

#### IAEA – Post-Crisis Incident Management



**Nigel Tottie** Division of Nuclear Security Department of Nuclear Safety and Nuclear Security

#### **Overall presentation objective**



The objective of this presentation is to discuss post-crisis incident management issues for a Nuclear Security Event involving Material Out of Regulatory Control (MORC).

## Outline



The Response

 Radiological Crime Scene Management

Nuclear Forensics

Conclusion

# Spectrum of nuclear security activities





**Prevention** 

Detection

Response

Primary Objectives: Prevent Material from leaving Regulatory Control Primary Objectives: Detect material out of Regulatory Control

Primary Objectives: Create Permissive Environment; Facilitate Investigation; Return material to Regulatory Control; Coordinate the Overall Response





#### The Security (Crisis) Response

- **Confirm and Activate-** Identify as NSE, establish command and control, create *permissive environment* (incl. secondary devices)
- Manage People- Evacuation, control of scene (multi-agency coordination) (cordons and containment), public communication
- Manage Threat- Deal with suspects, Device(s), RN material (incl. *recovery* to RC)
- Manage Scene- RCSM Principles, identify evidential opportunities and consider additional scenes- *investigation*



#### The Post-Crisis Response- Radiological Crime Scene Management and Nuclear Forensics

#### NSS 20 – Nuclear Security Fundamentals NSS15 – Nuclear Security Recommendations



#### NSS22G – Radiological Crime Scene Management NSS18 – Major Public Events NSS2G – Nuclear Forensics in support of Investigations

#### The Post-Crisis Response- Radiological Crime Scene Management and Nuclear Forensics











#### WHY RADIOLOGICAL CRIME SCENE MANAGEMENT?

- To ensure that:
  - All on-scene activities are designed to secure and preserve evidence as far as is possible;
  - Our staff are able to work safely when carrying out all onscene investigative procedures;
  - All evidence is recovered and managed in accordance with chain of custody procedures to maintain evidential integrity; and
  - All enquiries are fully supported and perpetrators are prosecuted

Remember- our primary aim is to Facilitate Investigation and Return Material to Regulatory Control

## Radiological Crime Scene Management

### As much about this:





As about this:



**EVIDENCE** 

CHAIN OF CUSTODY

Agency \_\_\_\_\_ Collected By

Remarks





#### WHY IS RCSM DIFFERENT FROM OTHER CRIME SCENES ?

- Differs with respect to the need to control:
  - Time spent in the hazard control areas;
  - Distance between the evidence contaminated with radionuclides and the individual collecting the evidence;
  - Radiation shielding between the evidence and the individual collecting the evidence;
  - Radionuclide contamination; and
  - Individual radiation exposures.



#### **Nuclear Forensics in Support of Investigations**

- Nuclear forensics are a preventive measure, and a key element of the response to nuclear security events, supporting the criminalization of trafficked nuclear and radioactive material;
- A nuclear forensic examination focuses on the categorization of materials bearing on origin and history, with sequenced reporting within 1 day, 1 week and 2 months;
- A nuclear forensics analytical plan is an important part of a State's national response plan for nuclear security events;
- Enables a State to examine both traditional forensics evidence, and traditional evidence contaminated by radionuclides, to link people, places and materials



#### IAEA RCSM AND NUCLEAR FORENSICS TRAINING

#### **IAEA RCSM Training**



- Available to IAEA Member States on request (through INSSP)
- Training curriculum is ideal for National Workshops on Radiological Crime Scene Management (regional available)
- Available to States in Train-The-Trainer (TTT) Format (from 2019)
- Workshop Aim To strengthen the Member State ability to ensure safe, effective and efficient operations at a crime scene where nuclear or other radioactive materials are known to be or are suspected to be present



#### IAEA Nuclear Forensics Training 60 Years

- Available to IAEA Member States on request (through INSSP)
- Training course on Introduction to Nuclear Forensics
- Training course on Practical Introduction to Nuclear Forensics
- Training course on Nuclear Forensics Methodology
- Residential Assignments
- Model Action Plan
- Expert Mission for Assessment of NF Capability







- The Security Response must focus on the primary aims of:
- Creating a Permissive Environment;
- Facilitating the Investigation,
- Recovery of MORC; and
- **Coordination of the Response.**
- Investigation requires the ability to secure and preserve all evidence from a crime scene, including that which is contaminated or is RN material
- Nuclear Forensics is an important aspect of the investigation, for both categorisation and characterisation of RN material
- IAEA can support RCSM and Nuclear Forensics capability development, on request (preferably through INSSP)

15

## Questions?