

Chapter 6: Exercise Assessment

6.1 Purpose

6.1.1 Every year the nuclear industry undertakes many exercises. These range from on-site facility exercises to off-site exercises. Exercises are the main vehicle whereby areas for improvement are identified as such it is important that there is an effective assessment process. This section of the NEPLG consolidated guidance provides guidance on how to develop an assessment process for an off-site emergency exercises.

6.2 Scope

6.2.1 This guidance only considers assessment of off-site exercises (formerly level 2 & 3 exercises), undertaken in compliance with REPPIR (Radiation Emergency Preparedness & Public Information Regulations) where “*the operator, carrier or local authority who has prepared (or in relation to a carrier, has ensured that there has been prepared) an emergency plan pursuant to regulation 7, 8 or 9 shall at suitable intervals not exceeding 3 years, a) review and where necessary revise the plan and b) test the plan and take reasonable steps to arrange for the emergency services to participate in the test to such an extent as is necessary*” and with site Licence Condition 11 made under the Nuclear Installations Act 1965 where “*the licensee shall ensure that such arrangements are rehearsed at such intervals and at such times and to such an extent as the executive may specify or where the executive has not so specified, as the licensee considers necessary*”

6.3 Guidance

6.3.1 In considering guidance for the assessment of an exercise a number of aspects have to be considered, these include:

- * Definition of an exercise
- * Definition of a performance indicator
- * Criteria for Assessment
- * Who should use the assessment criteria?
- * Assessors
- * Umpires

6.3.2 *Definition of an exercise*

An exercise is the sum of all the activities that need to be undertaken in response to a real event, where the real event is simulated. It is recognised that not all the activities will be undertaken in an exercise to the extent that they would be in a real event. However, it is important that those activities not undertaken are adequately simulated to minimise any imbalance in the exercise. three years in a level 2 or level 3 exercise.

6.3.3 *Definition of a Performance Indicator*

Two types of performance indicator exist:

- * Quantitative
- * Subjective

Quantitative performance indicators can be assessed by measurement; this might be time, number, dose.

Subjective performance indicators are to do with the feel of the activity or exercise. They cannot be measured but are more to do with where on a range of experiences the assessor considers the activity or exercise lies.

6.3.4 *Criteria for Assessment*

Essentially, there are two levels of assessment criteria that can be developed:

The first is response plan driven and is bounded by the objectives of the emergency response plan. eg issue KIO3 tablets, set up off-site facility, acquisition of environmental monitoring data. These will mostly be objective.

These top tier objectives will always form the core of any assessment. Chapter 5, "The Testing of Off-site Preparedness" provides an indication of how these objectives may be established. In addition chapter 4, "The Roles and Responsibilities of Responding Organisations" will also provide assistance in developing these top tier objectives.

The second may be exercise driven where the focus is on a particular aspect of the response plan eg environmental monitoring, MBC, OSF interactions or some new activity that is being trialled in the exercise for the first time. These will mostly be subjective.

To turn response plan objectives into assessment criteria some form of performance indicator has to be assigned to it

For Example

Issue KIO3	Complete inner zone in 2 hrs Complete outer zone in 6 hrs
Acquisition of monitoring data	Receive Dose estimate within 1hr Receive X monitoring results within 2hrs Receive RIMNET results within 3hrs
Set up off-site Facility	OSF established in 1hr. OSF operational in 2hrs OSF fully operational in 6hrs

To turn exercise driven objectives into performance criteria, again requires some form of performance indicator. These may be less tangible than response plan objectives and the performance indicator will need careful consideration to ensure that it is appropriate. For instance developing a performance indicator for 'Appropriate Interaction (Team Working)' in the OSF would be difficult. This would be a subjective assessment.

Having considered the above and developed the assessment criteria, a proforma should be produced identifying all the assessment criteria. Annex I gives an example of such a proforma, this will require modification depending on what assessment criteria are agreed.

6.3.5 *Who should use the Assessment Proforma?*

The assessment proforma should be used by all those who consider themselves to have a role in assessing the performance of the exercise.

6.3.6 *Assessors*

A number of individuals should be appointed to assess the exercise. The individuals should have the following attributes:

- * A knowledge of the arrangements being tested
- * Be neutral or non-partisan with regard to the exercise being undertaken.
- * Received training prior to the exercise on the assessment criteria and what particular aspects to consider.

A number of individuals should be appointed to assess the exercise.
The individuals should have the following attributes:

6.3.7 *Umpires*

Umpires drive the exercise by providing input to the responders by painting a picture of what can be seen eg there is debris under foot and a raging fire over there, or by providing information directly into the exercise to maintaining the response eg provision of information to monitoring teams

Note: Some organisations combine the role of the Assessor and Umpire

6.4 Conclusion

Developing appropriate and relevant assessment criteria allows areas for improvement to be defined and good points to be clearly identified to assist the learning process for emergency response.