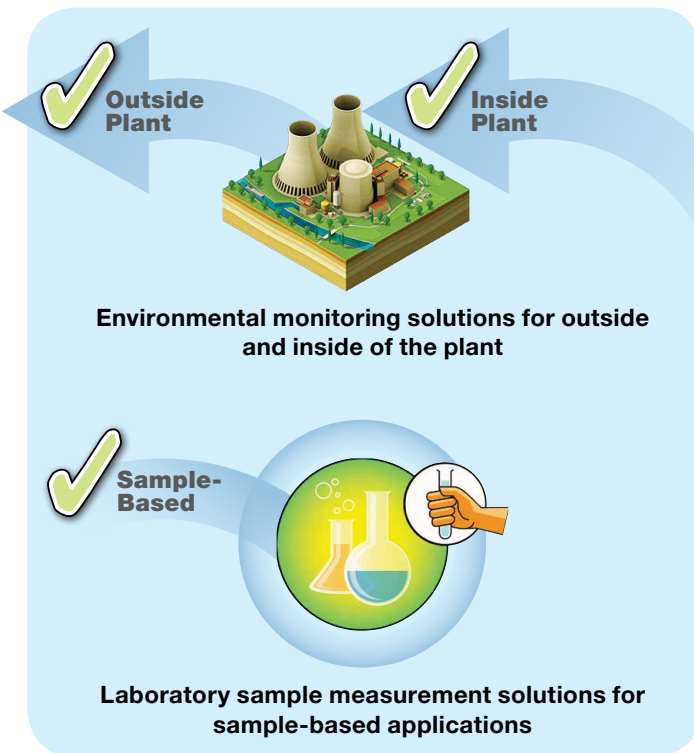


Environmental Radiation Monitoring

Key Drivers:

- Real time Monitoring outside & inside the D&D sites.
- Perform sample-based Environmental Monitoring.
- Provide early warning and identification of possible radiation release incidents.

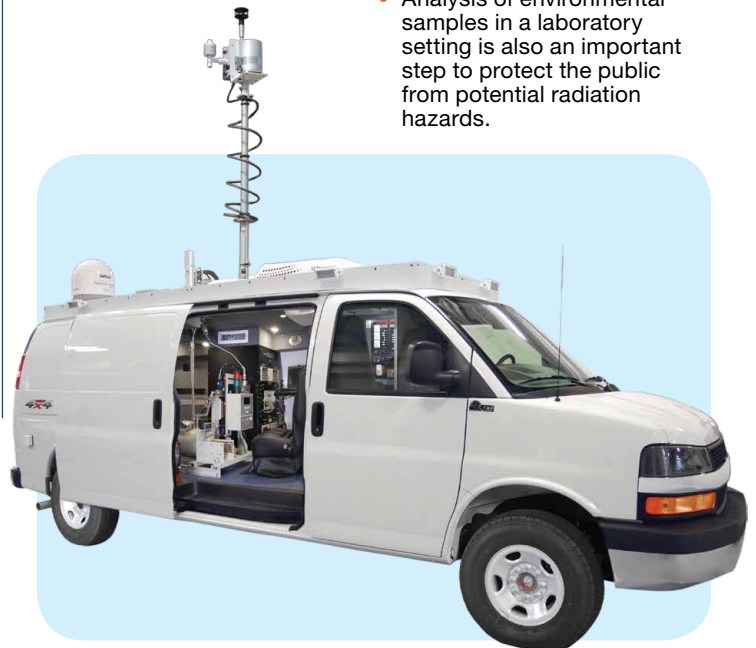


KEY BENEFITS

- ➔ Workers dose reduction (ALARA principle)
- ➔ Improved impact on environment
- ➔ Data storage of results for history
- ➔ Real time display of results

Objectives:

- To evaluate the real time contamination in nuclear sites, it is important to continuously monitor for, and measure, releases of radioactive material into the environment.
- The dispersion of radioactive materials is sometimes strongly affected by wind direction and velocity. The characterization of air, water, soil and vegetation samples for radioactive materials is necessary.
- Analysis of environmental samples in a laboratory setting is also an important step to protect the public from potential radiation hazards.



