

# Motorway Petrol Filling Station, Lazio, Central Italy

## Enhanced Aerobic Bioremediation Treats TPH, BTEX and MtBE



### Summary

Significant hydrocarbon contamination was discovered during the redevelopment of a motorway service station adjacent to an existing petrol fueling station in Lazio, Central Italy. The source of the contamination was identified to be leaking underground storage tanks (UST). The USTs were removed and grossly contaminated soil excavated, however, dissolved phase contamination was still present within the surrounding soil.

### Treatment

Over a tonne of ORC-Advanced Pellets was applied to the 280 m<sup>2</sup> excavation. Excavation was carried out to a depth of 3.5m BGL. Depth to groundwater was 3m BGL. Therefore, the excavation intercepted the groundwater for approximately 0.5m. Meaning that the ORC-Pellets were applied precisely to the source zone.

### Benefits: Easy, Direct Application to Source, No Programme Delay

ORC-Advanced has been specifically designed to provide a controlled release source of dissolved oxygen, driving enhanced aerobic bioremediation for up to 12 months.

ORC-Pellets were applied directly to the contamination source and without the need for specialized equipment. Furthermore, Pellet application does not produce nuisance dust or require a source of water.

Immediately following Pellet application, the excavations were infilled and construction work continued unimpeded.

### Remediation Details

#### Site Type:

Land adjacent to operational Petrol Filling Station

#### Project Driver:

Site redevelopment

#### Remediation Approach:

Pit Application - Enhanced Aerobic Bioremediation

#### Technologies:

ORC-Advanced® Pellets

### Geology

	Bedrock
	Gravel
X	Sand
X	Silt
	Clay

### Medium

X	Groundwater
	Saturated Soil
	Vadose Zone

### COC

X	Petro HCs
	Petro LNAPL
	Chlorinated VOCs
	Metals

### COC Concentration Levels:

TPH - 5,000 µg/L  
 BTEX - 1,000 µg/L  
 MtBE - 10,000 µg/L

### Treatment Depth:

3.5m BGL

### Product Cost and Application:

€30.000