

In Situ Remediation of Petroleum Hydrocarbons at Rail Depot, Bristol, UK

Hotspot treatment proves bioremediation technology within rail industry



Remediation Details

Site Type:

Train care depot

Project Driver:

Voluntary remediation

Remediation Approach:

Enhanced aerobic biological degradation

Technologies:

ORC Advanced Socks®

Summary

At a train maintenance depot near Bristol, surface petroleum hydrocarbon contamination had resulted from historic and on-going leaks, where trains were stabled overnight. REGENESIS was asked to design a remedial approach for a hotspot of this contamination within one of the rail tracks.

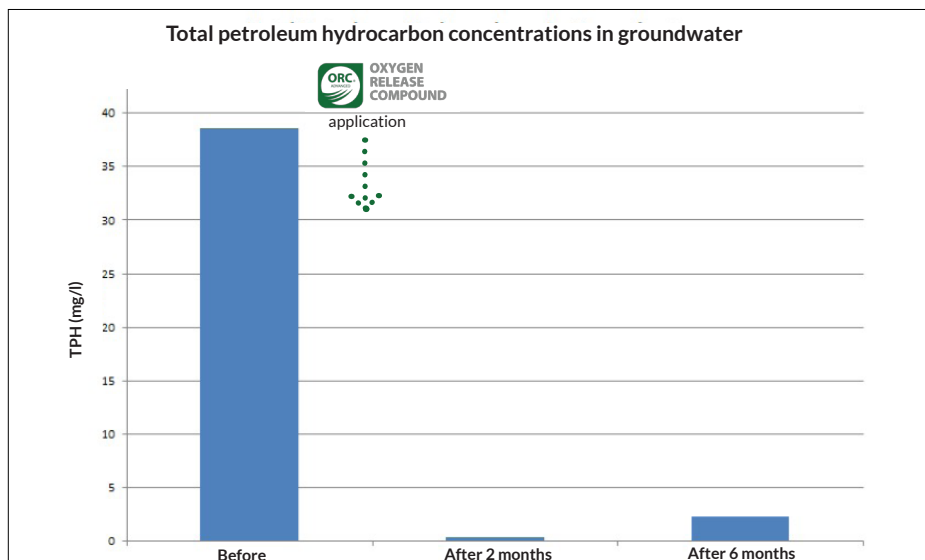
Remedial Approach

ORC Advanced Socks were installed in wells for the treatment of the dissolved phase contaminants in groundwater. The quick application showed the ease of installation, with only validation of the groundwater required to provide evidence of treatment.

ORC Advanced is specifically designed for in situ remediation and can be provided as a powder for direct push injection, pellets for placement in excavations or in socks for installation in wells. The technology accelerates the aerobic biological degradation of contaminants. It consists of a calcium oxyhydroxide with intercalated phosphate, which provides a controlled release of molecular oxygen into the groundwater for up to 12 months, from a single application.

Results

The ORC Advanced provided a >90% reduction in the groundwater within the hotspot area.



Geology

X	Made ground
	Gravel
	Sand
	Silt
	Clay

Medium

X	Groundwater
	Saturated Soil
	Vadose Zone

COC

X	Petro HCs
	Petro LNAPL
	Chlorinated VOCs
	Metals

COC Concentration Levels:

Up to 38,000 µg/l TPH

Treatment Level:

2-5m BGL

Application Approach:

Socks

Remediation Cost:

£5k