

Hired Metals Analyser Ensures Remediation Success

Cognition Land and Water Ltd, a UK based remediation specialist, has hired a portable XRF metals analyser to improve the speed of remediation work at a project in London's Kentish Town. The project had a major impact on local residents so timescales were extremely tight but Cognition's Charlie Jarvis says "It would not have been possible to meet the deadline without the use of portable analysers because they enabled us to make decisions onsite without having to wait for the results of laboratory analysis."



“*The XRF analyser substantially increased the speed with which we were able to work and helped to ensure that only contaminated soil was removed. The success of this project is due in no small part to the contribution of this device and we therefore plan to use it again on future projects involving metals contamination.*”



Background

Cognition Land and Water is a specialist contractor for land remediation, brownfield reclamation and groundwater treatment projects. Operating throughout the UK, the company manages all aspects of remediation from initial feasibility studies through to final site hand-over, ensuring satisfaction for all stakeholders, including regulators, developers, local authorities, consultants and local communities. The company prides itself on developing innovative and often bespoke solutions to specific land and groundwater contamination issues.

Instrumentation specialist Ashtead Technology is the rental partner for the world's top selling range of portable XRF analysers from Niton UK.

XRF analysers provide fast, non-destructive, qualitative and quantitative assessment of metals and alloys in a variety of materials. In addition to the onsite assessment of soil contamination, applications for XRF include quality control in manufacturing, metal evaluation in waste management, weld testing, electrical equipment testing under the RoHS and WEEE directives, the screening of consumer goods for contaminant materials such as lead in paint, toys, packaging etc. and the qualitative analysis of precious metals.

In addition to their role in soil testing at brownfield sites, portable XRF analysers are employed in other environmental applications including elemental analysis of materials such as bulk powder, surface dust wipes, volume sampling air filters and individual operator respirator filters.



Portable XRF analysers are employed in remediation work to guide earth-moving equipment to soil contamination 'hotspots' which results in less soil removal and thereby lowers costs. These instruments can perform both in-situ (on site) and ex-situ soil analysis (analysing prepared soil samples, via the prepared sample test-stand and soil sample preparation kit). This reduces the costs and time incurred by laboratory analysis.

Ashtead's rental instruments employ the latest XRF technology to deliver high levels of accuracy and precision, and are able to measure most metals (includes all metals with a higher atomic weight than Aluminium).

Case Study - Kentish Town

The gardens of 19 houses in Kentish Town have been found to be contaminated with metals such as lead, and Cognition Land and Water was employed by Camden Council to remove the polluted soil. The gardens all back onto the old Ascham Street works – a former industrial site that is reported, up until 1986, to have hosted nine different factories, including an electro-plating works.



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The remediation work necessitated disruption to the residents of the affected properties and also to those adjacent to the access which was created for the earth moving equipment. It was therefore necessary to be able to identify and remove the contaminated soil as quickly as possible and for this reason a portable XRF analyser was hired from Ashtead Technology.

With a standard analytical range of over 25 elements, the portable Niton XRF instrument provides instantaneous 'point and shoot' readings by simply holding the device directly over the soil. Results are displayed on a built-in screen and also stored internally for subsequent download via USB or Bluetooth communications.

Analytical results from an MCERTS approved UKAS certified laboratory are necessary for regulatory purposes, but the portable XRF instrument enables the rapid screening of multiple samples. Comparing the laboratory and portable XRF results, Charlie Jarvis says: "We were given a training course by Ashtead Technology prior to the use of the instrument, so we were ready to start using the device as soon as we arrived onsite. However, we first 'calibrated' the XRF results with laboratory analyses to reinforce our confidence in the field data from this site.

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Importantly, the ability to just rent the equipment when we need it saves what would be a considerable capital expense."

For further information on renting XRF analysers and the associated training courses please visit www.ashtead-technology.com