

Diesel Fuel Bioremediation in Railroad Ballast

Location: South Georgia

Client: Major Railroad

Contract Cost: \$65,000 (50% of Costs Associated with Water Well within 500 ft from Release)

PROBLEM

An at-grade crossing collision on a track siding with a train and fuel truck released over 1,000 gallons of diesel fuel over a track distance of 175 feet.

SOLUTION

The fuel saturated asphalt road and sub-grade were removed and replaced. An initial application of HC-2000 and water were used to flush the mobile phase out of the ballast. A total of twelve (12) applications of HC-2000 (205 gallons) were made over a twelve (12) month period. Degradation monitoring continued for a total of 14 months.

A water well was located less than 500 ft downgradient from the release. A monitoring well was installed immediately downgradient from the tracks to ensure that the water well was not impacted.

No contaminants were detected in the water well. Polycyclic Aromatic Hydrocarbons (PAHs), BTEX, and DROs were degraded below detection limits in the monitoring well.

Diesel Range Organics (DROs) ballast/soil concentrations were reduced by an average of 96.5%.

COST/BENEFITS

The track ballast was treated without taking the mainline track out of service and saved the railroad thousands of dollars in saved track time alone. 50% of project costs were due to demonstrating that this release did not impact the water well.



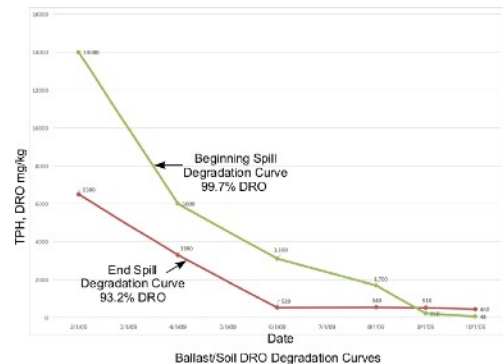
At-Grade Crossing Diesel Release



HC-2000 Application



Track After Treatment



Soil/Ballast Diesel Fuel DRO Degraded an Average of 96.5% over a 14 Month Period