

Accelerated JP-8 HC-2000 Bioremediation

Location: Atlanta, Georgia

Client: International Airport

Contract Amount: Confidential

PROBLEM

The drive train on a tanker carrying 10,000 gallons of Jet A exploded and punctured the shell releasing 8,000 gallons of fuel on a perimeter road at an International Airport. The site was located in a restricted area in direct line with aircraft approach runways.

Fuel was released on asphalt pavement and migrated overland and 1-mile downstream into airport drainage ditches, tunnels, and a creek. The airport authority required that a remedial approach with minimal access and visual disturbances to approaching aircraft be implemented.

SOLUTION

Approximately 6,500 gallons of fuel were recovered from a one-mile section of stream utilizing skimmers, vacuum trucks, wash down pumps, and a polypropylene rope mop.

An estimated 1,000 gallons of fuel saturated 600 cubic yards of soils at the release point. 350 cubic yards of soils were excavated from the bottom of the drainage ditch and placed on a one foot deep biobed. Soils were cultivated with a disc/harrow.

The remaining 250 cubic yards of soil were treated in the bank (insitu) employing three (3) horizontal aeration manifolds powered by a regenerative blower. Ten (10) gallons of HC-2000 (diluted with 16 volumes of water) were applied on a weekly basis to the bank and bed bioremediations systems. A sprinkler system was installed to maintain moisture levels at both locations.

Total petroleum hydrocarbon (TPH) concentrations were reduced below 200 mg/kg in 16 weeks (99% reduction). Total heterotrophic plate counts were elevated from 6,000,000 to over 100,000,000 CFU/gm.

COST/BENEFITS

Remtech trained airport personal to maintain the bioremediation systems and reduce project costs. Remediating soils onsite with HC-2000 minimized the number of site access and resident time that met airport authority security and aircraft safety requirements.



Transfer of Contaminated Soils to HC-2000 Biobed



Creek Fuel Cleanup Operations



Bank HC-2000 Bioremediation & Stabilization System



HC-2000 Bioremediation Bed With Auto Sprinkler System



Bank HC-2000 Treatment System

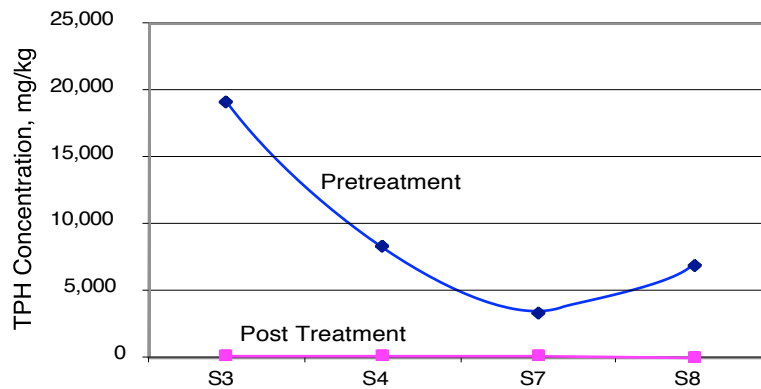


Figure 1: TPH Concentrations Reduced by Over 95% Following Four (4) months of HC-2000 Treatment

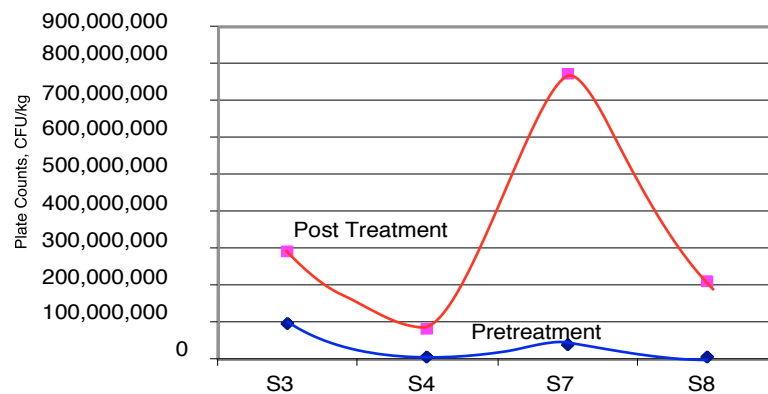


Figure 2: Total Heterotrophs Increase with HC-2000 Applications