BEST PRACTICES AND LESSONS LEARNED IN LANL APPROACHES TO TRANSPORTATION SECURITY

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Introduction

- **Programmatic mission**
  - unwanted radioactive and nuclear sealed sources of US origin

- **During transportation of nuclear material the risk of sabotage or theft is heightened.**
Physical Protection of Material in Transit

• Prevent theft and/or diversion for malevolent use
• Prompt detection, assessment, and reporting
• Prompt Local Law Enforcement Authority (LLEA) response
# Graded Approach for Implementation Controls

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Security Plan</th>
<th>State / City Notification</th>
<th>Engineered Delays</th>
<th>GPS Tracking</th>
<th>Intrusion Alarm</th>
<th>Additional Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Medium</td>
<td>O</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Low</td>
<td>N</td>
<td>N</td>
<td>O</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Y = yes, O = optional, N = no
Security Requirements

• Engineered
  – Hardened locks and doors
  – Stop Boxes
  – Real Time GPS tracking with or without intrusion notification

  ▪ Administrative
    – Notifications to appropriate authorities
    – Background vetted drivers
    – Transportation security plans
    – Procedure changes
LANL Lessons Learned
#1 Shipping Violation

- Air shipment of fissile material
- LANL-wide pause of all Class 7 shipping operations.
  - Corrective Action Plan
  - New Procedure
    - Use Every Time Checklists
#2 Unmonitored Shipment

- 94 sealed sources at a US commercial licensee
- The shipment quantities did not trigger any supplemental physical security or tracking requirements.
#3 Foreign shipment

- May 24th 2005 one 293Pu/Be was packaged in Uruguay for transportation to the US.
  - No support
  - Conflicting priorities
  - High costs
Conclusion

• DOE – owned truck
  – Real-time tracking
  – Stop box
  – Reliable drivers
  – Minimized transport time

• Improvements from Lessons Learned