

Pilot of the International Atomic Energy Agency's (IAEA) Advanced, Practitioner-Level Training Course on Preventive and Protective Measures Against Insider Threats

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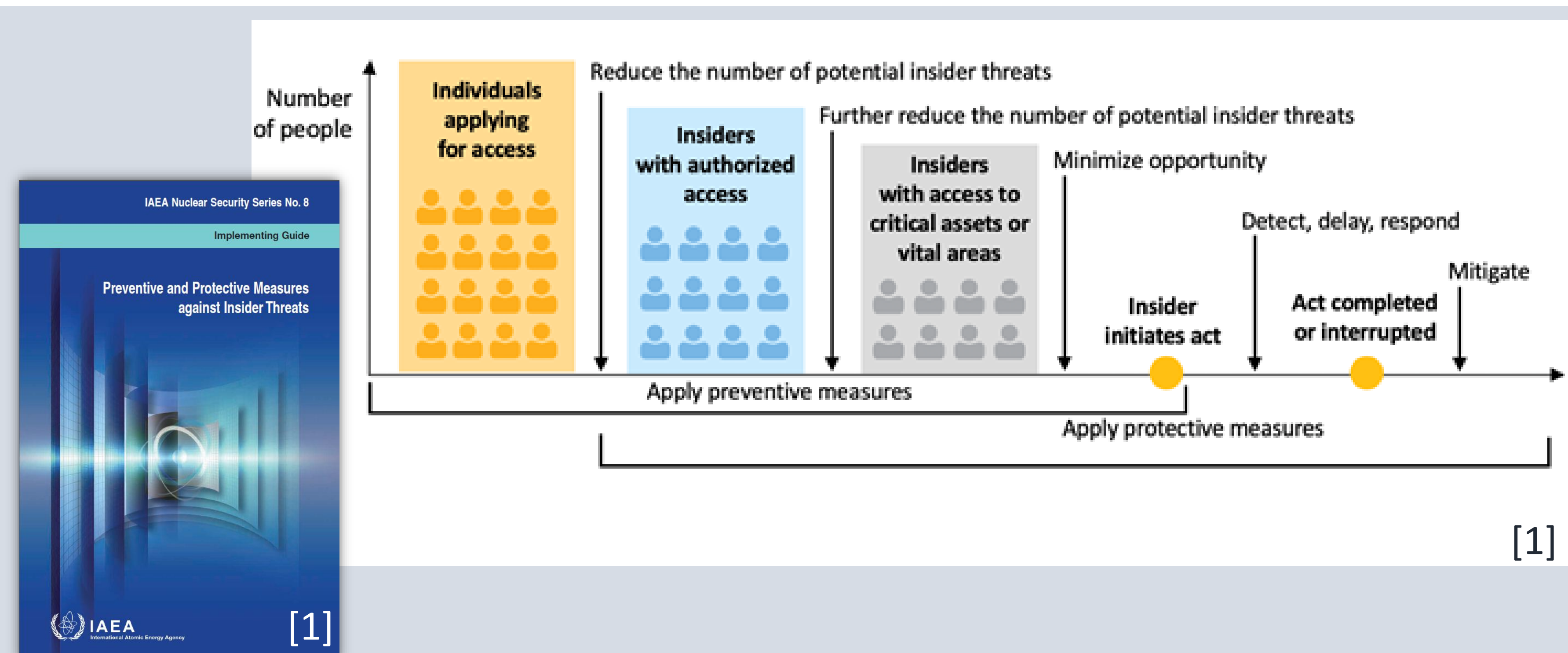
Background: The “Joint Statement on Mitigating Insider Threats” circulated by the International Atomic Energy Agency (IAEA) as Information Circular (INFCIRC) 908 emphasizes the threat to nuclear and radioactive materials and facilities posed by insiders. To support States in mitigating this threat, INFCIRC 908 includes a commitment by the subscribers to support the IAEA in developing and implementing an advanced, practitioner-level training course on preventive and protective measures against insider threats. Subscriber States have fulfilled this commitment through developing the course materials and piloting the course 15-19 July 2019 at Sandia National Laboratories (SNL) in Albuquerque, New Mexico, United States of America. This course reflects a strong international collaboration with course development and subject matter expert contributions from eleven Member States, the IAEA, and Interpol.

