

CASE STUDY

RemScan gunning for contaminants

Utilising infrared technology, Ziltek Pty Ltd and CSIRO have developed RemScan, a hand-held device for real-time measurement of petroleum contamination in soil.

This innovative concept allows for rapid segregation of contaminated soil from clean soil, avoiding unnecessary removal and potential cross contamination.

To ensure contaminated soils are completely removed from a development site, over extraction of clean soil adjacent to a contaminated area can occur. This leads to clean soil being disposed of with contaminated soil. RemScan is helping to provide a more accurate assessment of contaminated soil volumes, saving disposal costs and reducing the total waste going to landfill.

According to Dr Richard Stewart, Ziltek's Managing Director, "RemScan bridges a gap in the soil analysis market. Where previously technologies were available for real-time detection of heavy metals and volatile organics, RemScan now offers the ability to measure Total Petroleum Hydrocarbons in the field."

HazWaste funding of \$100,000 has helped Ziltek commercialise and refine the technology for field based conditions.

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Dr Richard Stewart
Managing Director, Ziltek



Hand-held RemScan gun





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How it works

RemScan utilises infrared sensors to detect the concentration (mg/kg) of Total Petroleum Hydrocarbons (TPH) (C10 - C36) in soil.

The gun-shaped design allows for simple hand-held operation where the extent of TPH contamination across a site can be more comprehensively assessed than would ordinarily be feasible through standard sampling and laboratory testing.

Although RemScan is not intended to replace laboratory analysis, validation testing has shown the accuracy of the unit provides sufficient confidence in results.

Potential applications

RemScan can be utilised across a range of applications including site assessment and validation works, bioremediation and spill response.

RemScan allows site managers to develop more sophisticated sampling plans, helping to optimise the total volume of soil requiring treatment and reducing the risk of overlooking contaminated areas or over-excavating into clean areas.

The application of real-time data and information can also help to optimise soil remediation processes such as bioremediation. A common concern with bioremediation of TPH contaminated soil is that the rate of contaminant degradation is slow and monitoring requires expensive and time consuming sampling and laboratory analysis.

RemScan provides an opportunity to quickly and regularly monitor the progress of bioremediation treatments without additional costs. Where treatments are stalling and contaminant concentrations are not reducing, intervention techniques can then be more readily instigated.

RemScan thus offers an opportunity to increase soil remediation through improved bioremediation treatment.

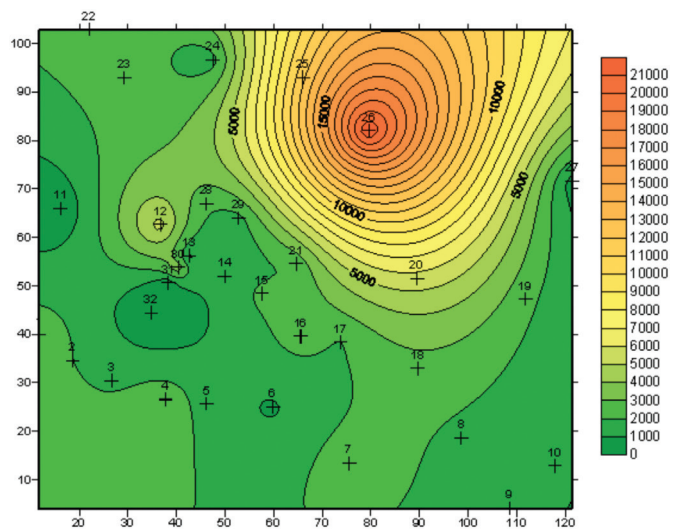


On-the-spot core analysis

Scanning the horizon

HazWaste funding has helped Ziltek to demonstrate the field based application of the technology.

Ziltek will be looking to further validate RemScan's capabilities through international technology evaluation programs.



Site map showing how RemScan data can be used to detect the extent of contamination