

Project

W.R. Grace & Co. Dewey & Almy Chemical Division New Jersey, USA

Ex Situ Treatment of Soils Impacted with Bis (2-ethylhexyl) phthalate



Summary

Soil impacted with bis (2-ethylhexyl) phthalate (BEHP) was treated *ex situ* in two covered land treatment cells containing approximately 450 yards of excavated soil. Concentrations of BEHP as high as 7,710 mg/kg, were reduced by 91.1% to 99.5% following 10 months of active treatment.

The Challenge

An estimated 450 yards of soil required treatment at the site. The remedial goal for BEHP was 49 mg/kg. To reach this goal, removal efficiencies of over 91% had to be achieved.

The Solution

DARAMEND® was applied *ex situ* on two 225 yard treatment cells impacted with BEHP. DARAMEND was applied to the soil surface and incorporated to a depth of 2 feet with a specialized deep rotary tiller. Tilling also served to aerate and homogenize the soil. Standard agricultural irrigation equipment was used to apply water, when required, to maintain the soil moisture content at about 40% of the soil water holding capacity.

The Result

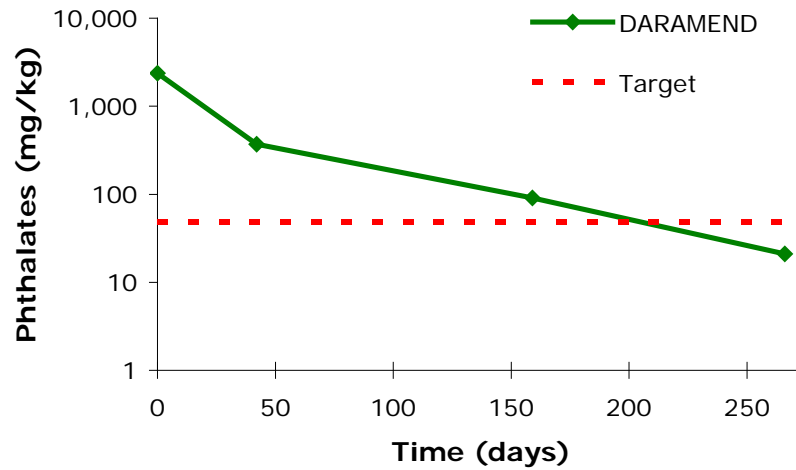
DARAMEND bioremediation technology supported efficient removal of all target compounds in soil at the site to levels below the target criteria of 49 mg/kg for each of the two treatment cells.

Treatment Cell 1 BEHP concentrations were reduced by 91.1% and ranged from 15 to 26 mg/kg following treatment.

Treatment Cell 2 BEHP concentrations were reduced by 95.5% and ranged from <3.7 to 15 mg/kg, following treatment.

The Timeline

Treatment was completed over a period of 10 months in 1996.



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