

NO MORE 'SOS' SIGNALS FOR SOS

Southern Oregon Sanitation implemented a D5 RIID and D3M to correct a misidentified radiological contaminant, and mitigated the incident on site successfully as a result.

Summary

A significant amount time and money was saved by Southern Oregon Sanitation when our D3M and D5 RIID detectors revealed a misidentified a radioactive source to be Lutitium-177, instead of Cobalt-57. With a difference in half-life of 284 days, extensive and unnecessary mitigatory action was quickly avoided, and the incident dealt with appropriately.

Aiming for efficient, cost-effective and sustainable waste management

In the world of waste management, [Southern Oregon Sanitation \(SOS\)](https://www.sosanitation.com/) are no 'one-trick-pony'. Operating for over 70 years as a family-owned business across Josephine, Jackson and Klamath County, SOS serve over 27,000 customers with regular garbage pickups and other residential services. They manage a broad variety of waste types such as solid, medical, wood, commercial, industrial, household and more.



Visit their website here:
<https://www.sosanitation.com/>

Now that's a lot of people, and a lot of waste

At any moment, a piece of equipment or waste item arriving at a waste management facility may be contaminated with a radioactive source(s). With different half-lives (the time it takes for the source's radioactivity to decrease by half), waste management sites like SOS must be aware of the specific source(s) present to ensure the appropriate action can be taken effectively, safely and in a cost-effective manner. This allows the business to get back up and running again in the shortest time possible, with minimal losses.

Recently, one of SOS' garbage trailers was flagged for a radiological signature at the local land-fill, with the portal monitor detecting an unknown substance. The initial readings suggested the radionuclide present was Cobalt-57, resulting in the team starting to investigate the implications of a source with such a long half-life (291 days!) and the necessary procedures to manage the specific event.

NO MORE 'SOS' SIGNALS FOR SOS

Kromek detectors on the case

To confirm the identity of the identified radionuclide, SOS were loaned a [D5 RIID](#) and [D3M](#). These detectors produce rapid, accurate gamma and neutron radiation alerts in-field.

The D3M constantly monitors the environment for radioactive sources, and with an ultra-low false alarm rate, workers are only interrupted in the event of a real incident. This personal radiation detector (PRD) also stores spectral data locally for later extraction and inspection, facilitating plans for risk mitigation.

A significant amount time and money was saved by Southern Oregon Sanitation when our D3M and D5 RIID detectors revealed a misidentified radioactive source to be Lutitium-177, instead of Cobalt-57. With a difference in half-life of 284 days, extensive and unnecessary mitigatory action was quickly avoided, and the incident dealt with appropriately.



Time, money and a whole lot of effort, saved!

By deploying these two detectors, SOS discovered that the detected radioactive source was actually Lutitium-177, not Cobalt-57. This correction made mitigation a whole lot easier, due to the identified Lutitium-177 having a half-life of only 7 days! Phew! Panic over, and no unnecessary action taken.

NO MORE 'SOS' SIGNALS FOR SOS

David Ingledue, the Safety & Compliance Manager at SOS praised the effectiveness of the Kromek devices in the resulting mitigation of the event, stating:

“The amazing devices made by Kromek enabled our teams to properly identify the radionuclide and take appropriate action to mitigate the incident. Since this, our company has purchased multiple Kromek D3M PRDs (Personal Radiation Detector) and a D5 RIID (Radioisotope Identification Device) so we may be proactive with any future events. Thank you and Kromek for manufacturing such incredible devices.”



No more SOS signals needed

Currently, the D3Ms are being worn by SOS' transfer station employees, and successfully alerted them to two detected radioactive sources. The D5 RIID was then deployed to identify these sources, revealing the waste itself was not irradiated, but instead the customers were themselves after having undergone radiation therapy! As a result, the solid waste was able to be disposed of in the proper manner. These in-field alerts supplied by both Kromek detectors enabled Southern Oregon Sanitation to remain proactive in radiological identification, and will facilitate the prevention of future incidents.

With a D5 RIID and several D3Ms now permanently equipped, SOS are primed to respond to any future incidents with speed, efficiency and confidence, allowing their daily routines and waste management processes to continue with minimal interruption.