

Clean-up and Bioremediation of Concrete Floor at Major Automotive Plant in Western Europe

The concrete floor (100,000 square metres) of an engineering press shop which produces 80% of the body panels for a major car manufacturer had become saturated with lubricating and draw oils over 50 years since its construction. A plume of oil had been detected in the ground underneath the floor, migrating towards an underground stream.

The company needed to prevent further migration of oil into ground from the concrete floor to prevent pollution of the underground stream. However, it was also crucial that the company maintained full production at the site whilst carrying out remedial works. This meant that the conventional option of breaking up and replacing the floor in section was not an option due to the disruption this would have caused. The only viable alternative was to bioremediate the concrete in situ using Global Advantech's system for concrete bioremediation.

Global Advantech's concrete bioremediation system is an application of biostimulant molecules which may be used to clean and to completely remove oil, grease and hydrocarbon contamination from concrete floors by utilising natural biodegradation to completely breakdown and remove the contamination within the porous structure.



Initially the floor was cleaned using a scrubber-drier machine and a natural-derived degreaser (Global Advantech's Pre-Bioremediation Degreaser DC770) to remove surface oil and dirt contamination. The floor was then sprayed twice



weekly with a solution of biostimulant molecules and nutrients (Global Advantech's Natural Bioremediation Agent BR914), and the floor was cleaned periodically with the machine and natural derived degreaser.

After eight weeks of treatment the floor had



been bioremediated and was completely free from oil and grease, and further migration of oil through the concrete into the soil beneath had ceased.

Global Advantech's bioremediation and effluent treatment products contain natural molecules, which are proven to catalyse certain cell defence mechanisms and accelerate specific metabolic functions within micro-organisms. Their addition enables indigenous micro-organisms to utilise the hydrocarbons and otherwise toxic organic molecules as food sources, rapidly degrading them to carbon dioxide, and simple salts.

Global Advantech Limited

Exceptional clean technologies for a sustainable future.....

Energy House, 14 Maurice Close, Kimbolton, Cambridgeshire, PE28 0HD, United Kingdom
 t +44 (0)845 519 0159 / e enquiries@globaladvantech.com / www.globaladvantech.com