Course Goals and Topics:

Participants will leave the course with the following:

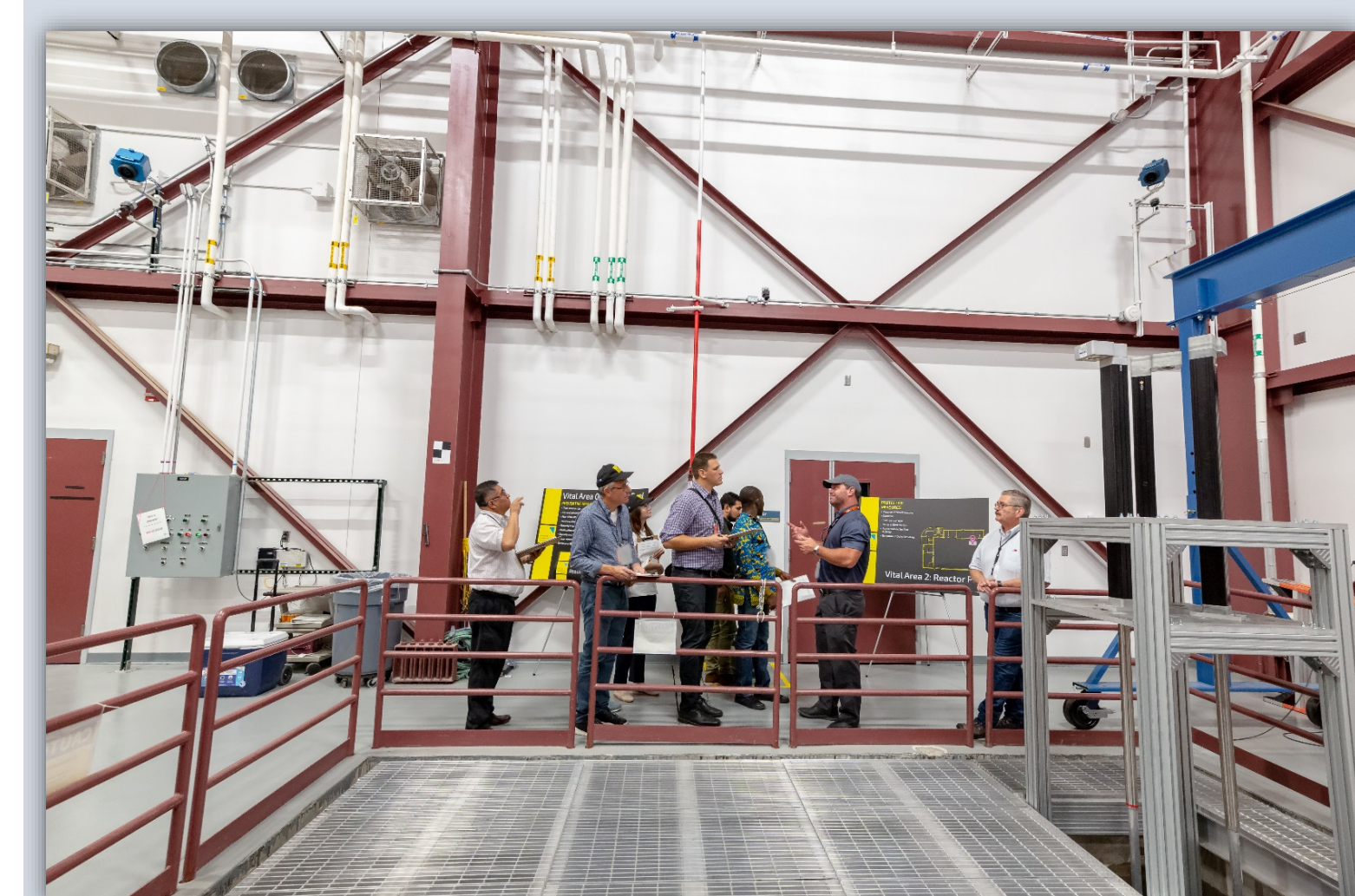
- (1) International examples of how key insider threat mitigation elements can be successfully implemented in a variety of nuclear facility types
- (2) New knowledge and skills to assist in assessing the effectiveness of their own programs
- (3) Knowledge of current research and forward leaning topics related to insider threats
- (4) An understanding of the importance of validating measures and procedures as defined on paper with real implementation and operational information

This course covers foundations of an insider threat mitigation program, insider characterization, preventive measures, protective measures, and system effectiveness evaluation.

