

## LA-UR-12-24428

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Title:	Second Line of Defense Roadmap Meeting
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Intended for:	Second Line of Defense Roadmap Meeting, 2012-09-05/2012-09-07 (Washington, District Of Columbia, United States)



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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

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## 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

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**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

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- **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

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## 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

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- 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

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- **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

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**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

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- **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**