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Second Line of Defense Roadmap Meeting:

J. Rennie, J. Toevs

Washington, DC., September 5-7, 2012

Los Alamos National Laboratory



New Initiatives

I. Suggested Topics

- Science Team can contribute more broadly to SLD
- CNS, GNDA Initiatives
- Sustainability
- Spectroscopic mobile systems
- Surge capacity
- Secondary standards

III. Other Topics If Time Allows

- Ongoing constituency building
- Formal peer review and comment resolution
- Advanced technology – air cargo monitors, NII and AI systems



Broaden Science Team Contribution

We (the Science Team) can be more proactive – past examples:

- RIIDs test for performance with container traffic
- MDS performance in off-normal deployments

This is a two-way street:

- We can let SLD know how we can help
- But only if there is two-way communication

Suggestions

- Engage the Science Team through participation in real-time discussions, briefings, planning and strategy activities at HQ
- Or expand the role of the COS person (currently Steve Anderson) to include keeping Science Team advised of developments



CNS, GNDA Initiatives

- Inspection protocols – ask lab experts to provide their perspective on what did and did not work for MPC&A (Gerrard comment)
- Determine how host countries intend to use deployed systems
- Determine host countries' performance expectations
- Consider different detection standards for different operational modes consistent with traffic speed, distance, background variation, etc.
- Further develop predictive tools for mobile systems to assess their detection capabilities in various operational modes
- Test to benchmark predictive tools



Sustainability

How the Science Team may help:

- Develop better ways for local operators and forward-deployed personnel to check the calibration of monitors--such as looking at what info on gains and settings can be had by using the two gamma sources that are available.
- Develop a set of industrial sources and a red team to challenge different sites – a team that could put different industrial sources in containers, either announced or unannounced, and challenge the operators to find and identify the sources.
- Skill set shelf-life of operators is short unless exercised. In addition to making sure that operators were performing scans properly, red teaming could relieve some of their boredom and refresh their skills.



Spectroscopic Mobile Systems

- Investigate alternatives to gross-counting mobile systems if MD-134 capability is insufficient for host country's needs
- Draw on RSL experience to inform decisions on approach and spectroscopic system effectiveness in operational modes
- Conduct tests to assess detection and identification capabilities in intended operational modes



CNS Surge Capacity

- Can the Science Team contribute technical input to methodology employed in a surge?
- What are the users after?
- What sort of intelligence is available that would inform best choice of response?
- Science team should stay abreast of GNDA and CNS developments to provide best possible support.



Secondary Standards – RIIDs Path Forward

Based on Secondary Standards WG results, apply to RIIDs

- Bring a few LANL and ORNL scientists together to issue a joint report on our RIIDs tests for intermodal shipping container traffic
 - Recommendations for improving RIIDs performance
 - How improved performance can enhance secondary screening
 - Look at ORNL results with backpack -- does it outperform the RIIDs?
- Having prepared the vendor reports, engage with the vendors to see whether:
 - Different settings will provide better performance toward SLD threat goals
 - If not, work with them to improve their internal TAAs
 - If not successful, work to get GADRAS or MIMS or more capable TAA installed
- Test RIIDs against sources in minivan (light conveyances)
 - Test plan already written, needs updating



Improving Effectiveness of Current Equipment

- Secondary screening CONOPS to detect goal quantity threats
- Cooperative interaction with RIID vendors to improve TAA for SNM detection
- Defensible secondary referral rate reduction methods
- Increased use of reachback apparatus
- Improved collimation design-further reductions in background radiation