



On when
it counts.



DSM Eliminates Lighting Maintenance, Improves Plant Safety with Upgrade to Dialight LEDs

Factory-sealed Hazloc Fixtures End Moisture-related Failures & Bring Visual Clarity to Chemical Facility

The DSM Nutritional Products facility in Freeport, Texas is the world leader in the production of beta carotene nutritional supplements for animal and human consumption. Located along the Gulf Coast, the four-level open-air structure is over 50,000 square foot of production space, plus 20 acres of surrounding tank farms, waste water facilities and utility sub stations.



Dialight SafeSite[®] Area Lights illuminate the cityscape just beyond the Freeport, TX facility.

Installation Snapshot

- 4-level open-air facility
- High-humidity, high-vibration Class I Div 2 environment
- 600+ sodium vapor fixtures, 40% of which had failed
- Achieved zero maintenance, lighting reliability, improved visual clarity and safety
- Replaced with Dialight SafeSite Area Lights, High Bays and Flood Lights



The Challenge: Humidity-Driven Lighting Failures

Due to the humidity and harsh environment, lighting failures had become overwhelming. Of the 600+ sodium vapor fixtures in place, approximately 40% were no longer functional. In addition to the vibration, moisture frequently collected inside the conduit, transferring to the fixtures and ruining the components. Changing out bulbs was a complex process with difficult access, made worse by the fact that simply swapping a bulb often resulted in damage to the fixture, requiring a complete replacement.

Looking for a better solution, DSM Sr. Project Engineer Bob Szucs began investigating modern LED alternatives to upgrade

the facility. His requirements were relatively simple: it just had to work.

For the Class I Div 2 facility, finding a solution that offered the lighting output and reliability required in an entirely sealed unit added a bit of complexity. Plus, he wanted a supplier that could deliver fixtures to meet his wide range of needs—from area lights and high bays inside the structure, to flood lights for the exterior facilities.

The Solution: Dialight Class I Div 2 Factory-Sealed LED Fixtures

Szucs compared products from 3 vendors and found that only Dialight, the world leader in industrial LED lighting solutions, offered the combination of lighting output, longevity and factory sealed units to meet his specifications.

“We chose Dialight because all of the fixtures are factory sealed, which meant we could eliminate the problem of moisture getting in and ruining the fixture,” Szucs said. “They were also lighter weight and less bulky, making it much easier for our technicians to install, and offered the best warranty.”

Szucs says his decision was aided by the fact that the Dialight team went above and beyond to provide lighting schematics, footcandle specifications and a knowledgeable contractor to make the transition simple and easier to manage for him.



Dialight SafeSite Area Lights were an easy install.

In addition to a significant energy savings—up to 65% reduction in electricity consumption per fixture— DSM can now enjoy up to 10 years of worry-free, maintenance-free lighting. As an added bonus, since the Dialight fixtures will provide consistent, reliable light, Szucs says this has eliminated his store of bulbs and fixtures, freeing up space for more production-focused needs.

There has also been a dramatic improvement in visibility throughout the plant, enabling operators to identify and catch any issues before they become a problem, especially in the evening and nighttime hours, where visibility had historically been a major challenge. Maintenance crews can work much safer and more efficiently, as the improved color rendering allows for easier identification of wiring and signage, and eliminates the need for flashlights to perform virtually any task.

“Dialight was very responsive in letting me know what I could expect in the finished project,” he said. “And, their output exceeded what we needed.”

The Result: Zero Maintenance & Better Visibility with a Streamlined Process

DSM worked with a Dialight contract partner to install more than 600 fixtures, 90 percent of which were Class I Div 2 SafeSite Area Lights and High Bays, as well as Flood Lights in the tank farm area. In some cases, the Dialight fixtures offered such a dramatic improvement in light on the floor, DSM was able to eliminate some fixtures compared to the original sodium vapors.



Dialight SafeSite LED High Bays increase visibility and safety in the facility.

The bright white lighting of the new Dialight LEDs is also much easier on the eyes for workers in general, providing a more consistent view throughout the facility.

“We are very pleased with the Dialight product and have already introduced other DSM facilities to Dialight,” Szucs said. “The expertise that Dialight brought relieved me of a lot of the leg work that’s typical in a major project such as this, along with the fact that I could get everything I needed from a single supplier. And, they brought in a contractor who was familiar with the product, so I didn’t have to worry about installation issues either. All of those issues were addressed on the front end, making the entire experience much easier from my perspective.”