IRRS Good Practices

Emergency preparedness and response – regulatory aspects (Module 10)

Roles of the Regulatory Body in a nuclear or radiological emergency

Australia – Follow up Mission

Mission Date: October 2023

Good Practice

The use of an incident management system across ARPANSA (Australian Radiation Protection and Nuclear Safety) for routine recording of health and safety incidents will ensure that staff are familiar with the system and will use it effectively to manage the response to a nuclear or radiological emergency.

Observation

ARPANSA has introduced an incident management system for responding to exercises and real incidents. It was also used in a pilot programme with some staff to record routine health and safety and business continuity incidents with the intention of including all staff in ARPANSA in the future.

Basis

1- GSR Part 7 Requirement 23 para 6.20 states that *"The operating organization and response organizations shall develop the necessary procedures and analytical tools to be able to perform the functions specified in Section 5 for the goals of emergency response to be achieved and for the emergency response to be effective."*

2- GSR Part 7 Requirement 26 para 6.37 states that *"The operating organization and response organizations shall establish and maintain adequate records in relation to both emergency arrangements and the response to a nuclear or radiological emergency, to include dose assessments, results of monitoring and inventory of radioactive waste managed, in order to allow for their review and evaluation. These records shall also provide for the identification of those persons requiring longer term medical actions, as necessary, and shall provide for the long-term management of radioactive waste."*

IAEA Comments/Highlights

ARPANSA adopted the Australasian Interservice Incident Management System (AIIMS) and applied it to ARPANSA's Incident Management Framework which is used across ARPANSA for the management of all health and safety, security, business continuity and nuclear and radiological incidents. Four training sessions in AIIMS have been delivered by accredited trainers to approximately 60 ARPANSA staff. Following training, staff are assigned one or more roles in emergency response in line with their area of expertise.

In addition, an incident management software system has been introduced to manage the response to exercises and real events in line with AIIMS including the tracking of actions to address lessons learned. It is being used in ARPANSA as part of a pilot programme with some staff to record routine day-to-day health and safety and business continuity incidents.

The Netherlands – Initial Mission

Mission Date: June 2023

Good Practice

The CalNET information system forms a robust basis for a coordinated emergency response for national and cross-border coordination of protective actions during the early phase of a nuclear accident.

Observation

The Netherlands have developed a web-based information system named CalNET where relevant information, and communication during response to a radiological or nuclear emergency is exchanged. All the response organizations including the 25 Safety Regions, as well as the authorities responsible for public safety and security have access to the information at all times via this system. The online, real time, participation in CalNET is available to the authorities of neighbouring countries, namely Belgium.

Basis

1- GSR Part 7, Requirement 22, para. 6.13 states that *"When several different organizations of the State or of other States are expected to have or to develop tools, procedures or criteria for use in the response to an emergency, arrangements for coordination shall be put in place to improve the consistency of the assessments of the situation, including assessments of contamination, doses and radiation induced health effects and any other relevant assessments made in a nuclear or radiological emergency, so as not to give rise to confusion."*

2- GSR Part 7 Requirement 6, para 5.10 states that *"Arrangements shall be made with other States, as appropriate, for coordinated response to a radiological emergency."*

IAEA Comments/Highlights

This system forms a robust basis for a coordinated emergency response at national and an online, real time, cross-border coordination of protective actions during the early phase of a nuclear accident.

Germany – Initial Mission

Mission Date: April 2019

Good Practice

The Integrated Measurement and Information System (IMIS) in combination with the unique Radiological Situation Report formed a robust basis for a coordinated emergency response.

Observation

The relevant information for response to a radiological or nuclear emergency was collected in the Integrated Measurement and Information System (IMIS). The Federal Government and the Länder as well as the authorities responsible for disaster control or public safety had access to the information at all times via this system. In particular, the information included a unique Radiological Situation Report to be used by all organizations responsible to take actions in an emergency. This formed a robust basis for a coordinated emergency response.

Basis

GSR Part 7 para. 6.13 states that *"When several different organizations of the State or of other States are expected to have or to develop tools, procedures or criteria for use in the response to an emergency, arrangements for coordination shall be put in place to improve the consistency of the assessments of the situation, including assessments of contamination, doses and radiation induced health effects and any other relevant assessments made in a nuclear or radiological emergency, so as not to give rise to confusion."*

IAEA Comments/Highlights

The Federal Government and the Länder as and the authorities responsible for disaster control or public safety had access to the information at all times via the IMIS system. In particular, it contained in cases of regional or supra-regional emergencies a unique Radiological Situation Report to be used by all organizations responsible for taking actions in an emergency. This formed a solid basis for a coordinated response in a radiological or nuclear emergency.

Luxembourg – Initial Mission

Mission Date: June 2018

Good Practice

The IRRS team acknowledged the strong integration of the radiological and nuclear emergency response arrangements into the national all hazards emergency management system. A single all hazard response structure was used, leveraging the expertise of the Department of Radiation Protection (DRP) effectively for nuclear emergencies.

