

Gulf Coast Asphalt Terminal Controls H₂S

REDUCES EXPOSURE, AVOIDS SIGNIFICANT COSTS

BACKGROUND AND CHALLENGES

Athlon, a Halliburton Service, was approached by a Gulf Coast Asphalt Terminal to assist in managing hydrogen sulfide (H₂S) gas. The facility receives asphalt blending components to produce road asphalt and roofing tar. The majority of the blending components originate from refineries and is typically sour, with H₂S levels commonly exceeding 5,000 parts per million. At 100 ppm, H₂S is immediately dangerous to life and health, and at low concentrations (parts per billion levels), H₂S has a repugnant odor. This facility has a target of 0 ppm in the vapor space.

ATHLON'S RECOMMENDATION

Athlon performed surveys on-site and tested samples from the terminal. It was determined that Athlon's high temperature, metal-based additive RPS-886 would be the best fit to reduce H₂S levels in the asphalt to the target of 0 ppm. It was also concluded that previously associated operation challenges could be avoided with this product selection, as its lower dose rate and inherent improved stability would improve issues associated with supply chain and stability.

Through our investigation, it was discovered that additional H₂S was being reated in the asphalt blending process. Athlon recommended an alternate injection strategy that would help the terminal optimize their chemical usage and reduce the frequency of retreating.

PERFORMANCE RESULTS

Since implementation, RPS-886 has drastically improved H₂S related issues at this terminal.

1. RPS-886 has proven to be a highly effective and cost efficient product. Less than 1 ppm of product is required for every 10 ppm of H₂S in the vapor space.
2. Significant reduction in H₂S excursions, resulting in improved safety performance.
3. Through optimizing the injection strategy and treatment protocol, retreatment requirements have dropped significantly. The operators agree that the injection equipment is less labor intensive and easier to use than before.
4. Zero incidences of supply short-fall
5. The solution resulted in nearly a six-figure savings on annual chemical spend.



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