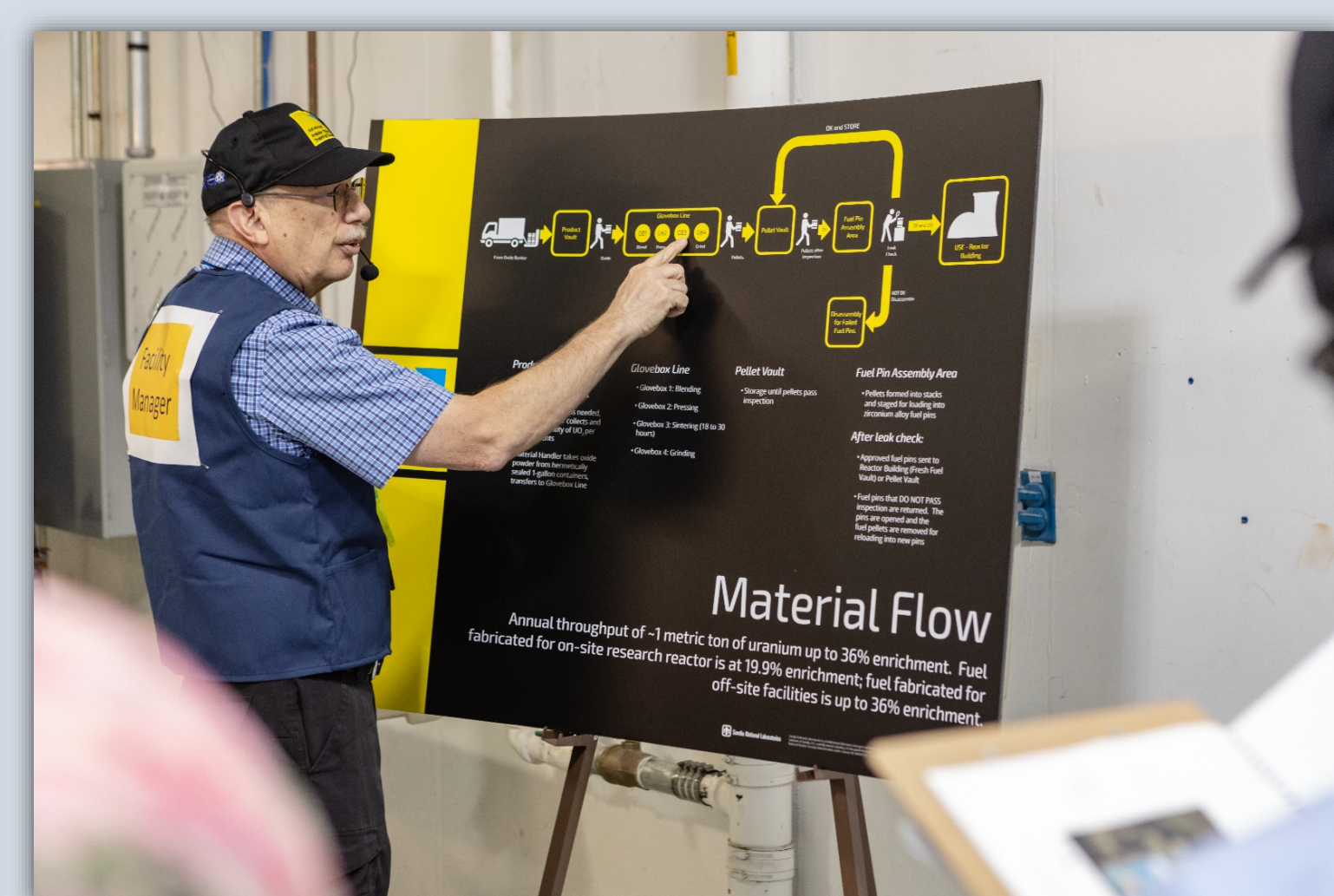


This course emphasizes the practical application of the insider threat preventive and protective measures described in [1] and highlights the complementary and overlapping nature of these measures.

To achieve the goals above, this course incorporates small group exercises in a mock fuel fabrication facility and a mock research reactor to allow participants to see and interact with measures in a realistic environment, hands-on activities with real security equipment, presentations by international experts and practitioners about how they implement measures in their own facilities and countries, and panels on how measures have been implemented at different types of facilities and current insider threats related research.



Participants discuss the operations at the mock research reactor with an instructor to assess how well they are implemented.



An instructor explains the material flow and operations in the mock fuel fabrication facility.



Participants discuss an insider adversary scenario in the mock research reactor with an IAEA expert.



