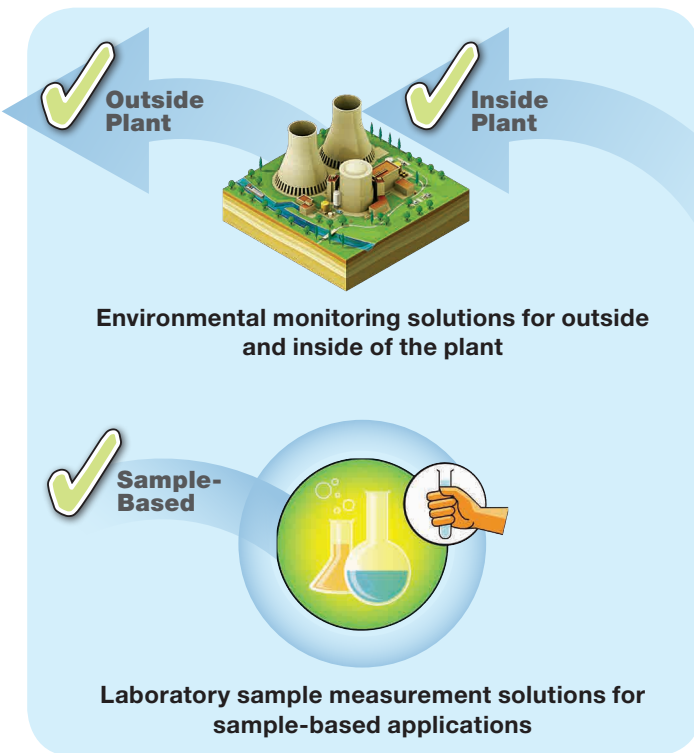


Environmental Radiation Monitoring

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.

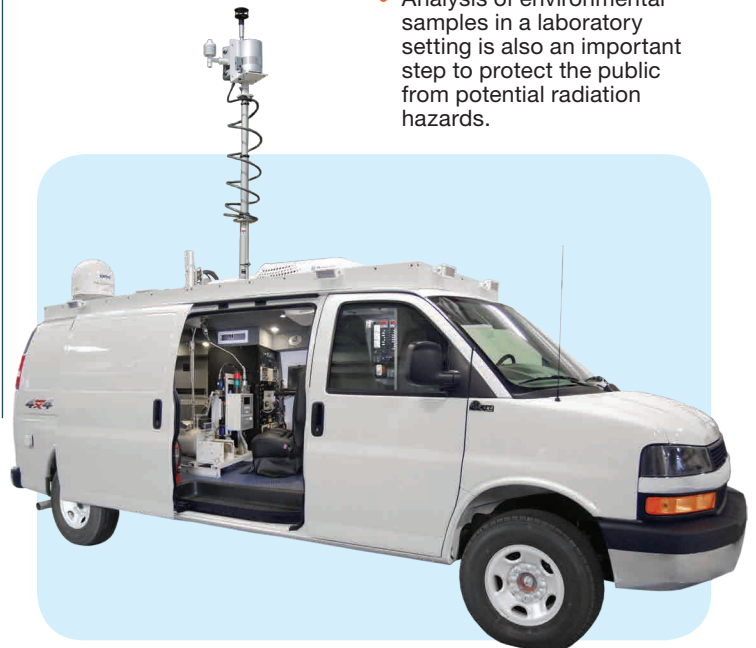


KEY BENEFITS

- ➔ 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



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. The iCAM monitor 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

The EcoGamma-g monitor 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).
- Our unique “Time-To-Count” technique eliminates dead time and saturation effects of conventional GM detectors.



