**Questionnaire A**

**Inspection of Licensee’s Outage Activities Including Fire Protection Programmes**

Country: \_\_\_\_\_\_\_\_\_\_\_\_\_

### Notes:

Only one response per country is required. If more than one person from your country is participating, please co-ordinate the responses accordingly.

Submittals should be sent by email to: nancy.salgado@oecd.org by Thursday, 6 February 2014

**FOREWORD:**

Outages are an important opportunity for licensees to undertake plant maintenance, inspections, modifications and other activities necessary to ensure the continued safety of NPPs. Fire protection is one of the important aspects to be considered in the frame of this topic because of the increase of the fire risk and maintenance on fire protection systems.

The scope of the workshop is limited to planned NPP routine outages and will include: the consideration of NPP outage work scope; Regulatory body (RB) inspection scope; nuclear and fire risk minimisation; resolution of outage findings that may affect start-up; and arrangements for restart of the NPP. The scope of questions relating to fire protection includes both nuclear and conventional fire safety. The focus of this workshop topic is to identify commendable inspection practices by the RB for gaining confidence that safety will be maintained during an outage, return to service and the following operating cycle of the NPP.

**QUESTIONNAIRE:**

For preparation of the workshop, participants are invited to supply their national inspection approaches used according to the following questionnaire:

1. **REGULATORY REQUIREMENTS**

1. What are the regulatory requirements governing the outage of NPPs?
2. What are the regulatory requirements relating to fire protection at NPPs during outages?

2. **OUTAGE SCOPE AND CONTENT**

The following questions concern the review of outage scope and content by the RB with the licensee prior to the outage.

1. What types of pre-outage interactions (e.g. meetings, reports) are held between the RB and the licensee?
2. What documentation is supplied and what discussions are held in pre-outage interactions (e.g. test plan, modifications, regulatory commitments, in-service inspection, quality assurance, fire safety, etc.)?
3. What influence does the RB have on the scope, content and planning of NPP outages? Is there a formal approval required from the RB on the outage scope?
4. Does the RB define preconditions for restart?

3. **RB OUTAGE INSPECTION SCOPE**

The following questions concern the scope and resourcing of inspections carried out by the RB during an NPP outage.

1. Does the RB explicitly define by internal procedure a list of topics that it will inspect during an outage and if so what are they?
2. Which of the following topics are typically inspected by the RB?
* safety culture
* operating experience
* qualification of licensee staff/contractors
* fire protection
* radiological protection
* control of foreign material (FME)
* housekeeping
* industrial safety (personal safety)
* working time
* management of contractors
* security
* environmental issues
* modifications
* quality assurance
* in-service inspections (periodic tests)
* pressure boundaries
* outage management
* maintenance activities
* handling of fuel elements
* specific technical areas (e.g. structural integrity, electrical, etc)
1. What type and how much inspection resource is utilised (e.g. RB inspection staff, RB specialist, and technical support organisation manpower)?
2. What inspections are undertaken by the RB to evaluate that the licensee has minimized nuclear safety risks during the outage?

4. **FIRE SAFETY**

The following questions concern fire safety maintenance programmes, the impact of outage activities on fire safety and arrangements for response to a fire.

1. What inspections are undertaken by the RB regarding oversight of the maintenance of fire protection systems during an outage?
2. What inspections are undertaken by the RB of the licensee’s ability to control fire risks arising during an outage (e.g. hot work, fire loading, etc.)?
3. How does the RB evaluate that the licensee’s arrangements for response to fire during an outage are adequate?

5. **OUTAGE FINDINGS**

The following questions concern RB follow-up on outage findings[[1]](#footnote-1) (e.g. test results, in-service inspection (ISI) results) and events (e.g. leaks, fire, workforce accidents, reportable and non-reportable events) and their resolution.

1. How is the RB informed of any findings and events arising during the outage?
2. How does the RB respond to findings and events (e.g. specific resources, specific inspections)?
3. Is the RB routinely informed of all fire occurrences?
4. How does the RB assess that any findings are evaluated in a timely manner?

6. **OUTAGE KEY STAGES, RESTART, AND POST OUTAGE ACTIONS**

The following questions concern the monitoring of progress by the RB during an NPP outage, RB witness points, authorisation for restart, post outage review and relevant post outage testing

1. What arrangements does the RB have to monitor progress with the outage program (e.g. daily reports, routine meetings, database access)?
2. Does the RB define any formal witness or hold points during the outage and if so what are they?
3. Does the licensee require formal authorisation from the RB before restart, and if so what is the RB decision making process to allow the restart?
4. What type activities (if any) are undertaken by the RB after restart (e.g. inspection of physics tests, review of licensee lessons learned, etc.)?

7. Are there any other important topics that you would like to be considered at the workshop?

1. Identified either by the RB or the licensee [↑](#footnote-ref-1)