

CASE STUDY #4

- Client:** City of Scottsdale vehicle maintenance shop for city vehicles.
- Location:** Scottsdale, Arizona USA
- Capacity:** 500-gallon oil/water separator, which discharges to the city sewer system.
- Problem:**
1. To maintain oil and grease level in the oil/water interceptor that is significantly lower than the current level of 713,700 mg/L.
 2. Reduce current costs and liability in having the waste pumped and transported to a disposal site.
- Previous Treatment:** None. Were physically pumping waste and transporting to landfill.
- Biological Treatment:** On August 25, 1994, PHase III, Inc. seeded the tank with 30 gallons of PDM-7 H.C. Bacteria, and then installed a Microbe Distribution Unit (MDU) that consisted of a 55-gallon drum of H.C. blend microbes with metering pump. PDM-7 H.C. Bacteria was introduced each night through a computer-timed pump. The metering pump was set to dose between 12:00 A.M. and 12:00 P.M. Installation was made inside the building at the wash sink drain line going to oil/water separator. Using an average of 20 gallons PDM-7 H.C. Bacteria per month (85 oz. per day). Every 90 days the 55-gallon drum was refilled and all equipment checked for proper operation.
- Biological Treatment Results:** The following results show the TPH that were in the effluent waste stream from the 500 gallon oil/water separator.

<u>DATE</u>	<u>TPH LEVELS</u>
8/25/94	No Test Taken
9/19/94	713,700 ppm
1/06/95	2,160
6/19/95	13,400

Conclusion: After 104 days the total TPH were reduced from 713,700 to 2,160 mg/L, which was a 99.7% reduction. The oil/water interceptor had not been cleaned for a long period of time therefore a large amount accumulated in the tank. We shock dosed the tank initially with 30 gallons of H.C. Bacteria and 10 gallons of Eliminator to get the digesting process a jump start due to all the oil that was in the tank. Now after 10 months the TPH is 13,400 ppm (98% reduction) without pumping the interceptor. The MDU was empty on May 25, 1995, so it had been a moth since the interceptor was treated. The only reason the oil/water interceptor would need to be pumped is because of the solid debris that is accumulating on the bottom of the tank.

Overall Benefits: This biological program will eliminate the need for pumping the interceptor on a monthly or quarterly basis and reduce the high cost of disposal. Onsite treatment will eliminate the liability involved with transporting the waste to a disposal site along with reduced sulfide odors while cleaning drain troughs.