Continuous Monitoring of Environmental Gamma Radiation

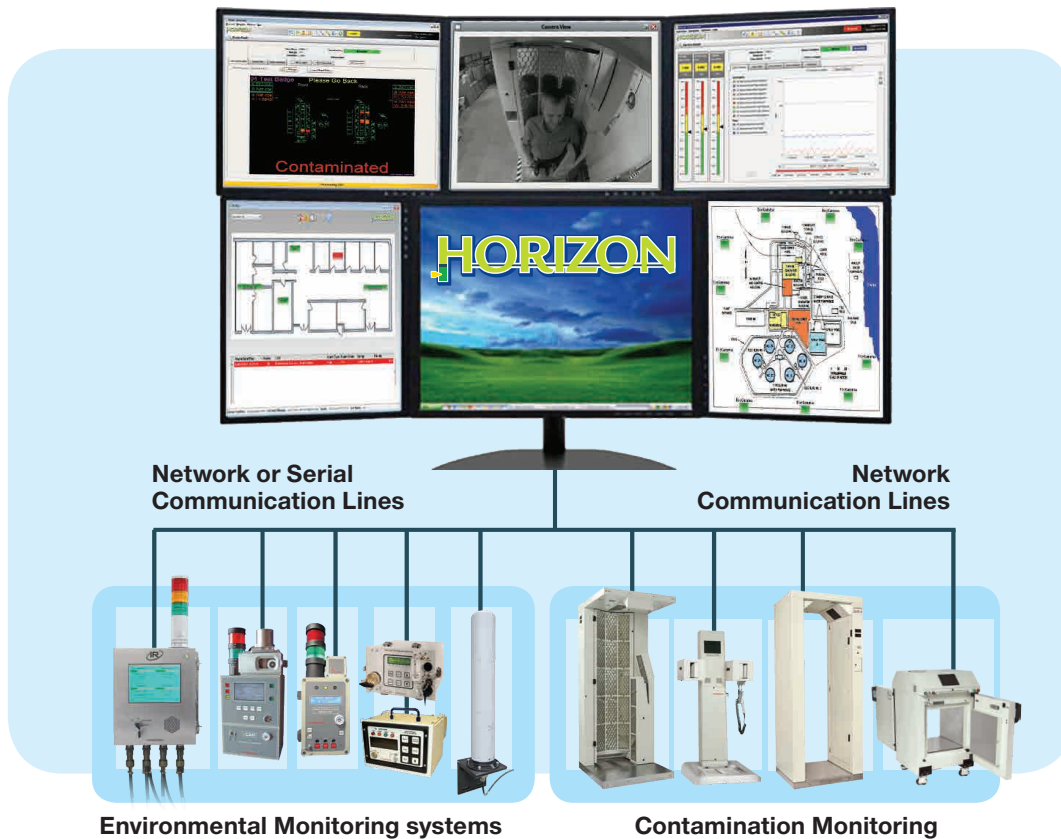
Environmental Radiation Monitoring

D&D Capabilities and Solutions

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

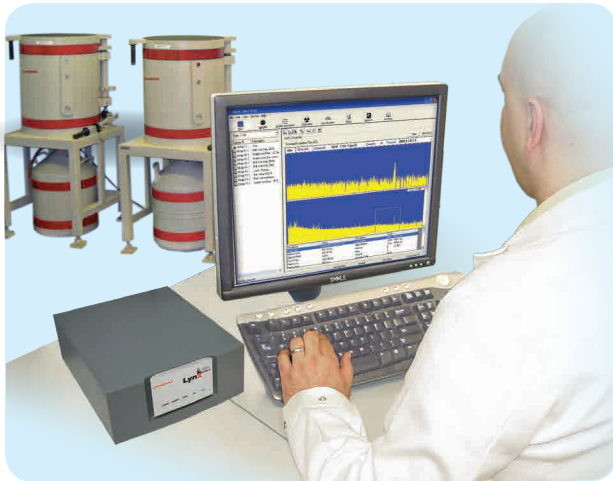
Apex-Gamma™ Radiological analysis system

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

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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

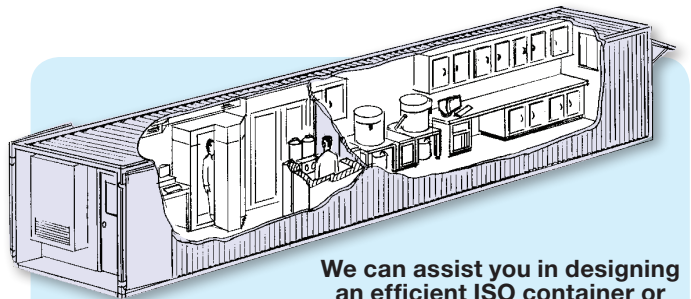
- Turn-key transportable laboratory solutions, which include design, equipment selection, installation, calibration and training.
- Equipment can include gamma spectroscopy system (with HPGe and/or NaI detectors) and alpha/beta counters for samples.
- Includes the design and construction of labs in vans, 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



We 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