



# Save Time, Money and Dose ...

with the Canberra™ CSM-GR1™ Monitor...

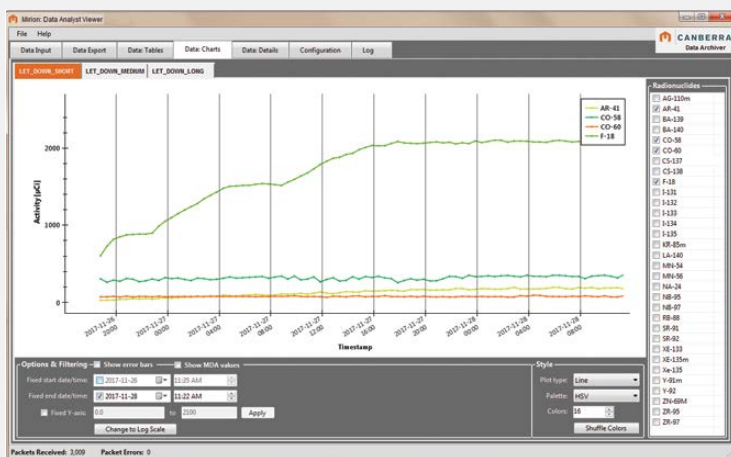
## The CSM-GR1 Continuous Spectroscopic Monitor includes:

- **GR1™** Compact CZT Spectrometer with 2% FWHM for easy nuclide ID
- **GR1-SHIELD™** Tungsten Shield and three collimators – only 8.6 kg (19 lb)
- **GR1-ACC™** Carbon fiber tripod and carrying case (optional)
- **DA-PRO™** Data Analyst module with:
  - Trusted Genie™ 2000 and ISOCS™ software algorithms for data processing and analysis
  - Can perform multiple analyses simultaneously with different count times, nuclide libraries, and analysis parameters
  - Web-based GUI for control and data review
  - Support for Canberra EcoGamma™ monitor if local dose rate also needed along with spectral data
  - Wired Ethernet, USB and wireless communications
  - GPS for environmental measurement location coordinates
  - Internal memory for local storage of months of spectral results
  - Also compatible with:
    - Lynx® DSA and HPGe detectors
    - Osprey® Tube Base MCA and scintillation detectors
- **PC or Tablet** for set-up, results viewing and data archival
  - Requires Genie 2000 and ISOCS software for data reanalysis or generation of ISOCS geometry models
  - Allows user to quickly generate new efficiency calibrations using ISOCS software
  - PC connection not necessary for data acquisition as the Data Analyst starts operation upon power up

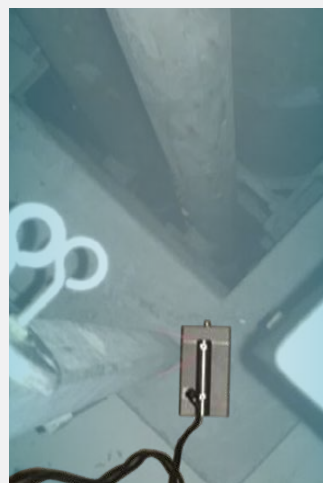


## CSM-GR1 Continuous Spectroscopic Monitor features:

- The compact size and remote operation capability of the CSM-GR1 monitor allows it to fit into small spaces while the operator is at a safe distance away
- Results available immediately – no waiting for sample collection, processing and analysis in the count room
- Data shows short term variations in nuclide concentrations that are not discernible with typical 4 or 8 hour grab samples
- No cooling fans in electronics eliminates risk of internal contamination
- Quick installation for minimal dose, with no additional dose incurred during operation
- User can easily create new efficiency calibrations (pipes, tanks, stacks, etc.) on the PC and upload them to the Data Analyst module for immediate use
- Compatible with Mirion® WRM2™ wireless modules and Horizon® Supervisory System software
- GR1+ spectrometer, shield and PC can be used without the Data Analyst module for conventional in situ spectroscopic analysis of plant components:
  - Waste assay – containers and objects
  - Evaluation of spills or leaks
  - Assay of filters
  - As part of an Emergency Response Kit



Multi-nuclide Trend Plot of Reactor Coolant over 36 hour period



GR1-Shield near Reactor Coolant Pipe

- The system was deployed to monitor nuclide-specific activities in reactor coolant
  - All nuclides in the library can be trended individually or together in one plot

**Reduce dose and get real-time isotopic data for high-activity, in situ measurements with the CSM-GR1 Continuous Spectroscopic Monitor.**

Learn more about the CSM-GR1 monitor and other members of the Mirion monitoring family:

