

Arrangements for the Termination of a Nuclear or Radiological Emergency

Introduction to the Working Session and Working Groups

01 Working Session

Purpose of the Working Session



 Apply in practice the knowledge gained throughout the Workshop.

Objectives of the Working Session



- Identify and apply the prerequisites for declaring a nuclear or radiological emergency ended with regard to a postulated emergency scenario.
- Identify activities necessary to be carried out during the transition phase to enable the prerequisites to be met.
- Recognize the preparedness infrastructure and other arrangements necessary to provide adequate capability for an effective response during the transition phase.

Inputs for the Working Session



- Country A has conducted a hazard assessment for the purposes of emergency planning and developing a protection strategy.
- As a result of this activity, Country A has identified a range of postulated nuclear or radiological emergencies for which they need to prepare.
- Country A has good emergency arrangements for the emergency response phase, so its focus is on the transition phase.
- The postulated emergencies are likely to occur in populated areas rather than in isolated locations.

Inputs for the Working Session (cont'd)



- The following relevant 5 postulated emergencies have been derived:
 - 1. General emergency at a coastal nuclear power plant within the State combined with a severe natural event (earthquake and tsunami);
 - General emergency at a nuclear power plant located in a neighbouring State;
 - 3. Emergency at a radiotherapy unit involving the accidental overexposure of patients;
 - Unintentional dispersion of radioactive material in the public domain;
 - 5. Recovery of a stolen dangerous source.
- Detailed descriptions of each event are provided in your folder;

Pilot Workshop on the Termination of Suclear or Radiological Emergency (18 – 21 December 201

DESCRIPTION OF POSTULATED EMERGENCY SCENARIOS DERIVED ON THE

Note: In all cases, the nuclear or radiological emergency should not be assumed to occur in isolated locations but in areas with population densities and land use such as those in Europe, for example.

Postulated Emergency 1: General emergency at nuclear power plant combined with a severe natural event (earthquake and tsunami), located on the coast within State

Scanneys: A severe earthquake and tumanic cause the loss of all external power and practically the entire admension permitted by the plant, as the entire of the severe of the power and practically the entire admension power pumply to the plant, which are operating a full power at the time of the accident, and large amount of orfice admension permitted by the permitted by the permitted by the permitted properties of a week (For example in the readplies of the permitted by the entire accident and the permitted by the entire accident permitted by the permitted b

Expected attentions at the and of the sumergency response phase. People within 20 km of the site and other designated areas are evacuated and those within 20 – 30 km are instructed to shorthe before being advised to voluntarily evacuate. While in some areas the people were advised to return after the immediate hazard is gone in others they were relocated instanced. People are relocated in additional areas beyond 30 km where hel-spots were identified. Retrictions on the distribution and consumption of food and non-food commodities and the consumption of denishing water are in place within designated areas in radius of ever 100 km and efforts are ongoing to identify if these restriction are still needed. Emergency response organization is still functioning in full response mode (247). People are easy to know if they are and, what authorises will do

Postulated Emergency 2: General emergency at nuclear power plant located in a neighbouring Sta

Scanzic: The loss of all extensiapower and practically the entire alternative power supply occurs at the plant as a result of allorage, at a site comparing site boiling vater reaction (BWR). Seven core dramage contract three Units, which are operating at full power at the time of the malicious act, and a large amount of radioactive materials in released unto the environment over the period of a week (for example in the next 100-400 PBs (for 1.31) and 7-20 PBs (for Cs-137). The nuclear power plant is located at a distance of 10 km from the border.

Expected tituation at the end of the emergency response phase. Following agreements with the accident state, similar protective actions are instituted in the neighbouring state (see Expected tituation at the end of the emergency response phase in the description of the Postulated Emergency 1) leading to similar situation at the end of the emergency response phase.

Postulated Emergency 3: Emergency at a radiotherapy unit involving the accidental over-exposure of

<u>Scenario</u>: The misuse of a computerized treatment planning system, to allow for the non-standard use of multiple shielding blocks during radiotherapy, leads to patients being exposed for substantially longer treatment times than prescribed. A total of 28 scients suffering from prostate cancer and cancer of the cervix

1

Inputs for the Working Session (cont'd)



 Workshop participants are divided into five Working Groups (A-E), and each working group has been assigned a postulated emergency scenario as follows:

WORKING GROUPS				
GROUP A	GROUP B	GROUP C	GROUP D	GROUP E
China	Canada	Greece	Egypt	Brazil
Germany	France	India	Kenya	Croatia
Iran	Lithuania	Korea	Mauritania	Georgia
Pakistan	Malaysia	Montenegro	Mexico	Indonesia
Ukraine	Romania	Switzerland	Slovakia	Slovenia
-	Luxembourg	2	Portugal	-
	ASSIGNMENT OF A	POSTULATED EMERGENCY SCEN	IARIO TO A GROUP	
GROUP A – Postulated Emergency Scenario 1				
GROUP B – Postulated Emergency Scenario 2				
GROUP C – Postulated Emergency Scenario 3				
GROUP D – Postulated Emergency Scenario 4				
GROUP E – Postulated Emergency Scenario 5				

You will also find this information in your folder.

Inputs for the Working Session (cont'd)



- The Working Session comprises of 4 parts, each of which has specific tasks and expectations.
- Each working group (WG) will consider these tasks in the context of the assigned postulated emergency scenario:
 - Participants within a WG are seated together to facilitate discussions.

Expectations



- To discuss the relevant issues within the WG and to elaborate the conclusions/work done:
 - Each part will be finalized with 5 mins. of feedback from each WG on how have discussions progressed;
 - Detailed presentations are expected to be given by the WGs on Day 4 (further information to follow).

Arrangements



- Each WG should select a coordinator to coordinate the work of the group and a rapporteur to report on the work of the WG:
 - Work within the groups may be divided among the members so that all aspects can be dealt with in the time available;
 - The outcomes from each part should be well documented!
- Each WG will have one lecturer assigned as a facilitator.
- Details of each part of the Working Session will be provided separately.



Good luck!

