

Identifying, Notifying and Activating

IAEA-KINS Workshop on the Emergency Preparedness and Response to Nuclear and Radiological Emergencies

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Introduction

- Requirement 7: *“The government shall ensure that arrangements are in place for the prompt identification and notification of a nuclear or radiological emergency and for the activation of an emergency response.”*

Identifying, Notifying and Activating



- For facilities in emergency preparedness category I through III (**EPC I, II & III**)
 - Ensure operators promptly determine appropriate emergency class or level of response
 - Initiate on-site actions
 - Notify and provide updated information to off-site notification point
 - Promptly notify all appropriate off-site response organizations
 - Which will initiate pre-planned and coordinated responses appropriate to emergency class

Identifying, Notifying and Activating (cont.)

- For activities in emergency preparedness category IV (**EPC IV**)
 - Ensure first responders are able to identify and activate radiation emergency plans
 - Ensure medical doctors are trained for identifying radiation symptoms
 - Notify and activate radiation emergency plans in case of detecting radioactive material in scrap metal
 - Indicators of potential emergencies are well-known for response organizations

Identifying, Notifying and Activating (cont.)



- **Initiate** appropriate emergency response actions upon receipt of notification by another State or IAEA of actual or potential transnational emergency
- In **transnational emergency** – notifying State informs directly or through IAEA those States that may be affected

In Practice

- Off-site notification protocol and messages
- Means to activate critical staff 24 hrs/7 days
- Means to notify other countries
- First responders aware of indicators of presence of radiation or radioactive material
- Medical doctors aware of symptoms that high dose of ionizing radiation can cause

In Practice (cont.)

- Anyone who could “discover” an abnormal event should have access to adequate mechanism to notify appropriate organization
- Emergency classification system must be in place
- Procedures relate classification to actions

Emergency Classification System

- Takes into account all postulated nuclear and radiological emergencies
- Emergency action levels (EALs) considered
- ECS established with aim of:
 - Initiating prompt response
 - Implementing emergency operations
 - Initiating appropriate level of co-ordinated response on-site and off-site
 - Defining responsibilities and initial response actions for each emergency category
- **The level of activation is based on the emergency class!**

Emergency Classification System (cont.)

General emergency	• An emergency that warrants taking precautionary urgent protective actions, urgent protective actions, and early protective actions and other response actions on the site and off the site
Site area emergency	• An emergency that warrants taking protective actions and other response actions on the site and in the vicinity of the site
Facility emergency	• An emergency that warrants taking protective actions and other response actions at the facility and on the site but does not warrant taking protective actions off the site
Alert	• An event that warrants taking actions to assess and to mitigate the potential consequences at the facility
Other nuclear or radiological emergency	• For emergency in category IV that warrants taking protective actions and other response actions at any location

Emergency Classification System (cont.)

- Frequently asked question: *Should an EPC III and/or IV country adopt the full emergency classification system?*
 - ‘General emergency’ and ‘Site emergency’ is not likely, so it is not strictly required
 - However, situation may change, (e.g. EPC I facility being built beyond the national border, nationals getting involved in ‘General emergency’ abroad, public communication needed regarding emergencies worldwide etc.)
 - International emergency communication (e.g. USIE) can use these terms of ‘higher’ classes of emergencies
- This may justify using the full emergency classification systems even in category III and IV countries

Off-site Notification

- Requirement for prompt notification - 30 minutes for fixed facilities
- Contact points well defined and available - 24hrs/7days
- Notification message pre-defined
 - Information may be limited
 - Be realistic in amount of information needed
 - Too much information may delay notification
- Follow up information defined



Image courtesy IAEA

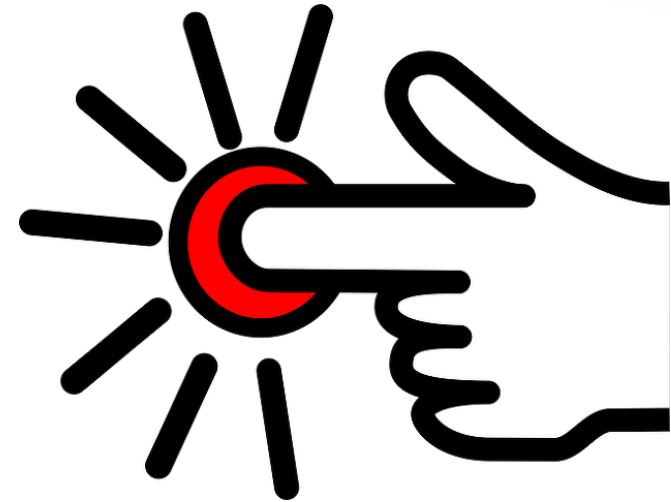
Notifying Other States

- Nearby States:
 - Prompt notification directly from facility or promptly through approved channels (bilateral agreements)
 - Contact point identified
 - Protocol identified, including format
 - Language issues taken into account
 - Direct notification between local authorities
- Distant States
 - IAEA and bilateral agreements

