TTX – Detection by Instrument Alert – Law Enforcement

Scenario Scope:

- Intended participants: operators, strategic decision-makers
- Pathways: instrument alert
- Domain/Modality: domestic interior
- Themes: planning, response, training

INTRODUCTION: Yesterday at approximately 3:00 PM a high-strength Radiological Dispersion Device (RDD) was detonated in a major shopping center in Capitol City killing 32 people (mostly due to the blast). Initial estimates are that approximately 75,000 people live and work in the vicinity of the blast and may have potentially been exposed to radioactive material. The Militant Armed Front (MAF) terrorist organization is taking credit for the attack and credible evidence suggests that a second vehicular attack on the city of Bayside is imminent. MAF is highly dedicated to their mission and is willing to sacrifice their own lives by detonating the device if interdicted by law enforcement. It is presumed that at least 2 of the dead in the Capitol City attack were MAF members. In response to this threat, all major cities in Centralia are on high alert, but Bayside law enforcement takes action to implement aggressive, yet covert, screening of vehicle traffic using immigration checkpoints. This will enable officers to covertly search vehicular traffic with radiation detection equipment with the objective of interdicting any vehicle-borne RDD and minimizing the chance that the adversary is alerted.

INJECT: In an effort to quickly enhance security particular to a radiological threat, the Bayside Law Enforcement Directorate is coordinating with local assets as well as the Centralia Ministry of Interior to ensure checkpoints are rapidly set up and staffed with officers having operational knowledge of Personal Radiation Detector (PRD) use, alarm adjudication protocols, and safe interdiction strategies. Bayside has a limited number of trained customs authorities who routinely screen for radioactive materials at the seaport; however the majority of the public safety/security officers have not received training on radiation detection equipment or interdiction tactics for at least 3 years. Sufficient equipment is also an issue. What is known about the checkpoint operations is as follows:

- 6 officers
- 1 Personal Radiation Detector (PRD)
- 2 lanes of traffic
- Radiation Isotope Identification Device (RIID) for secondary inspection in Bayside, reasonably could get to any established checkpoint in 30-60 minutes

Discussion Questions (total time for this inject is 20 minutes, approximately 10 minutes to discuss checkpoint and 10 minutes to discuss operator training strategy)

A. Strategize and draw how the checkpoint should be set up to maximize detection, localization, and interdiction of the potential threat radiological source. Describe officer roles and strategic locations as vehicles are being screened at the checkpoint.
    - *Use poster paper, markers to draw it out; sticky pieces of paper to denote where the PRD may be located*

B. Radiation detection and interdiction experts have been made available for a 2-hour just-in-time training course intended for officers assigned to man the checkpoints; describe what should be included in the curriculum.
    - *Potential course content:*
        i. *PRD use, hands-on training and device operation*
        ii. *Tactical PRD training to ensure the most optimal search and location procedures*
        iii. *Terrorist tactics focused on specific indicators of this threat*
        iv. *Covert PRD use and recognition of other suspicious indicators*
        v. *Data interpretation/synthesis – characterizing threat versus legitimate source*
        vi. *Interdiction tactics with dangerous adversaries involving a RN device*
        vii. *Securing the scene and appropriate notifications for characterization and support (other immediate response actions, hot zone characterization, what to do with people in the area)*
    - *Are there certain types of officers that should be selected for this mission over other types of officers? What training, experience, or characteristics do they have?*

C. Beyond training on equipment use, what other key information or awareness training should checkpoint officers be given about the threat? This information may include safeguarding, contacting technical reachback assets, notifying appropriate government authorities, and other items.
    - *Contacting technical reachback assets*
    - *Notifying appropriate government authorities*
    - *Safeguarding (what to do and what not to do if an RDD if suspected)*
    - *Exposure/health hazards*
    - *Expected size of what they may be looking for*
    - *Potential impacts if detonated*

D. Identify the experts within Centralia most suited to provide the training.
    - *Possible trainers for discussion include:*
        i. *Officers from the Border Guard working at the Bayside Seaport*
        ii. *Representatives from the Centralia Atomic Energy Commission Security Directorate*
        iii. *SMEs with experience working with medical or industrial sources in Bayside or Hub City*
        iv. *Law enforcement officers with specialized weapons and tactical training (similar to US SWAT teams)*

v. *University or other SME scientists*
vi. *Combination of experts*

- *Discuss the benefits and drawbacks of each or how a combination team may be best utilized.*

E. If the training had to be shortened to only 20-30 minutes, what are the most essential pieces that would have to be communicated to officers? Prioritize the top two or three items.

