



Naphtha Storage Tank Bottom Cleaning

A naphtha storage tank 220' in diameter and 60' in height had several inches of solidified ferrous oxide and a quantity of residual free product. The objective was to clean the tank bottom in a cost-effective manner (removing hydrocarbons and oxide), eliminate hazardous confined space entry by maintenance personnel, and prevent the escape of vapors from the tank.

The tank was first flushed with fresh water, leaving 200 to 300 gallons of visible floating product, plus substantial additional product left in the sludge. A rotating liquid delivery system was installed and M-1000H*™ microbes were introduced. The mechanism was operated for 10 hours per day.

After 13 days, the company reported that where corrosion had been covered by the water, it had dissolved to a liquid and could be pumped out. This was done, and the majority of the material that had covered the tank floor was removed. It was also observed that near the center of the tank, where the water had not covered the oxide during the treatment, oxide material remained attached to the floor. This material covered an area about 35 feet in diameter and was 1 to 2 inches thick. Since this material had not received a microbial treatment, it was removed in the conventional manner and required 4 more days. It is estimated it would have taken more than 50 days to complete the cleaning manually.

After all the material had been removed from the tank, it was observed that in the areas where M-1000H*™ came in contact with the floor of the tank, it was clean and appeared to have been "sandblasted". LEL vapor readings were also taken every 2 hours of the work day. By day 5, they had dropped to 65% of LEL. By day 10, they had dropped to 30% of the LEL, and by day 13 LEL readings were at 0%.