



Groundhog™

Site assessment services for
radiologically contaminated land

Groundhog™ is a suite of radiation monitoring tools and services, specially designed to provide a cost-effective route to environmental restoration.

Nuvia delivers a professional, reliable and rapid service at every stage, from consultancy on the design of survey and sampling procedures, through to the design and implementation of remediation techniques and assay procedures. Our unique Groundhog™ technologies deliver continuity and compatibility of measurement from initial assessment to final assay and verification, giving you a full audit trail.

Groundhog™

Radiological surveying

Accurate radiological surveying is essential to plan remediation activities, to identify locations where intrusive investigations are required, to reduce waste volumes (and therefore costs) wherever possible, and to demonstrate freedom from contamination for valuation purposes. Groundhog™, developed exclusively by Nuvia, is an indispensable tool to demonstrate and validate the extent of radioactive pollution.

The system

Groundhog™ collects radiological data from a variety of ultra-sensitive detectors, and combines this with GPS and other positional information: it produces accurate, highly detailed maps in a fraction of the time taken by older methods.

The equipment

Groundhog™ is a portable system which fits either into a specially designed backpack or onto a vehicle. The compact and robust equipment can be used in confined and hard-to-reach spaces; it may be used to monitor boreholes and to survey marine sediments; and it can be easily operated in rough or flooded terrain. An array of detectors may be mounted on vehicles for effective coverage of large sites.

Speed

A core feature of the Groundhog™ system is the rapid collection of a high density of survey measurements – more than one measurement per square metre and at a rate of one measurement per second – and the automated recording of all data. It enables 100% site coverage in the minimum time.

Records

The Groundhog™ service maintains Quality Assurance records to provide a complete audit trail from each measurement to the final report delivered to the customer.

Groundhog™ uses database and Geographical Information Systems to provide high-quality analysis and presentations, in both reports and data delivered to customers for their own use.

Savings

Groundhog™ effects savings at every level: it assists in the estimation of total remediation project costs; it identifies areas of contamination, focusing intrusive investigations; it enables accurate characterisation and quantification of contamination to identify the most cost-effective remediation options; and it avoids costly errors and delays arising from unexpected contamination.

“A vast
improvement on
traditional methods
of radiological
surveying”

Groundhog™

Ongoing development

Nuvia continues to expand the Groundhog™ range of equipment and services to meet customer demand. The original Groundhog™ Classic system is in use around the world, along with recent additions:

- Groundhog™ Fusion – providing increased flexibility; the ability to collect gamma radiation spectra; low-energy gamma radiation surveys to allow the measurement of Americium-241 (and therefore Plutonium) and possibly Depleted Uranium; and an ‘alarm’ system which allows subtle radiological conditions to be identified in the field, without the need to process survey data elsewhere.
- Groundhog™ Betahog – providing beta radiation surveys using portable equipment for difficult-to-access areas, and also arrays of detectors for large areas such as roadways.
- Groundhog™ Evolution2 – the first to provide high-density, efficient surveys for small radioactive particles, now enhanced with similar techniques to those in Groundhog™ Fusion, to provide greater flexibility and the ability to locate a wider range of particles.

Complete solutions

Nuvia’s comprehensive services ensure a complete solution to remediation requirements. From Phases I and II (site assessment work) through Phase III (remediation) to Phase IV (post-remediation validation), Groundhog™ delivers invaluable information through clear mapping and easy-to-understand reports. We can provide dedicated teams of professionals to assist, advise or complete projects for clients around the world, including site investigation, assessment and full remediation services.

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