F. Available equipment is very limited for this operation, what other institutions might be have equipment that can be deployed to support the mission? In addition to equipment, where might there be trained staff to operate the equipment with minimal training?

- *Border Guard working at the Bayside Seaport (officers and equipment)*
- *Centralia Atomic Energy Commission Security Directorate (would they have equipment??)*
- *Trained personnel and their equipment in working with medical or industrial sources in Bayside or Hub City*
- *University*
- *Nuclear power plant equipment assets from greater Centralia*

INJECT: By 5:00 AM today, 7 checkpoints have been set up in and around Bayside City. At 10:42 AM, a PRD at Checkpoint 4 alarms indicating a radiation source. At the time of the alarm, there are 10 vehicles in close proximity to the checkpoint going through the inspection lines. Officers must localize and adjudicate the alarm, but because of the operational information that exists related to the threat, time is of the essence.

Discussion Question (20 minutes to develop, 10 minutes for brief outs)

A. Create an adjudication flow chart that investigates the PRD alarm. Discuss both technical and non-technical indicators and associated considerations and decisions. Plan to provide a short briefing on the flow chart. Flow chart should outline operations from alarm through adjudication and technical reachback decisions to determine conclusively if (and what kind of) a threat exists.

- *SEE EXAMPLE FLOW CHART BELOW (e.g., Model Guidelines Document)*
- *Localization challenges*
  - *Shielding*
  - *Proximity to the vehicles*
  - *Appropriate use of the detector (can you feel the vibration, shielded by body)*
  - *Sources in close proximity?*
  - *What potential problems could this result in?*
    - *Missing that there are two sources at play*
    - *Disrupting localization process*
    - *Need to rely on other police tactics to identify a threat*

- *Legitimate radiation sources*
    - *What types of questions need to be asked to rule in/out a medical treatment source (yes/no questions to develop flow chart)*
    - *Occupation that results in radiation exposure*
    - *Documentation/manifests of legitimate medical/industrial sources*

- *Suspicious indicators to corroborate the PRD alarm*
    - *Weapons in view*
    - *Fidgety drivers*
    - *Exiting the vehicle for any reason*
    - *No legitimate documentation*
    - *Unwillingness to comply with questions or direction*
    - *Material in car that may be used for shielding purposes*
    - *Literature or instructions on radiological material*
    - *Flashing lights or unexplained items that can be seen*
- *Technical reachback decisions*
    - *What type of information should the operators provide when calls are made to request technical reachback expertise and equipment?*
    - *What information will be gained from technical experts and specialized equipment (e.g., RIID)? How could this be used to aid the investigation? What other ways could the data be used?*

INJECT: Law enforcement operators demonstrate some confusion on actions to take once the alarm has been adjudicated and it is confirmed to be a second RDD. The source has been isolated from the public, but currently the officers working the checkpoint are in custody of the radiological material.

Discussion Question (5 minutes to decide, can be cut or a larger group consensus if time is short)

