



KEMIRA WATER SOLUTIONS

CASE STUDY

CMCE LIGHTNING SUPPRESSION SYSTEM

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Kemira Water Solutions Protects Critical Chemical Operations in Bartow, Florida with CMCE Lightning Suppression

Kemira Water Solutions - Bartow, Florida

[Kemira Water Solutions](#) is a **global leader in sustainable chemical solutions for water-intensive industries**, helping municipalities and industrial facilities improve water quality, optimize treatment processes, and operate more efficiently. With more than a century of expertise, Kemira manufactures specialty chemicals used in drinking water treatment, wastewater treatment, industrial processing, and environmental protection. Its products play an **essential role in helping customers meet increasingly stringent environmental regulations while maintaining reliable operations**.

One of Kemira's **key North American production facilities is located in Bartow, Florida**, where specialty water treatment chemicals are manufactured and distributed to municipal and industrial customers throughout the region. The facility produces iron- and aluminum-based coagulants and other treatment chemicals that are vital to water and wastewater treatment processes.

The Challenge

Florida experiences more lightning activity than any other state in the United States, and Polk County—including Bartow—lies within one of the nation's highest lightning density regions. For a chemical manufacturing facility, lightning presents risks that extend well beyond equipment damage.

Kemira's Bartow operation depends on continuous production, storage, and shipment of specialty treatment chemicals. Critical assets throughout the site include:

- Chemical storage tanks
- Chemical processing and mixing equipment
- Pumps and transfer systems
- Instrumentation and process control systems
- Electrical distribution equipment
- Loading and unloading stations
- Plant communications infrastructure

Any lightning-related interruption could lead to production downtime, equipment damage, operational delays, and increased safety concerns around chemical handling. Even indirect lightning effects such as power disturbances and electromagnetic surges can impact sensitive industrial systems.

Kemira required a proactive solution capable of eliminating lightning exposure across a large operational footprint while supporting safe, uninterrupted production.

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The Solution

Encore Land and Sea installed **one CMCE-120 Lightning Suppressor** to protect approximately **500,000 square feet** of Kemira's Bartow chemical manufacturing facility.

Unlike conventional lightning rods that are designed to manage lightning after it strikes, the CMCE Lightning Suppression System works by neutralizing the atmospheric electrical charges that building during thunderstorms, preventing lightning formation within the protected area. This process creates a strike-free protective dome around the property.

The passive system operates continuously without requiring external power and integrates into the facility's existing infrastructure with minimal maintenance requirements.

Project Results

With the installation of a single CMCE-120 Lightning Suppressor, Kemira benefits from protection across approximately 500,000 square feet of critical operations, helping support:

- Increased operational reliability during Florida's severe thunderstorm season
- Protection of chemical processing and storage infrastructure
- Reduced risk of lightning-related production interruptions
- Improved protection for electrical and instrumentation systems
- Enhanced confidence for personnel working throughout the facility
- Long-term protection with minimal maintenance requirements

By eliminating lightning strike exposure over essential operating areas, the system helps Kemira maintain the continuous production that municipal and industrial water treatment customers depend on.



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Why It Matters

Chemical manufacturing facilities face unique operational challenges during lightning events. Production equipment, chemical storage infrastructure, electrical systems, and automated process controls all represent critical assets that can be vulnerable to lightning-related disruptions.

For facilities operating in lightning-prone regions like Central Florida, protecting these assets is essential for maintaining worker safety, minimizing operational risk, and ensuring uninterrupted chemical production.

Kemira's investment in CMCE Lightning Suppression demonstrates a proactive approach to safeguarding critical infrastructure while supporting reliable operations for customers who depend on high-quality water treatment chemicals every day.

Project Summary

Property: Kemira Water Solutions Production Facility in Bartow, Florida

Property Type: Chemical Manufacturing Site

Location: Bartow, Florida

Challenge: Lightning-related risk across chemical facility

Solution: Installation of one CMCE-120 Lightning Suppressor

Coverage Area: Approximately 500,000 square feet

Objective: Prevent lightning strikes over the property while supporting worker safety, infrastructure protection, and operational resilience.

