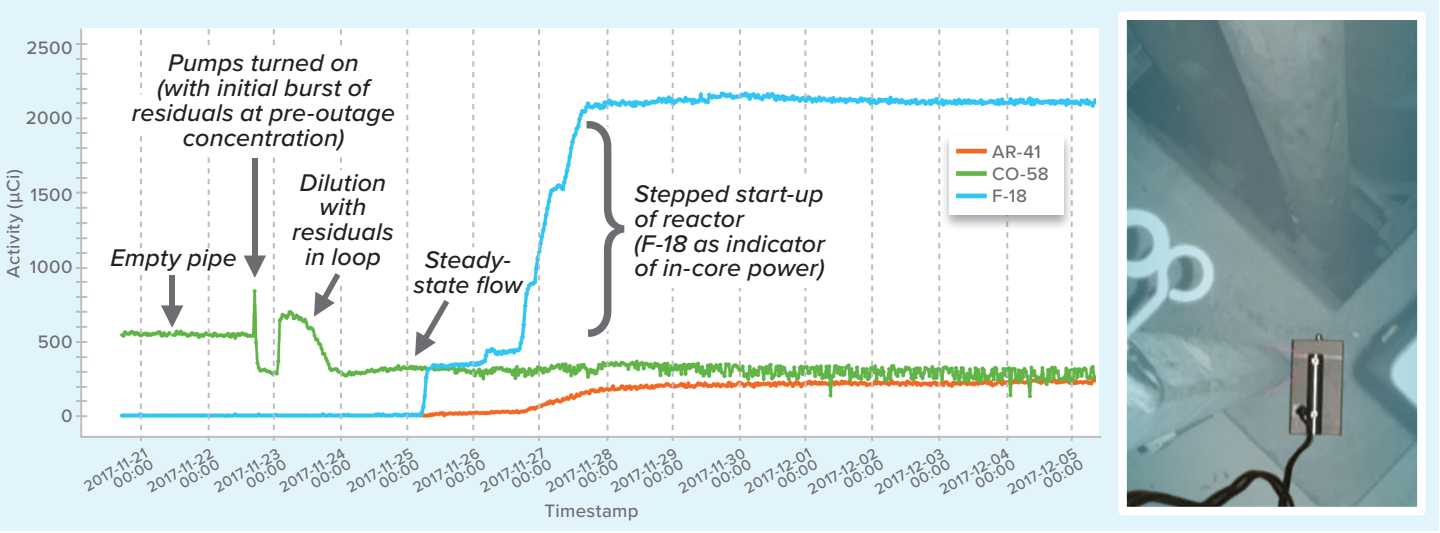
MIRION TECHNOLOGIES

Get the Gamma-Isotopic Information You Need to Make Decisions... *NOW!*

... with Mirion's CSM-GR1™ Continuous Spectroscopic Monitor

Why wait for grab samples to be processed when you can have a continuous feed of gamma-isotopic results?



Example analysis of letdown pipe during outage using the CSM-GR1

- The small size and room temperature operation of the monitor's CZT detector / shield allows it to be placed wherever you need.
- Specialized shielding and collimators allow the monitor to be used in very high background areas.
- With no cooling fans, there is no risk of internal contamination.
- Measurements are performed using Mirion's industry-leading **Genie™ 2000/ISOCS™** gamma spectroscopy software which is embedded in the **DA-PRO™** Data Analyst module.
- **CSM-GR1** results have been shown to mirror the results of periodic grab sampling.
- Concurrently trend as many nuclides as you like with the **DA-Prospector™** Results Viewer Software.
- Generate activity data as frequently as needed for rapidly or slowly changing measurement situations.
- The **DA-PRO** module can also process local dose data from the **EcoGamma™** Gamma Radiation Monitor for trending.
- The **DA-PRO** module can send data to remote locations, even off-site, for real-time review and analysis.

