Results achieved

- Complete elimination of hydrogen sulfide and reduction of ammonia to acceptable levels
- Over 80% reduction in outage time
- No personnel exposure to hazardous materials
- No additional disposal expense

Chemical profiles

**FQE™ H₂S**

Designed for instantaneous and permanent elimination of hydrogen sulfide present in refining and other process equipment. The most efficient abatement product on the market capable of removing 3 moles of sulfide to 1 mole of active chemical.

**FQE™ Ammonia Odour**

Exceptionally rapid removal of potentially toxic and harmful ammonia odours in refinery operations. Non-hazardous, non-reactive, safe for personnel, and equipment compatible for effective ammonia control.

CASE HISTORY

CHEMICAL DECONTAMINATION OF A SULFUR RECOVERY UNIT SOUR WATER TANK

A large petroleum refinery in New Jersey used our hydrogen sulfide abatement product, **FQE™ H₂S**, and ammonia control product **FQE™ Ammonia Odour** to decontaminate a sour water tank in their sulfur recovery unit (SRU) containing 1,438 m³ (380,000 gallons) of sour water.

The initial H₂S readings from the sour water vessel exceeded 80,000 ppm (8.0%). A 20% FQE H₂S mixture in water was prepared and pumped into the tank. The tank contents were circulated for 48 hours to ensure good contact was made between the vessel water and the FQE H₂S. The tank contents were sampled every two hours with the H₂S being reported at 0 ppm after 32 hours. Prior to the hydrogen sulfide treatment, the vessel was treated with FQE Ammonia Odour for ammonia control. The required amount of FQE Ammonia Odour was pumped into the tank and the vessel contents were circulated for 12 hours until the ammonia level was below the acceptable 10 ppm.

The chemical circulation was performed at an ambient temperature and was applied from bottom to top through a 3D nozzle mounted through the vessel’s top manway access. The spray nozzle was used to eliminate the high H₂S and ammonia concentrations present in the vessel’s head space. Upon completion, the treated water was processed through the wastewater treatment plant without delays.

Typically, this process is conducted by the slow addition of a strong oxidizing liquid over a 7-10 day period of time, resulting in extra time and additional disposal considerations being required.
Improve efficiency and financial performance

At FQE Chemicals, we help our clients improve the efficiency, safety, and financial performance of their assets by creating innovative and unique chemistries that provide superior value and performance. Our award-winning chemistries are distributed globally.

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