Development of Concept of Operation of Radiation Portal Monitors
Equipment vs procedures

Equipment

People and processes
Concept of Operation

• ConOps defines the **roles and responsibilities** of personnel from various organizations directly involved in the daily operations, oversight, and management of the border monitoring equipment.

• ConOps is a **critical step** in assuring a common understanding of the roles of all stakeholders.

• ConOps serves as a **basis for** refining and implementing **Standard Operating Procedures** for the system.

• Formal adoption of ConOps is **subject to approval** by all involved authorities.
## Generic Functions

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Equipment operation

- **Organization 1** provides the Front Line Officers responsible for routing operations of the equipment.

- Organization 1 is responsible for:
  
  **Day-to-Day Operation**
  
  - Controlling the flow of cargo / passengers through the RPM
  - Minimizing delays to traffic
  - Responding to all alarms generated by the system
  - Determining whether a Secondary Inspection is required, and assuring that cargo requiring Secondary Inspection are properly directed and managed
  - Assuring that Secondary Inspections are conducted and results are documented.
  - Making decisions regarding whether outside assistance is needed.
Event Resolution

• Notifying Organization 2 that additional assistance is needed, and providing detailed scenario and technical information as requested.
• Following set procedures in cases of danger or imminent threat of danger working closely in cooperation Organization 3.

Training

• Ensuring all Organization 1 staff are trained to respond to alarms of all levels and in the proper conduct of secondary inspections through regular basic and refresher training of Officers and Trainers.
• Conduct regular operational assessment exercises, in cooperation with all relevant stakeholders to ascertain the effectiveness of procedures and training, and making modifications as necessary.
Equipment operation (cont’d)

Maintenance and Administration
• Assuring that the system is properly functioning and reporting failures to Organization 5.
• Keeping batteries charged on all supplementary inspection equipment.
• Preparing an annual report and others as necessary, summarizing alarm incidents for Organization 6 and other stakeholders.
• Documenting any changes to equipment and/or software configuration.
Advanced Alarm Resolution and Response

• **Organization 2** is expected to operate the 24/7 On-Call system. The main role is to provide expert support for the resolving challenging radiation alarms to assist with development of STOP or GO decision.

• Organization 2 is responsible for:
  
  **Day-to-Day Operation**
  • Maintaining and providing access to an On-Call 24/7 team of specialists.

  **Event Resolution**
  • Coordinating response when assistance is requested from **Organization 1**
  • Acting as a Focal Point for all notifications relating to nuclear or radiological events (including response to security-related events)
  • Provide technical assistance (both remote and in-situ) for categorization of radioactive material detected by **Organization 1**, if the results of secondary inspection are inconclusive
  • Coordinating response with **Organization 3 and Organization 4** when appropriate
Advanced Alarm Resolution and Response (cont’d)

**Maintenance and Administration**

• Facilitating information exchange

• Assuring that the expert-level equipment is properly functioning and reporting failures to *Organization 5*.

• Reviewing and contributing to an annual report, and others as necessary, summarizing alarm incidents for *Organization 6*, and other stakeholders.

**Training**

Contributing to primary and refresher training of *Organization 1* officers, on advanced alarm resolution and response
Emergency response

- **Organization 3** is expected to operate the 24/7 On-Call system. The main role is to provide emergency response to the confirmed cases of illicit trafficking that pose immediate threat.
- Organization 3 is responsible for:
  - **Event Resolution**
    - Maintaining and providing access to an On-Call 24/7 team of specialists.
    - Providing assistance to Organization 1 and/or Organization 2 Officers when notified and requested by them.
    - Providing assistance in case of emergency, involving nuclear or radiological threat discovered through the use of the radiation detection equipment.
Neutralization, safe transportation, disposal

- **Organization 4** is expected to operate the 24/7 On-Call system. The main role is to provide decontamination, isolation, safe transportation, storage and possible disposal of radioactive material found.

- **Organization 4** is responsible for:
  
  **Event Resolution**
  
  - Maintaining and providing access to an On-Call 24/7 team of specialists.
  - Providing assistance to **Organization 1** Officers when notified and requested by them.
  - Providing assistance in the handling, removal, and storage of any radiological or nuclear material discovered through the use of the radiation detection equipment.
  - Collection and preservation of relevant evidences (nuclear forensics)
• **Organization 5** is expected to maintain and configure radiation detection and IT equipment. The main role is insuring the sustainable operation of radiation detection equipment through its maintenance and performance verification. Organization 5 is responsible for:

**Day-to-Day Operation**
- Establishing, maintaining, and storing an inventory of critical spare parts.
- Perform periodic performance verification of radiation detection equipment (and other associated equipment) in use

**Event Resolution**
- Ensuring response to problem notifications and technical questions within a set period of time, to be agreed upon with Organization 1 and Organization 2.

**Training**
- Contributing to primary and refresher the training of staff from Organization 1 and Organization 2 on routing maintenance and equipment performance verification
Maintenance and Administration

• Procuring and supervising routine and emergency maintenance support for the fixed and portable detection equipment.

• Procuring and supervise routine calibration support for the radiation detection equipment.

• Making radioactive sources used for equipment calibration and training available when needed.

• Performing routine analysis of data recorded by radiation detection equipment, for troubleshooting and statistical evaluation.

• Reviewing and contributing to an annual report, and others as necessary, summarizing alarm incidents for Organization 6, and other stakeholders.

• Documenting any changes to equipment and/or software configuration.
Operation assessment

• **Organization 6** is primary focal point for ensuring the long-term effective and efficient operation of the system. Organization 6 is responsible for:

  **Maintenance and Administration**
  • Efficiency evaluation and deficiency addressing in operation of the deployed system
  • Processing procurement requests for equipment and maintenance services
  • Coordinating with stakeholder offices to ensure the appropriate mandates are in place to support the long-term effective operation of the radiation detection system
  • Liaison with international partners
  • Reviewing and contributing to an annual report