Observation

Radiological and nuclear emergency response was strongly integrated within the national all-hazards emergency management system. The Administration Service Secours (ASS) had national call centre for all events. They were also official point of contact for France/Cattenom NPP and acted as National Warning Point for IAEA and ECURIE. Initiation and escalation of a nuclear emergency response followed the same steps and used the same processes as for other incidents and emergencies. DRP was engaged immediately and integrated itself as radiological risk advisory group to the national response system both at the ASS operations management centre, and also at the national crisis centre to support the Government "Cellule de Crise". The DRP's field work during emergency response was supported by professional and volunteer Civil Defence staff, which included storage, maintenance and prompt logistical deployment of specialized response equipment containers from the National Support Base.

Bases

(1) GSR Part 7 Requirement 1, para. 4.3 states that "*The emergency management system shall be integrated, to the extent practicable, into an all hazards emergency management system (see paras 5.6 and 5.7).*"

(2) GSR Part 7 Requirement 6, para. 5.7 states that "*Arrangements shall be made for the establishment and use of a clearly specified and unified command and control system for emergency response under the all-hazards approach as part of the emergency management system (see paras 4.1–4.3). The command-and-control system shall provide sufficient assurance for effective coordination of the on-site and off-site response. The authority and responsibility for directing the emergency response and for making decisions on emergency response actions to be taken shall be clearly assigned. The responsibility for directing the emergency response and for decision making on emergency response actions to be taken shall be promptly discharged following a notification of an emergency.*"

IAEA Comments/Highlights

Radiological and nuclear emergency response was strongly integrated within the national all-hazards emergency management system. Radiological incidents or emergencies were reported into the national all hazard Administration Service Secours (ASS) which operated the national

emergency call centre. When assistance calls arrived involving radioactive material, or suspected radioactive material, the ASS procedures were to contact the DRP. The ASS then coordinated all national rescue and response services in support of the on-scene command of the incident and a radiological risk assessment group made of DRP staff would be located at the ASS operations centre. If required, DRP staff might be deployed to the scene to perform field work. In this case, DRP had a fully equipped response vehicle with detection and protective equipment. If additional human resources or equipment were necessary, the DRP had arrangements with the civil protection National Support Base, which stored, maintained and provided logistical support including several transport containers setup for radiological field response (detection and protection equipment, decontamination facilities, reception facilities).

Luxembourg – Initial Mission

Mission Date: June 2018

Good Practice

When making protective action decisions during a nuclear emergency in a foreign country, the Government of Luxembourg default action was to implement the same protective actions as prescribed by the accident country for its residents. Coordinating response actions with another state in this manner was efficient and prevented unnecessary delays in implementing protective actions and enhanced public confidence by avoiding confusion or justification of differences in protective actions.

Observation

The Operating Plan for radiological risk assessment, signed by the Minister of Health, specifically highlighted the need to harmonise response actions with the accident country, and align the national protective actions with the accident state whenever possible.

Bases

(1) GSR Part 7 Requirement 22, para. 6.14 states that "*Arrangements shall be made to coordinate with other States in the event of a transnational emergency any protective actions and other response actions that are recommended to their citizens and to their embassies in order either to ensure that they are consistent with those recommended in other States, or to provide an opportunity for them to explain to the public the basis for any differences (see para. 5.73)*".

(2) GSR Part 7 Requirement 7, para. 5.22 states that "*Appropriate emergency response action s shall be initiated in a timely manner upon the receipt of a notification from another State or of information from the IAEA on a notification relating to an actual or potential transnational emergency that could have impacts on the State or its nationals*".

(3) GSR Part 7 Requirement 9, para 5.39 states that "*Within the emergency planning zones and emergency planning distances, arrangements shall be made for taking appropriate protective actions and other response actions effectively… …The arrangements shall be coordinated with all jurisdictions (including, to the extent practicable, jurisdictions beyond national borders, where relevant) within any emergency planning zone or distance.*"

(4) GSR Part 7 Requirement 10, para 5.48 states that *"Arrangements shall be made by response organizations in a State to promptly provide information and advice to its nationals and to those people with interests in other States in the event of a nuclear or radiological emergency declared beyond national borders, with due account taken of the response actions recommended in the State in which the emergency occurs as well as in the State(s) affected by that emergency (see paras 5.73 and 6.14)."*

IAEA Comments/Highlights

The Administration Service Secours (ASS) call centre was the official point of contact for France/Cattenom NPP and acted as national warning point for IAEA and ECURIE (European Community Urgent Radiological Information Exchange). Initiation and escalation of a full-scale nuclear emergency response followed the same steps and used the same processes as for other incidents and emergencies. The Department of Radiation Protection (DRP) was engaged immediately and integrated itself as the radiological risk advisory group in the national response system both at the ASS operations management centre, and at the national crisis centre to support the Government "Cellule de Crise", which was activated in accordance with the National Nuclear Response Plan.

The National Nuclear Emergency Plan was approved by the Government Council as well as multiple supporting Operational Plans signed by ministers and directors. These clearly described the preparedness and response activities to a nuclear emergency in a neighbouring nuclear country. Within the framework of the national plan, the role of the DRP as radiological advisor was clearly described and documented. The DRP acted within the national response structure as advisor to the "Cellule de Crise" headed by the Prime Minister. The DRP was in contact with the regulator and TSO of the accident state to gather information on the current and assumed future status of the accident and what protective actions were being taken by the accident state. In accordance with the HERCA-WENRA approach, the DRP would advise the Government on protective actions required in Luxembourg, with the documented default approach being to harmonize protective actions with those in the accident state.