type of habitat for them.

Albemarle is committed to taking a responsible approach to mining and environmental management. By incorporating wildlife protection measures and adapting our plans based on ecological assessments, we aim to minimize our impact on local biodiversity and work collaboratively with the surrounding Kings Mountain community.



What is a tricolored bat:

(Perimyotis subflavus)

- Its name derives from the coloration of the hairs on its back, which have three distinct color bands
- It is the smallest bat species in the eastern and midwestern U.S., weighing only 0.16–0.28 oz. That's lighter than a standard postcard!
- During the spring, summer and fall (non-hibernating seasons), the tricolored bat primarily roosts among leaf clusters of deciduous hardwood trees
- During winter, it hibernates in caves, culverts and abandoned water wells and forages in treetops and closer to ground
- Its populations has declined rapidly since 2006 with the introduction of the fungal disease white-nose syndrome

The Unsung Hero of Your Holiday Meal: Lithium



Lithium is crucial in many everyday applications, including the glass-ceramic cookware that's a staple in so many kitchens. Known for its durability and thermal resistance, glass-ceramic items like baking dishes, roasting pans, and ramekins are primarily composed of silica (SiO_2), alumina (Al_2O_3), and lithium oxide (Li_2O), as well as other components.

The inclusion of lithium oxide in glass-ceramic cookware is essential for several reasons:

Thermal stability:

Lithium oxide lowers the material's thermal expansion coefficient, enabling it to withstand rapid temperature changes without cracking.

Crystallization process:

During manufacturing, lithium oxide facilitates the controlled crystallization of the glass matrix, creating a material that combines the best properties of glass and ceramics.

This unique composition makes glass-ceramic cookware remarkably versatile, allowing it to transition directly from the freezer to the oven without compromising its integrity.

In the 1950s, as the Kings Mountain Mine was at some of its highest levels of lithium production, a scientist in Corning, New York, accidentally discovered this technology, which eventually led to CorningWare. Before this innovation, cookware was more prone to cracking or shattering due to temperature changes, suffered from uneven heat distribution and was relatively more expensive to produce.

So, this holiday season, as you roast a turkey, bake gingerbread cookies, or serve up Grandma's famous cornbread stuffing, take a moment to appreciate the science and innovation behind your kitchen essentials.

Albemarle Celebrates *National STEAM Day by supporting a robotics workshop for local students*

In recognition of National STEAM Day on Nov. 8, Albemarle sponsored and participated in a robotics workshop at Cleveland Community College, hosted by Cleveland County Schools. Middle school students explored the college's Speaker Tim Moore Advanced Technology Center, an inspiring space dedicated to advanced learning in science and technology.

Albemarle metallurgists Sharon Pedraza and Henry Walqui joined the event, sharing insights into the importance of science in everyday life. Their presentations underscored the exciting possibilities available through careers in science and technology, inspiring students to pursue their interests further.

Why STEAM?

Traditionally referred to as STEM (science, technology, engineering, and mathematics), the inclusion of the arts (STEAM) emphasizes the importance of creativity and innovation in problem-solving and design. Arts integration encourages students to think outside the box, blending technical skills with creative approaches to develop well-rounded solutions. STEAM reflects the growing understanding that science and technology benefit greatly from creative thinking and interdisciplinary collaboration, fostering innovation in fields ranging from robotics to architecture and beyond.



Investing in the Future

Albemarle is proud to support initiatives like the Cleveland County Schools Robotics Program that inspire future innovators. By engaging students with STEAM education, this program helps prepare them to thrive in an increasingly technology-driven world.



Metallurgist Sharon Pedraza shares insights with students in the Cleveland County Schools Robotics Program.

Cleveland County Schools Robotics Program

The Cleveland County Schools Robotics Program is a dynamic initiative that inspires middle and elementary school students to explore science, technology, engineering, arts and mathematics (STEAM) through hands-on learning, teamwork, and problem-solving. Sponsored by Albemarle, this year-long program equips students with essential 21st-century skills such as critical thinking, collaboration, and creative innovation. Students design, build and program robots, preparing them for competitive and collaborative challenges.

The program goes beyond robotics, engaging teams in research activities and team-building competitions. Community involvement plays a key role, as students learn from professionals who demonstrate real-world applications of their projects. Presentations from local experts enhance the program's mission to connect classroom learning with practical, impactful experiences.

Project Update:

Kings Mountain Mine Redevelopment Remains on Track

Albemarle Corporation recently announced its third-quarter earnings, providing an update on company-wide efforts to adapt to current market conditions while maintaining our commitment to meeting customer needs and maintaining our leadership position.

As part of a comprehensive review conducted during the quarter, Albemarle has implemented proactive steps to reduce costs in response to sustained lower lithium prices. These measures included a global workforce reduction of approximately 6-7%, which involved a small number of non-manufacturing roles at our Kings Mountain facility.

Despite these adjustments, there are no changes to the redevelopment plans for the Kings Mountain Mine. The project remains on track, and we continue to invest in the permitting process. Our community relations and project teams remain dedicated to keeping you informed and engaged as we move forward together.

Past Events

Community Table Thanksgiving Meal

Albemarle partnered with Feeding Kids Cleveland County to host Thanksgiving meals at six locations across the county. The event welcomed all community members, spreading warmth and holiday cheer.



Ongoing / Future Events



Supporting Hurricane Recovery with Footprint Project

As part of ongoing hurricane recovery efforts in the southeastern U.S., Albemarle is proud to partner with Footprint Project, a nonprofit providing clean energy solutions to disaster-affected communities. Footprint Project is deploying mobile solar and battery storage systems to areas most impacted by recent storms. We are honored to support this critical work and contribute to the recovery of our communities.

Kings Mountain Christmas Parade

On Dec. 7, Albemarle will join the City of Kings Mountain to celebrate the holiday season at the annual Kings Mountain Christmas Parade. With over 100 floats and performances, the streets will come alive with festive cheer. Albemarle employees will be handing out treats—so be sure to look for our electric bus!



**WE WISH ALL OF YOU
A HAPPY HOLIDAY
SEASON AND NEW
YEAR! THE ELEMENT
WILL BE BACK IN 2025!**

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Albemarle is a global leader 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.

For more information visit albemarlekingstown.com

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