Mobile vehicle for performing real-time measurements to determine actual field deposition and dispersion of radiation for environmental surveying



Expertise for Challenging Measurements

CANBERRA can customize the solution based on the unique requirements of the situation. All the solutions offered in this flyer can be thoroughly performed by our Measurements & Expertise (M&E) team, without any purchase of products or systems.



MIRION
TECHNOLOGIES

Real-time environmental monitoring solution

iCAM continuous air monitor

The intelligent Alpha/Beta Continuous Air Monitor (iCAM) provides robust and reliable real-time monitoring of airborne particulate activity in the workplace. iCAM uses an ion-implanted silicon radiation detector. It acts as a simple alarming monitor for operators with the sophistication required to provide low false alarm rates and high protection levels.

Performance

- Continuous total airflow recording and reporting.
- User-set alarms with local and remote reporting.
- One-week data storage with detailed event log.
- Thirty minute protection of full functionality by built-in battery backup without external pump.
- Optional remote gamma probe.

Key benefits

- Auto-adaptive spectrometric compensation for natural radon/thoron progeny background, yielding lowest false alarm rate in the field.
- Rugged steel enclosure which provides IP54 environmental protection.
- Stable long-term low level measurements.



ICAM Alpha/Beta Air Monitor (iCAM)

EcoGamma™-g Radiation Monitor

CANBERRA's EcoGamma-g is an advanced, dual detector, environmental gamma radiation monitor designed to operate in the most extreme conditions with unsurpassed accuracy, range and stability.

Key benefits

- Environmentally robust housing provides stable, reliable performance in demanding operating environments.
- Built-in temperature monitoring provides supplemental meteorological information and aids.
- Total Integrated Dose (TID).
- CANBERRA's unique "Time-To-Count" technique eliminates dead time and saturation effects of conventional GM detectors.

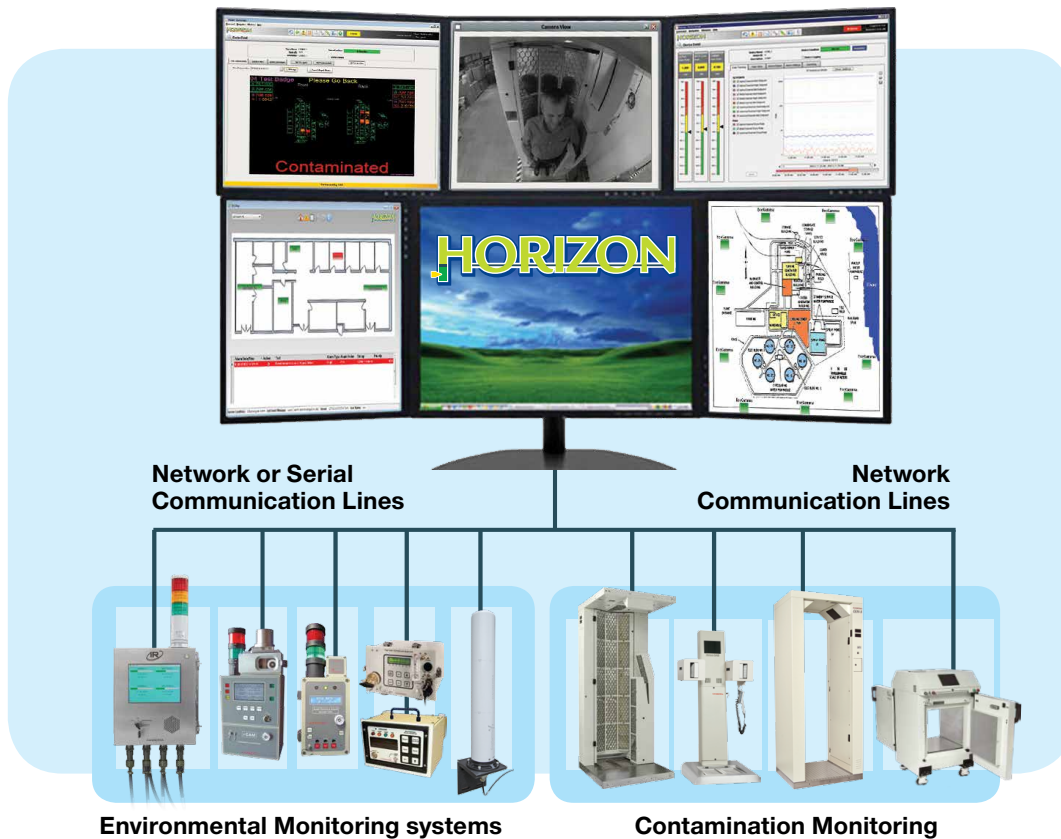


Continuous Monitoring of Environmental Gamma Radiation

Horizon® Supervisory Software System

Features are:

