



NUCLEAR SAFETY DIRECTORATE - BUSINESS MANAGEMENT SYSTEM		
TECHNICAL INSPECTION		<b>T/INS/030</b>
<b>GUIDANCE: LC30 PERIODIC SHUTDOWN</b>		ISSUE 001
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## 1. Purpose and scope

- 1.1 The purpose of this guidance is to facilitate a consistent approach to LC 30 compliance inspection and to provide assistance to inspectors while carrying out their duties in this area. The guidance should not be regarded as either comprehensive or mandatory.
- 1.2 The guidance provided is split into four main elements:
- 1) Purpose of the Licence Condition
  - 2) Guidance on arrangements for LC 30.
  - 3) Guidance on inspection of arrangements.
  - 4) Guidance on inspection of implementation of arrangements.

## 2. Licence Condition

### LICENCE CONDITION 30: PERIODIC SHUTDOWN

- (1) When necessary for the purpose of enabling any examination, inspection, maintenance or testing of any plant or process to take place, the licensee shall ensure that any such plant or process shall be shut down in accordance with the requirements of its plant maintenance schedule referred to in condition 28.
- (2) Notwithstanding paragraph (1) of this condition the Executive may agree to an extension of a plant's operating period.
- (3) The licensee shall, if so specified by the Executive, ensure that when a plant or process is shut down in pursuance of paragraph (1) of this condition it shall not be started up again thereafter without the consent of the Executive.

## 3. Purpose of Licence Condition 30.

- 3.1 The purpose of condition 30(1) is to ensure that, where it is necessary to do so, a licensee periodically shuts down plant in order to carry out any LC 28 requirements that require plant to be out of service.
- 3.2 Condition 30(2) allows the Executive to agree to an extension of the period between such regular shutdowns.

- 3.3 Where a specification under condition 30(3) has been issued and the executive has to formally consent to the restart, this consent will only be given when the licensee has satisfied both itself and the executive that the plant may be safely restarted and safely operated until the next periodic shutdown.

#### **4. Guidance on arrangements for LC 30.**

- 4.1 This licence condition does not formally require the licensee to make and implement adequate arrangements, but to effectively comply with this condition we would expect the licensee to have established arrangements or procedures which ensure that the requirements of the condition are met and, in the interests of economy and efficiency, to have established consistent and effective procedures and practices well known to its managers and the regulator
- 4.2 The arrangements should identify plant or processes which it is necessary to shut-down to carry out examination, inspection, maintenance and testing required by the maintenance schedule. The arrangements should ensure that all such maintenance schedule activities, and other safety related activities or requirements are systematically identified, planned, actioned, reviewed and recorded.
- 4.3 The arrangements should define the process for seeking agreement from the executive for extending the operating period between shutdowns. These should include a requirement to provide a properly produced safety justification.
- 4.4 Arrangements should define the process for obtaining a LC30(3) consent from the Executive prior to start-up of the system or process which had been subject to shut-down in accordance with LC 30(1). i.e. management of shut-down programmes, reports, reviews and formal start-up meetings with the Executive etc.

#### **5. Guidance on inspection of arrangements for LC 30.**

- 5.1 Check that the arrangements seek to ensure that:
- (a) the persons responsible for the overall control of the periodic shutdown and for the orderly release, isolation, de-isolation, testing and return to service of plant systems are identified and SQEP for their duties;
  - (b) an outage plan or similar document specifying the maintenance schedule work and any other safety-related work to be carried out during the outage is produced and updated;
  - (c) minimum levels of diversity and redundancy are maintained when plant is isolated;
  - (d) plant system testing takes place before return to service;
  - (e) ALARP radiation dose assessments are carried out covering periodic shutdown activities;

- (f) quality plans exist for all safety related activities;
- (g) where a specification has been issued under LC 30(3), the plant is not returned to service without the consent of the Executive; and
- (h) a timely report reviewing the shutdown activities is produced.

5.2 Check that the arrangements provide for:

- (a) consultation with the Executive before, during and after the shutdown,
- (b) advising the Executive of the proposed outage plan in ample time to allow change in its content, and of the revised plan before shutdown;
- (c) adequate arrangements for the review and assessment (including where appropriate independent assessment) of all findings arising from examination, maintenance, inspection and testing activities, and for presenting the results to the Executive where required
- (d) presenting the results of the shutdown activities to the Executive prior to restart and in support of the restart request.
- (e) provision of a statement to the Executive confirming satisfactory completion of any examination, maintenance, inspection and testing required by the maintenance schedule, shutdown plan and any other statutory requirements, and confirming that the plant is fit to operate for the specified period. Exceptions from the maintenance schedule must be identified and dealt with in accordance with LC 28 arrangements;
- (f) consideration by the licensee of the adequacy of the safety case for operation for the period up to the next scheduled shutdown, confirmation of satisfaction with the safety case or, in the event that the full period cannot be justified, proposals for the timely delivery of such a satisfactory safety case, or the shut down of the plant, or other committed action, in support of the request for restart consent.
- (g) preparing and submitting a periodic shutdown report to the Executive within 28 days or other agreed period of a Consent to start-up. This must describe the totality of the outage work and confirm or otherwise that activities not completed at the time of the start-up meeting have been completed satisfactorily.

5.3 Review the procedures to confirm they are “in ticket”, and that they reflect accurately current practice (where known).

5.4 Check that the procedures require the Consent of the Executive prior to plant being re-started, if this has been specified by the Executive.

5.5 Confirm that the operational period between declared periodic shutdowns cannot be exceeded without the agreement of the Executive. and that any request for such agreement is treated as an amendment to the maintenance schedule.

**6. Guidance on inspection of implementation of arrangements for LC 30.**

- 6.1 Examine shutdown related requirements in the maintenance schedule and confirm with the responsible person or nominee and by sample inspections that they are scheduled for execution during the current (next) periodic shutdown. Confirm that programmes have been / will be submitted to the Executive as necessary and check that NII required changes have been incorporated.
- 6.2 Inspect a sample of the safety documentation used to control access to and and isolation of plant covering a range of permits involving both major and minor isolations. Confirm that all have been completed and signed off by SQEPs and, where appropriate DAPs.
- 6.3 Establish by inspection and discussions with plant personnel that the requirements of LCs 22 (modifications), 28 (maintenance etc) and 21 (commissioning) have been satisfied prior to plant, equipment or systems being declared available for service.
- 6.4 During inspection for LC 28 compliance, establish that no changes to the declared period between shutdowns have been included in the maintenance schedule without appropriate approval.
- 6.5 During the outage, review the maintenance programme and verify that all activities scheduled for completion have been completed, and that all planned modifications are completed. If incomplete, ensure that a programme for outstanding activities has been prepared. Ensure a clear position statement on these matters is provided with the restart request, together with the necessary commitments for completion.
- 6.6 Ensure that the start-up agenda covers discussion of the outcome of the periodic shutdown, the current position, and a review of the safety case(s) justifying start-up and operation until the next LC30 shutdown.
- 6.7 Clearly distinguish in the start-up meeting those actions required to be completed prior to the issue of a restart consent, those to be incorporated into the 28-day (or other) report and those on different timescales.
- 6.8 Check that the 28 day report adequately reports on the work undertaken during the outage, the findings of the maintenance, inspection and testing undertaken, confirms completion or otherwise of work declared incomplete at the time of the start-up request and identifies issues or problems arising during restart.
- 6.9 Seek specialist advice confirming the acceptability of continued operation in the event of new adverse findings being reported in the 28-day (or similar) report and in all cases circulate the report for information to relevant assessors.