ORS
Office of Radiological Security
Protect · Remove · Reduce

THE INFORMER

Issue 32 **April 2019 - May 2019**

International Association for Healthcare Security and Safety

The Office of Radiological Security (ORS) attended the 2019 International Association for Healthcare Security and Safety (IAHSS) annual conference and exhibition in Lake Buena Vista, Florida from May 20-22. While ORS participated in this conference previously, this was the first time the laboratory Outreach leads staffed the ORS booth. With more than 675 participants and the largest one in IAHSS history, this event focused on tackling industry challenges and addressing issues with a focus on new trends and emerging technologies.

There were more than 75 exhibitors representing most of the industry sectors relating to security and safety in the healthcare industry. The exhibitors were primarily focused on security solutions, because the vast majority of the audience at the event was hospital security managers and their staff.

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"IAHSS conference is clearly a rich environment for making connections directly to hospitals through their security management, security contractors who work at hospitals, and security vendors who provide technology. "

Melanie Florez—SNL

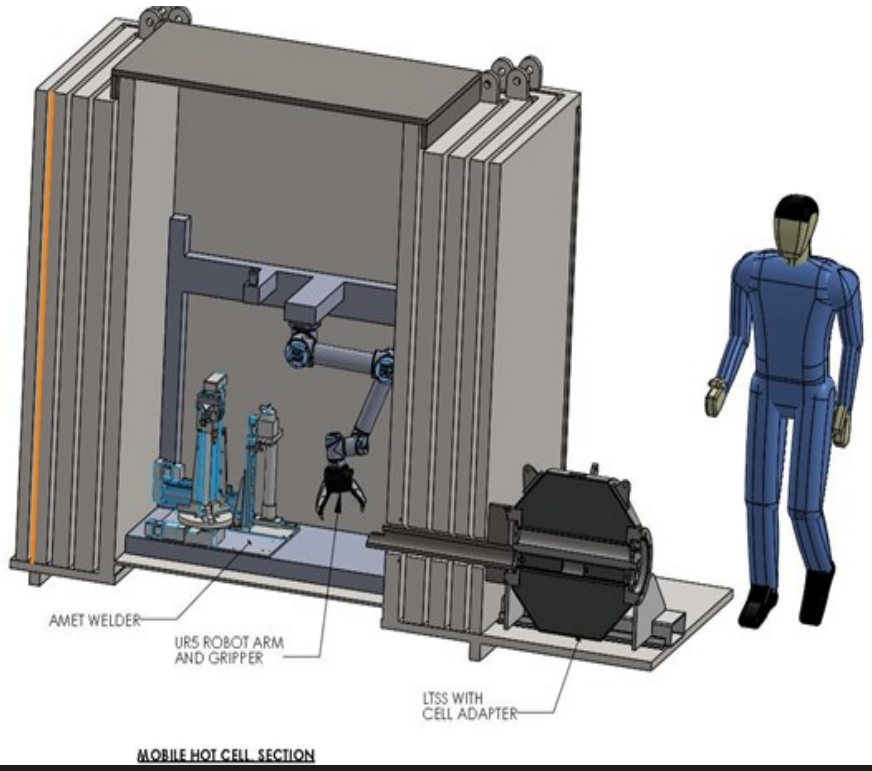
Melanie Florez representing ORS at the 2019 IAHSS

In This Issue

"If we can make these hot cells that are more user friendly using advanced technologies, we can make the process of retrieving radioactive materials safer and more efficient,"

Kathy McBride,

Program Manager of INL's Radioactive Source Disposition Program.



Mock-up of hot cell robotics, welding, and camera systems

Mobile Hot Cell for High Activity Radioactive Source Recoveries

While radioactive materials can play an important role in medical, research and commercial applications, in the wrong hands, they also pose a terrorism threat in the form of a dirty bomb or some other radiological dispersion device.

In order to address these threats, Idaho National Laboratory (INL) teams work to retrieve and dispose of unwanted, high-priority radioactive materials from medical facilities, research institutions and commercial facilities throughout the U.S. and abroad.

Typically, these teams secure the radiological device, seal it in a shielded container and ship it to an interim storage facility for consolidation and future disposal. There, experts remove the sealed radioactive materials from the device and store them in preparation for shipment to a DOE facility for long-term storage or disposal.

Occasionally, teams in the field must handle radioactive materials in the field and place them in shielded containers to meet shipping requirements. If a hot cell is too far away or not immediately available—which often occurs during international source recoveries—the team may choose to consolidate the material and send it directly to an approved storage location.

INL researchers are currently working on a mobile hot cell that would allow handling and consolidating radioactive materials while providing maximum protection and security for retrieval crews.

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ORS in the News:

https://twitter.com/search?q=NNSA%20ORS&src=typd&lang=en

https://nnsa.energy.gov/blog/nnsa-campaign-focuses-radiological-security-u.s.-cities

YouTube

Mock-up of hot cell robotics, welding, and camera systems on display and demoed at 2019 Waste Management Symposium

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This state-of-the-art hot cell uses advanced robotics, 3-D cameras and special monitors that allow increased depth perception to remove the radiological material from the device, deposit the material in a canister, weld the lid on the canister and place the canister in the shielded container.

The walls of the hot cell can consist of up to five layers of steel—similar to a Russian nesting doll—that provide up to 15 inches of shielding between the radioactive material and the operator. The cell is adaptable and configurable, allowing the robot to be attached at virtually any location within the cell to handle a wide range of radiological devices.

The method is an improvement on current hot cell technologies that require operators to use mechanical manipulators. The operators perform these tasks while looking through special glass windows that do not completely shield the operator from radiation.

The new hot cell is designed to fit on standard shipping racks and transporting the cell would require two tractor-trailer trucks. The hot cell weighs less than 80,000 pounds, and could be placed on a C-130 or a similar transport plane.

While current, mobile hot cells might require as long as a month to assemble, this new design could be assembled in one to three days.