

EAGLE iSCAN RADIOLOGICAL DETECTION SYSTEM

Drive-over/ Walk-over Scan:

The Perma-Fix Eagle iScan is a towed-array gamma spectroscopy system with precision GPS tracking. The system offers exceptional sensitivity to a wide range of gamma-emitting radioisotopes and the ability to identify individual gamma emitters. Minimum Detectable Concentrations (MDCs) and isotopic reporting are offered on a project-by-project basis. At typical scan speeds, the system can effectively detect 1 pCi/g of Ra-226 or 2.5 pCi/g of Cs-137 contamination in small, localized areas (nominally 0.5 m²).

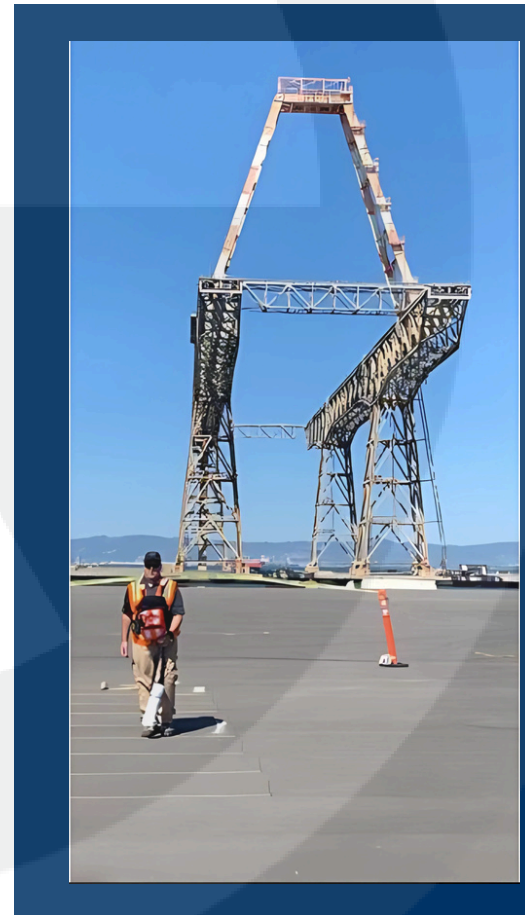
The system is capable of covering up to 1 acre per hour with sub-meter spatial resolution. After scanning a survey area, the spectral data and GPS data are automatically merged using a cloud computing platform. A total count rate over time, mean spectral shape, total count rate-based heat map, and a spectral waterfall plot are automatically generated within minutes of completing the survey, enabling rapid analysis and potential remediation of elevated areas. Additional spectral or GIS analysis can be performed on a project-by-project basis.

Gecko Scan:

Whether it's a single wall, a room, or an entire building, the Perma-Fix Eagle iScan Gecko System is here to help. The Gecko system allows for real-time, three-dimensional mapping of indoor radiological measurements by coupling the capabilities of handheld alpha/beta detectors with a stereo camera equipped with an inertial measurement unit (IMU) to accurately record each measurement location. Alongside its groundbreaking capabilities, data from the Gecko system can be streamed over a local wireless connection established directly from the system and processed on Windows-powered devices such as tablets, desktops, or laptops.

Data is automatically saved to a local database at the start of each measurement and can be exported as a survey summary report—showing average results, mean, standard deviation, and four plots—or in spreadsheet format that includes local coordinates, alpha/beta readings, and timestamps. Spreadsheet data can be further analyzed using Geographic Information System (GIS) software to generate spatial maps that illustrate the position and concentration of radiological measurements on real-world maps.

The Eagle iScan radiological detection system was developed using years of experience in overland spectral scanning technology to provide clients with the best value for radiological characterization and final status surveys involving specific gamma emitters.



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