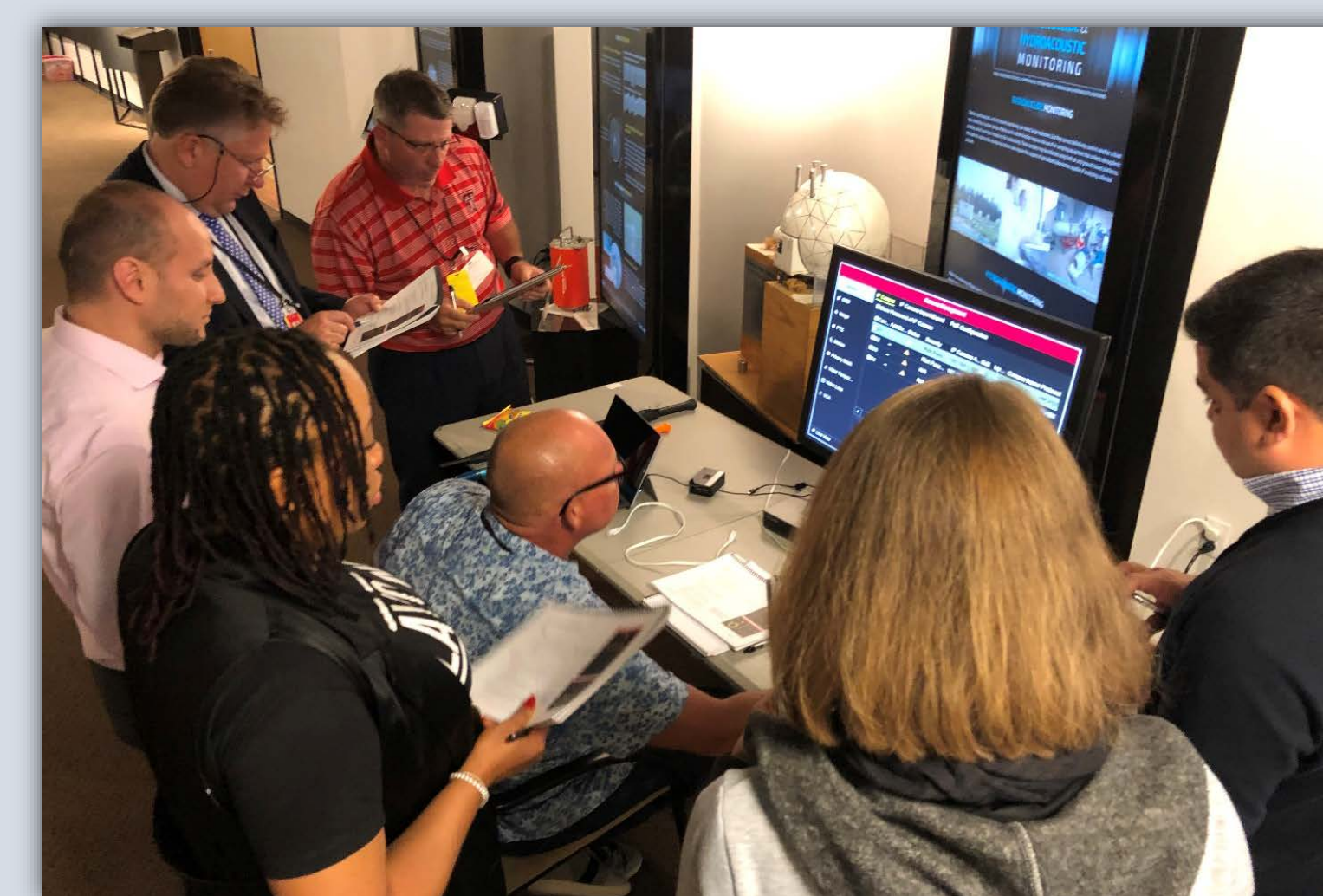
An instructor answers participant questions about the operations of the mock fuel fabrication facility.



An instructor explains the entry and exit procedures and protective measures in the fuel fabrication facility.



An instructor explains how system effectiveness against insider threats is assessed in his country.



Participants completes a hands-on exercise to learn how a cyber insider threat could compromise a camera.

Course outcomes and next steps:

Participants indicated that they found the course to be very useful. In particular, the participants found the realistic exercises and discussions valuable and took away ideas on measures to implement in their own facilities and countries as well as the importance of addressing the insider threat. The course development team will support the IAEA in reviewing and revising the course materials based on participant feedback. Revisions will include more depth on the foundations of an insider threat mitigation program, time for the hands on and discussion activities, refining and clarifying the exercises and activities, and introducing more standardized modules to introduce key topics and frame the course. The IAEA will offer this course again in September 2020, hosted again by Sandia National Laboratories in the United States. Other interested Member States may host future courses.

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References: [1] IAEA. (2008) Nuclear Security Series No. 8 *Preventive and Protective Measures against Insider Threats* (and draft revision NST-041).