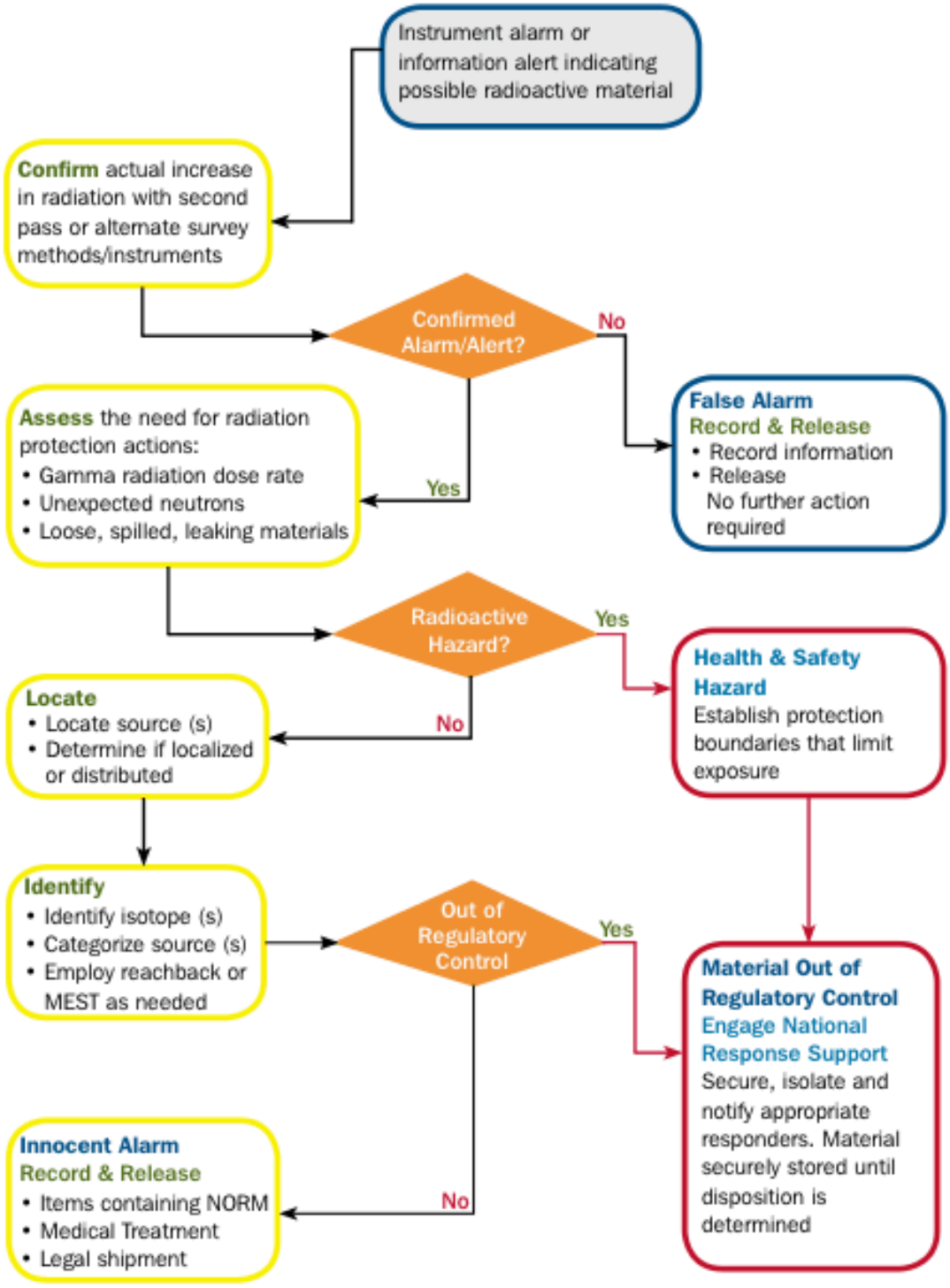
A. Identify the authority that should be notified to take over the scene. Provide rationale for choosing this authority.

- *Ministry of Interior – Law Enforcement Directorate*

Other Agency Roles that may come up in discussion:

- *Ministry of Energy – Atomic Energy Commission*
    - *Safeguards Directorate (monitoring, verification, compliance)*
    - *Security Directorate (compliance, materials safety/security)*
- *Ministry of Justice – more focused on criminal investigation and forensics than taking custody of a device from a scene in an operational sense*

FLOW CHART EXAMPLE BELOW:


Instrument alarm or information alert indicating possible radioactive material
Confirm actual increase in radiation with second pass or alternate survey methods/instruments
Confirmed Alarm/Alert?
No
Yes
False Alarm
Record & Release
• Record information
• Release
No further action required
Assess the need for radiation protection actions:
• Gamma radiation dose rate
• Unexpected neutrons
• Loose, spilled, leaking materials
Radioactive Hazard?
Yes
No
Health & Safety Hazard
Establish protection boundaries that limit exposure
Locate
• Locate source (s)
• Determine if localized or distributed
Identify
• Identify isotope (s)
• Categorize source (s)
• Employ reachback or MEST as needed
Out of Regulatory Control
Yes
No
Material Out of Regulatory Control
Engage National Response Support
Secure, isolate and notify appropriate responders. Material securely stored until disposition is determined
Innocent Alarm
Record & Release
• Items containing NORM
• Medical Treatment
• Legal shipment