EcoGamma™ Gamma Radiation Monitor

CSM-GR1 Monitor consists of:
DA-PRO Data Analyst module, GR1+ Detector, GR1-Shield and GR1-ACC Tripod and Carrying Case

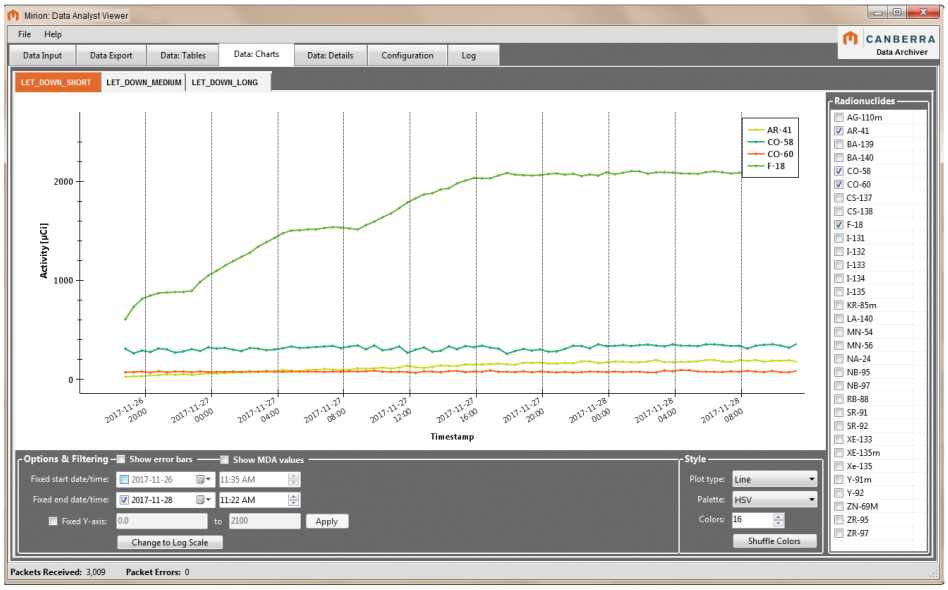
By reducing labor and dose, the CSM-GR1 Monitor will help you Deliver The Nuclear Promise

continued on back

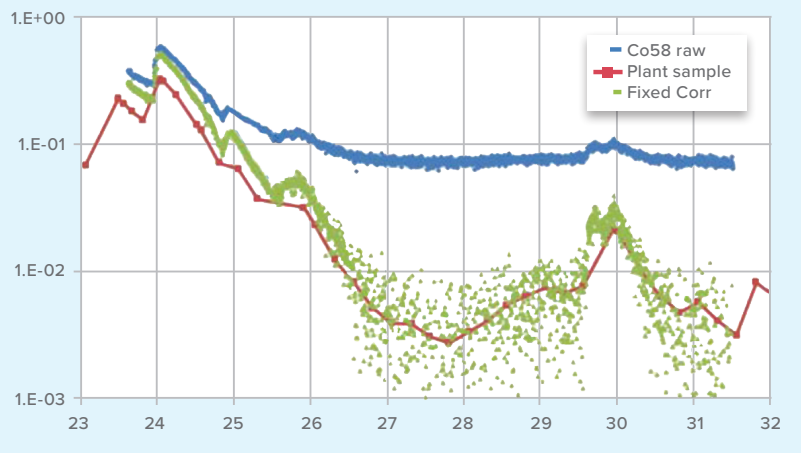
MIRION TECHNOLOGIES

So where and how can the CSM-GR1 Continuous Spectroscopic Monitor help you make decisions in real time *with virtually no dose to workers?*

- **Real-time radiation field monitoring**
  - Forecasting how areas will be affected (e.g. by fuel leak) and aid in minimizing exposure by knowing the radionuclide mix
- **Primary coolant monitoring**
  - Liquid phase (PWRs), liquid or gaseous phase (BWRs)
  - Monitoring during early outage for Co-58 (PWRs) or Co-60 (BWRs) concentration
  - Correlate transients to core activities, e.g. to localize "leakers" during local flux depression operations, without the delay of grab sampling
  - Radionuclide-specific corrosion product trending during oxidation processes
- **Moisture carry-over measurements via Na-24 or Co-60 in the steam**
- **Early detection of increased presence of radionuclides in secondary side**
- **Monitoring of liquid/gaseous effluents to identify any transients between grab samples**
- **Monitoring of resins to determine total accumulation in tanks/beds**



DA-Prospector™ Results Viewer Screen



Plot showing correlation of CSM-GR1 data to Grab Samples (red line)

Save Time, Money and Dose with Mirion's CSM-GR1 Continuous Spectroscopic Monitor!

www.mirion.com

OPS-829 - 03/2019