

IAEA International Conference (Safe and Secure Transport of Nuclear and Radioactive Material) – March 2026; Vienna, Austria

Mitigating the risk: Improving Insider Threat Mitigation, Ensuring Security of Cat. 1 and 2 disused sealed radioactive sources during transport, and lessons learned from implementation

C. Ruggiero – LANL, M. Wald-Hopkins – LANL, W. Stewart – LANL

M. Klatt – ORNL, S. Morgan – ORNL

P. Crane – INL

The National Nuclear Security Administration's (NNSA) Office of Radiological Security (ORS) strengthens US national security, as well as global security, by eliminating the threat of disused sealed radioactive sources (DSRS). To ensure that this mission is carried out successfully, LANL, INL and ORNL recognized a strong case for improvements in insider threat mitigation which led to the authorization, development and implementation of a stand-alone Insider Threat Mitigation Program (ITMP) for the Off-Site Source Recovery Program (OSRP).

The OSRP insider threat program's goal is to ensure that the risks to OSRP-funded recoveries and transports from actions taken by insiders, whether malicious or inadvertent, are understood and mitigated. The challenges to this are different than in mitigation of insider threats within a single organization or employer: OSRP projects involve numerous different stakeholders from NNSA, the national laboratories, as well as subcontractors for commercial industry, other academic or government institutions, and end user sites, as well as local law enforcement agencies, each with different awareness of insider threats, and different perspectives on insider threat risks and security needs. The removal projects require a high level of coordination and information sharing across these stakeholders to ensure success and strengthen security during operations, but this adds cross-organization challenges to mitigating insider threats.

The success of the OSRP ITMP program relied heavily on an in-depth assessment of OSRP work processes from the frontline practitioners who have been involved in recovery operations, in order to identify security-sensitive activities where ITMP mitigations could be implemented. Additionally, a Working Group (WG) was formed comprised of subject matter experts from the DOE national labs responsible for OSRP operations with nuclear transport security and insider threat mitigation experts that fostered a strong collaborative relationship with stakeholders to facilitate improvements in mitigations within their unique organizations, and improve communication and information sharing across organizations. Lastly, the establishment of communication and information sharing mechanisms that improved the awareness of insider threats across all stakeholders, provided assistance with insider threat mitigation resources, capabilities of the participating organizations.

Early "lessons learned" from ITMP implementation showed that Engagement in the field was incredibly powerful and effective. Having OSRP ITMP working group members attend recovery operations adds an ITM component real time with active discussions. These discussions allowed for scenario building and resolution as well as open and frank discussion on ITM.

As program implementation grows through greater interactions with OSRP subcontractors and the material transport industry, a broader acceptance of ITMP goals and objectives is anticipated, leading to new lessons learned for sharing with government and industry participants.