



# In-Situ Chemical Oxidation

Terra Vac (UK) Ltd and Hydrock Consultants

Terra Vac (UK) Ltd was asked by Hydrock Consultants on behalf of a major housebuilder to provide a solution for contaminated groundwater at a residential development site in St Albans.

The site in question was the former government test facility for the engines of the Vulcan Bomber some sixty years ago.

Fuel storage, usage and subsequent losses caused significant quantities of jet fuel to impact soils and groundwater surrounding the mass concrete bases on which the engines were mounted for testing.

Contaminated soils had been removed previously during the breaking out and removal of the mass concrete engine test beds, leaving behind a plume of impacted groundwater, over an area in excess of 1,000 m<sup>2</sup>.

In order to implement a rapid clean-up, Terra Vac (UK) Ltd opted for in-situ chemical oxidation techniques, using Hydrogen Peroxide.

Samples of groundwater were recovered and subjected to treatment trials in the company laboratory. Optimum concentrations of oxidant were derived to reduce the contamination load to the required levels.

The results of the laboratory tests were scaled up for on site treatment which entailed the installation of 40 dedicated injection probes linked at surface with a valved distribution manifold.

The Terra Vac (UK) Ltd in-house designed and built oxidant mixing and distribution unit ensured a controlled release of appropriate concentration oxidant to the subsurface.

Ten monitoring wells were used to track the improvement in groundwater quality which achieved the required levels within twenty weeks.



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Contaminated Land and Groundwater Remediation