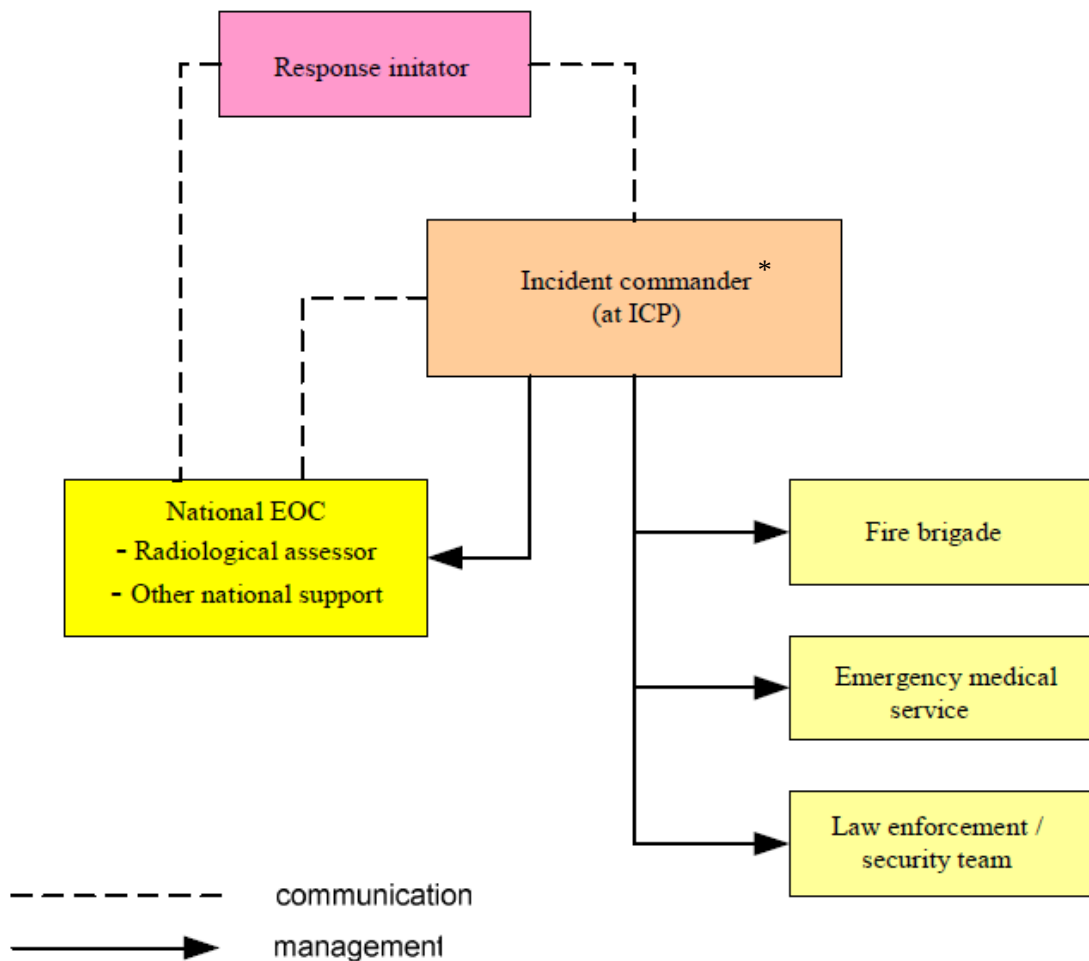


Activate Key Staff 24/7

- Designate who activates whom:
 - Who is considered key staff?
- Communications:
 - Telephone, cellular, others
 - List of numbers is up to date
- Duty system among staff
- Co-ordination of absences
- Notification system should have built-in redundancy
- Regular testing of equipment and procedure(s)



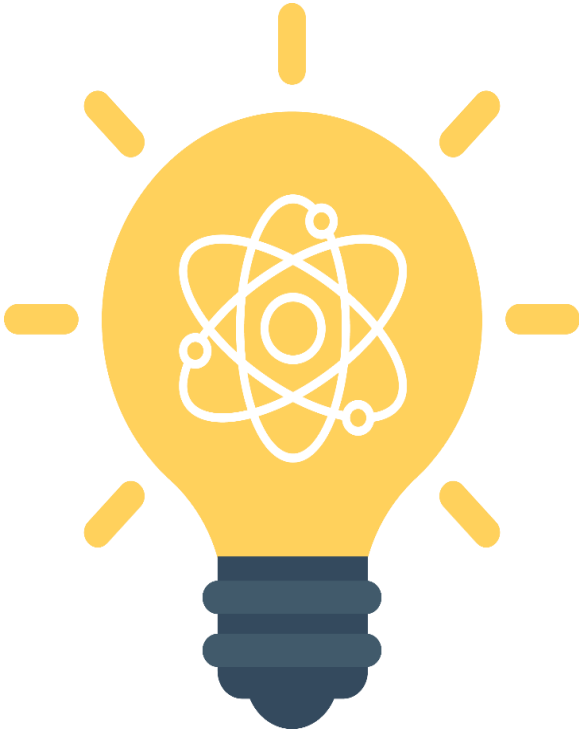
Activation Process



*in line with IAEA Safety Glossary (2018), term Emergency Response Commander is used interchangeably with Incident Commander

Image courtesy IAEA

Key Points



- Operators are responsible for:
 - Identify the emergency
 - Promptly classify the emergency
 - Notify and activate on-site response, and
 - Notify off-site authorities
- First responders are trained to identify observables at the scene
- Facilities and locations where a dangerous source might be found
 - Are aware of those indicators and
 - Are able to notify

Where to Get More Information

- IAEA TECDOC-1162 (2000)
- IAEA EPR-First Responders (2006)
- IAEA GSR Part 7 (2015)
- IAEA GS-G-2.1 (2007)

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Thank you!

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