

# CASE STUDY #21

- Client:** City of Tucson, Department of Operations/Facilities Design and Management for municipal vehicles.
- Location:** Tucson, Arizona USA
- Capacity:** 3000 gallon recycling open wash pit that flows into a 1,000 gallon oil/water separator which discharges to the city sewer system.
- Problem:**
1. Eliminate the petroleum oil and hydrogen sulfide odor being emitted from the open pit by bioremediating the oil wastewater and soil.
  2. Reduce current costs and liability in having the waste pumped and transported to a disposal site.
- Previous Treatment:** None. Client was physically pumping waste and transporting to landfill every two weeks which was very expensive and not solving the odor problems.
- Previous Results:** None. The frequency of pumping actually created more complaints due to emitting bad odors.
- Biological Treatment:** A 55-gallon drum of PDM-7 H.C. hydrocarbon bacteria was injected into the recycling pit by means of a computer-timed pump. Also a 5-gallon pail filled with PDM-7 nutrients was injected at the same location with a metering pump. The tanks were aerated by adding an air hose from the maintenance shop, which enhances the bioremediation process.
- Biological Treatment Results:** After 30 days the sulfide odors were eliminated. The heavy oil accumulation in the tanks were degraded. After 120 days the sand and mud sediment had to be pumped from the open pit. The sludge was put onto a drying bed. Testing proved that the TPH level in the soil was <100 ppm, the city used the soil for filler dirt.
- Advantages:** The City of Tucson was paying **\$700.00** per month to have tanks cleaned. PHase III, Inc. cost is **\$596.75** per month and solved all their odor problems while eliminating the liability involved with transporting the waste to a landfill.