- Supervisory software for remote access to radiation and environmental monitoring instrumentation and personnel/object contamination monitors.
- Preconfigured instrument array provides easy and fast setup & configuration.
- Web-based client application provides access to data and control functions from multiple workstations.
- Rich SCADA tools provide advanced graphic controls for visualizing your data.
- Simple navigation between monitored areas and individual instruments.



Laboratory sample measurements

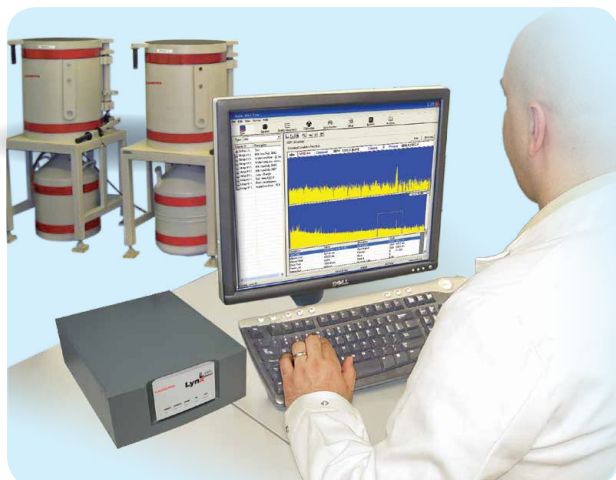
Apex-Gamma™ Radiological analysis system

Technical description

- This system is capable of identifying and quantifying virtually all nuclides found in a sample. It can be calibrated for typical sample types in a range of common sample containers without the use of radioactive sources.

Key benefits

- High purity germanium detector for gamma spectroscopic analysis of processed or raw food products or any other type of environmental samples.
- Full radionuclide report and automatic notification if nuclide-specific maximum permissible concentrations are exceeded.
- Shields offered that support samples of 4-liter Marinelli size and smaller or 1-liter and smaller.



Apex-Gamma™ System – HPGe-based spectroscopy system for environmental samples

Transportable radioanalytical labs

Technical description

- Mobile labs allow laboratory-grade analysis to be performed in the field, where the samples are, or they can back up a standard count room overwhelmed by additional sample load.

Key benefits

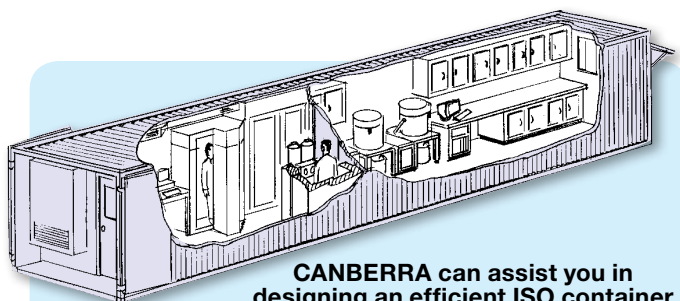
- Turn-key transportable laboratory solutions, which include design, equipment selection, installation, calibration and training.
- Equipment can include gamma spectroscopy system (with HPGe and/or NaI detectors) and alpha/beta counters for samples.
- Includes the design and construction of labs in vans, trucks, trailers and ISO international standard modules and in a variety of semi-permanent and mobile configurations.



iMatic™: Gasless Automatic Alpha/Beta Counting System



iSolo®: Portable Gasless Alpha/Beta Counting System



CANBERRA can assist you in designing an efficient ISO container or vehicle-based laboratory.



For more information, review the complete case study on our website:
www.canberra.com/measurements-expertise